EFFECTIVE LEADERSHIP MODEL IN HIGHER EDUCATION MANAGEMENT IN THE 21ST CENTURY

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Abstract

The 21st century is the era of the industrial revolution 4.0 which demands significant changes in various sectors, including higher education. Universities must be able to adapt to technological developments and improve the quality of human resources. This article discusses an effective leadership model in the management of higher education in Indonesia, highlighting the role of the Directorate General of Higher Education (Ditjen Dikti) as the main regulator. This studyshowthat situational, transformational, and service leadership are relevant models in improving the quality of higher education.

INTRODUCTION

The 21st century is known as the century of globalization and is currently better known as the century of the "industrial revolution 4.0". In this era, the competitiveness of a nation is no longer determined by the abundance of natural resources and cheap labor, but rather by technological innovation and the use of knowledge, or a combination of both. The ability to produce, select, adapt, commercialize and use knowledge is essential for the sustainability of economic growth and the improvement of living standards. Education is a great hope for the survival of humanity and for the advancement of civilization. Therefore, resources of all kinds, including technology, must be intelligently focused in their services and convenient availability for everyone must be guaranteed.

Universities have a very close relationship with industry and development, considering that universities are intermediate targets for preparing expert/skilled workforce and technology to serve industry needs. Universities are formal institutions that are expected to produce competent workers who are ready to face the work industry that is increasingly developing along with technological advances. Work skills, adaptability and dynamic mindsets are challenges for human resources, which should be obtained when receiving formal education at Universities.

Quantity is no longer the main indicator for a university in achieving success, but rather the quality of its graduates. The success of a country in facing the industrial revolution 4.0 in the 21st century is closely related to innovation created by quality resources, so that universities must be able to answer the challenges of facing technological advances and competition in the world of work in the era of globalization.

In creating innovative and adaptive resources to technology, it is necessary to adjust learning facilities and infrastructure in terms of information technology, internet, big data analysis and computerization. Universities that provide this learning infrastructure are expected to be able to produce graduates who are skilled in aspects of data literacy, technology literacy and human literacy. Innovation breakthroughs will lead to increased industrial productivity and give birth to technology-based start-ups, such as those that are currently emerging in Indonesia.

The direction of national higher education development in Indonesia is coordinated through the Ministry of Education and Culture (Kemendikbud), especially the Directorate General of Higher Education (Ditjen Dikti) (Presidential Decree 82/2019). In accordance withMinister of Education and Culture Regulation Number 45 of 2019regarding the Organization and Work Procedures of the Ministry of Education and Culture, the main task of the Directorate General of Higher Education is to organize the formulation and implementation of policies in the field of academic higher education. Furthermore, the Directorate General of Higher Education carries out the following functions: 1) formulation of policies in the field of academic higher education; 2) implementation of policies in the field of learning, student affairs, institutions, and resources of academic higher education; 3) formulation of granting permits for the implementation of private higher education organized by the community; 4) implementation of evaluation and reporting in the field of academic higher education; 5) implementation of the administration of the Directorate General; and 6) implementation of other functions assigned by the Minister.

In carrying out his main duties and functions, the Director General of Higher Education is assisted by a secretary and three directors, namely: 1) Director of Learning and Student Affairs, 2) Director of Institutions, and

3) Director of Resources. Coordination of higher education policies in regions in the territory of the Unitary State of the Republic of Indonesia (NKRI)

Referring to the description above, it can be stated that the adaptability of higher education to the divergence resulting from educational changes in the 21st century is largely determined by the direction of higher education development policies managed through the management of the Directorate General of Higher Education, as well as the coordination of the implementation of these policies with various universities in Indonesia. In terms of this coordination, the Directorate General of Higher Education is assisted by 18 (eighteen) Higher Education Service Institutions (LLDikti).

As a transformation of the Coordination of Private Higher Education (Kopertis), LLDikti has the authority to supervise private and state universities in their respective regions. The functions of LLDikti are: 1) Implementing guidance for the implementation of the Tri Dharma Program of Higher Education at Private Higher Education Institutions (PTS) in their working areas; 2) Providing encouragement and suggestions in the context of developing Private Higher Education Institutions in accordance with policies determined by the Directorate General of Higher Education; 3) Providing assistance in the form of facilities and personnel to Private Higher Education Institutions in order to improve the ability of PTS to be independent; 4) Carrying out other tasks as directed by the Directorate General of Higher Education; and 5) Carrying out technical control and protection for PTS in their working areas

The description above shows that the management and leadership of the Directorate General of Higher Education not only includes its internal organization but also the university organization which is an external part of its institution. Fiedler argues that the contribution of a leader to the effectiveness of group performance depends on the method or style of leadership and according to the situation faced (Fiedler, 1967). Most people still tend to say that effective leaders have certain traits or characteristics that are very important. For example, charisma, foresight, persuasiveness, and intensity. And indeed, if we think about heroic leaders such as Napoleon, Washington, Lincoln, Churchill, Sukarno, General Sudirman, and so on, we must admit that such traits are inherent in them and they have utilized them to achieve the goals they want.

There are actually several things that need to be considered so that leadership can play a good role, including: 1) The main basis for leadership effectiveness is not the appointment or designation, but rather the acceptance of others towards the leadership in question; 2) Leadership effectiveness is reflected in its ability to grow and develop; 3) Leadership effectiveness requires the ability to "read" the situation; 4) A person's behavior is not formed just like that, but through growth and development; and 5) A dynamic and harmonious organizational life can be created if each member is willing to adjust their way of thinking and acting to achieve organizational goals.

METHODS

StudyThis study uses a literature review method with a descriptive-analytical approach. Data sources are obtained from scientific journals, government reports, and academic references related to higher education management and leadership.

RESULTS AND DISCUSSION

Challenges of Higher Education in the 21st Century

There are 3 (three) challenges to higher education from an American perspective, namely: (1) cost; (2) outcome; and (3) Disruption - "disruption" can be interpreted as a fundamental or fundamental change in innovation (Kasali, 2018). Another opinion states that the main challenges faced by 21st century universities include: (1) Student expectations are increasing exponentially; (2) Competition from digital innovation and technological advances; (3) Maintaining a global approach to operations; (4) Convincing the best talent to join and stay; (5) Cost and funding issues; (6) Funding and sharing research results (Wilder, 2019).

Ernst & Young (2016) at the 5th ASEM Rectors' Conference and Students' Forum (ARC5) (in Suryadi, 2019) mentioned 5 (five) "mega trends" that are triggers for change in the higher education sector, namely: (1) Democratization of knowledge and access; (2) Digital technology; (3) Integration with industry; (4) Global mobilization; and (5) Market competition and funding.

Democratization of knowledge and access is characterized by: (a) ubiquitous knowledge, (b) wider access to higher education; and (c) increasing public participation. Digital technology is characterized by: (a) Massive open online courses (MOOCs) and the rise of “online learning”, (b) digital technology in “campus based learning”, and (c) blended learning. Integration with industry is characterized by: (a) increasing scale of “industry based learning”, (b) research and commercialization partnerships, and (c) industry acting as certification bodies and knowledge providers. Global mobilization is characterized by: (a) increasing international student exchanges; (b) the growth of “global universities”, and (c) the emergence of new jobs leading to the need for new skills. Market competition and funding are characterized by: (a) intense competition to attract domestic and international students, (b) challenges of government funding, and (c) competition for new sources of funding.

Responding to the various challenges above, university management must be oriented towards the job market. Ernst & Young (2016 in Suryadi, 2019) argue that in aligning university management with the job market, it is necessary to pay attention to 5 (five) five determining factors of employment, namely: (1) Economy; (2) Technology; (3) Regulation; (4) Sociology; and (5) Demography.

In economic factors, the global economy is currently faced with uncertain and unpredictable changes. Flexibility is needed to cope with the fluctuations of change and to maintain competitiveness. technology: (a) In 2030, it is predicted that 1 in 2 jobs will be dominated by computerization, (b) millions of new jobs will emerge and

require completely new skills; and (c) In 2025, it is estimated that 60% of the young generation will enter jobs that currently do not exist.

In terms of demographic factors, the 21st century is an era of elderly dominance. In 2035, it is predicted that the number of young people will be half of what it is today. In addition, there will be differences in supply and demand for labor between geographies. In terms of sociology: there are 3 (three) generations currently working, namely: (a) Boomers 8%; (b) Gen X/Y 76%; and (c) Gen Z 16%. Furthermore, regulatory factors are needed to encourage the growth of skilled workers, flexible employment, mobility of skilled workers, higher education, and vocational training.

At the 9th Indonesian National Education Convention (KONASPI) 2019, Suryadi, (2019) recommended that the education system: (1) Alignment with the job market and focus on new skills; (2) Higher education needs to evolve: (a) increasing cooperation with the world of work/industry, (b) directing students to rapidly developing job sectors, (c) focusing on digital skills, (d) focusing on developing specific "human skills", (e) eliminating the "gender gap" in science, technology, engineering and math (STEM); (f) strengthening soft skills field experience through internships, field work lectures, practical work and others; (g) increasing international mobility; and (h) focusing on multilingual mastery

Facing the implications of the 21st century (Industry 4.0), Xing and Tshilidzi (2017) provide solutions for universities, including: (1) Teaching and learning process in the era of industry 4.0: (1.1) Wearables Assisted Teaching, Learning, and Training; Use of "wearable devices" as a tool to assist the teaching and learning process. Example: Finite element analysis (FEA) is an effective technique in engineering, such as for building analysis. The use of wearable technologies such as augmented reality (AR), is widely used to create virtual laboratories; (1.2) Massive open online courses (MOOCs); The conventional teaching and learning process is faced with limitations in learning space, student seating capacity and the number of teachers. As a result, the number of students who can be served is very limited. MOOCs can overcome these obstacles for lecture materials with certain topics; (1.3) Increasing Innovation Capabilities; Minimizing the gap between universities and the world of work; Not only focusing on creating skilled workers, but also increasing research capabilities, innovation/job creation; Researchers are encouraged to be able to work across disciplines (technology, social, humanities, etc.); (1. 4) Blended Learning; A combination of face-to-face and e-learning (video conferences, forums and chats).

(2) Research in the era of the Industrial Revolution 4.0 (Research 4.0): (2.1) Open Innovation; Open Innovation is a term used to promote a mindset in the information era where innovations made by a company are carried out openly, in contrast to the traditional mindset that always keeps their company's innovations secret. Open Innovation is a statement that states that a company must use ideas that are no longer only from within (the group or company), but we can use ideas from external sources, which come from the thoughts of people out there, in various ways. The term Open Innovation was promoted by Henry Chesbrough, professor and director of the faculty. Open Innovation Center at the Haas School of Business at the University of California. The concept of open innovation is also closely related to other terms such as user innovation, cumulative innovation, know-how trading, mass innovation and distributed innovation;

(2.2) Evolutionary & Revolutionary Innovations; Evolutionary innovation is based on existing technology. Revolutionary innovation focuses on the invention of new technologies; (2.3) Research and Development based on new technology; The development of new technology is an important part of increasing research and development capacity. This can be used to improve the accuracy of data acquisition; the use of big-data analytics to define statistical patterns; the improvement of artificial intelligence techniques for more effective information retrieval, collection, organization and discovery of knowledge. “Additive manufacturing” (3D printing), is one example of new technology that can be used to reduce the cost of making prototypes, which usually takes time and money in conventional R&D activities in education.

(2.4) Shorten Innovation Cycles; Compared to R&D activities in the commercial world, innovation activities in higher education are often perceived as time-consuming and less beneficial to the world of work. To reduce the innovation cycle time, universities can organize lean innovation activities, where all team members can interact directly with the team leader, thereby accelerating the response to emerging research trends. Thus, all series of innovation activities can be coordinated quickly and effectively, such as: brainstorming, conceptualization, model design, theory verification, experiment setup, component procurement, prototyping, testing, analysis and delivery of innovation results.

(3) Higher Education Services in the Industrial Revolution 4.0 (Service 4.0); (3.1) Higher Education as a Platform: a) Multidisciplinary, cross-disciplinary activities; (b) MOOCs, Blended Learning and so on; (c) Utilization of the Internet of Everything; (d) Digital infrastructure updates; and (e) Increasing connectivity between entities in higher education; (3.2) International Partnership Programs; Twinning programs are collaborations between local

educational institutions and foreign educational institutions to provide teaching materials with an interconnection system that allows teaching materials to be accessed from various locations. At the end of the session, foreign partner educational institutions can provide recognition or value for students. Franchise programs are a scenario where foreign educational institutions (partners) authorize local educational institutions to organize lectures/foreign partner programs, and students receive submissions/values from foreign partners. Double or joint degree is a collaboration between local educational institutions and foreign educational institutions (partners) to jointly organize educational programs and students will receive recognition/value from both parties, either together or individually. Blended learning is a collaboration between local educational institutions and foreign educational institutions (partners) to organize educational programs in various forms such as: e-learning, online learning or on-site learning.

Referring to the exposure of challenges and opportunities above, it is concluded that higher education management in the 21st century at the management level in the Directorate General of Higher Education needs to prioritize regulations that encourage government funding both to increase the capacity and quality of higher education resources and to provide supporting facilities and infrastructure for learning in higher education based on digital technology. Cooperation between higher education institutions and the industrial world, technology-based learning such as virtual laboratories, MOOCs, and blended learning also need to be a priority.

Effective Leadership Model

The complexity of the challenges and solutions that universities need to take in facing the implications of developments in the 21st century (industry 4.0) as described above, the role of leaders is the spearhead that determines the success of higher education organizations. The role of the rector or director is key to the success of a university, so that the outcomes of higher education graduates, research, and innovation can provide added value to increasing the nation's competitiveness.

But in reality, according to Gufron, 4,741 universities in Indonesia, not all of them have a strong leader. On the other hand, the main problems faced by higher education today include access, quality, equity, and justice. The leadership crisis often makes the problem even more complex because of internal problems of the university.

The leader of a university is a key person to realize a quality university, as Doreche's opinion quoted by Danim, that: "I never saw a good school without a good principle" (Danim 2010: 37). A leader is a person who directs and influences the activities of the members of the organization (Stoner 1996: 11). Therefore, a university leader is a visionary (Indrajit 2006: 49). The vision of a university leader must be limited by the time of its achievement (Engkoswara 2010: 137), and in accordance with the tri dharma. The appointment and dismissal of leaders are in accordance with applicable provisions, by implementing the pattern of "management is how to get things (goals) done with other people" (Indrajit 2006: 31) and paying attention to contemporary leadership (Usman 2009: 358-361).

The qualifications of a leader are people who are effective in giving orders, inspiring, building a compact work group, being a role model, accepted by subordinates (Anzizhan 2006:40). Enkoswara emphasizes the exemplary aspect of a leader (2010:95). Specifically, a school leader, according to Mulyasa, is someone who is able to act as an educator, manager, administrator, supervisor, leader, innovator, and motivator (EMASLIM) (2009:98). In accordance with Number 60 of 1999, the duties of a university leader are "Leading the implementation of education, research and community service, fostering educational staff, students, university/institute administrative staff and relationships with their environment. Therefore, a university leader is a manager and a professional.

A professional leader must master the job, have loyalty, have integrity, be able to work hard, have a vision, have pride, have commitment and have motivation, according to Mahrip (Bupatimaju.blogspot.com). In this case, the rector is not only a leader but also a manager, namely based on authority or assignment, producing something, completing and involving routine things, people who do things (Yusuf 2011:60-61). The rector is assisted by four assistant rectors according to their respective fields (Indrajit 2006:49). They are all referred to as Chief Executive Officers (CEO) (Indrajit 2006:48). The rector coordinates all assistant rectors to achieve goals. Therefore, the rector should understand the hierarchy of needs according to Abraham Maslow (Santrock 2007:512). Such a big task, of course, should be accompanied by a big award, as regulated in the Law and Government Regulations.

The quality theory in this postmodern era is a contemporary theory, namely a theory that is oriented towards customer satisfaction, product excellence, and continuous improvement (Ishikawa, 1989; Sallis 2010). Integrated quality management is one of the contemporary theories, which emphasizes the criteria for higher education quality, namely relevance, academic atmosphere, internal management, sustainability, efficiency, productivity, leadership, access and fairness. These criteria are known as RAISELE (Carr and Hard, 1999; Tilaar, 2009). Quality begins with quality awareness, followed by quality planning and quality control (Abdullah, 2011; Ishikawa, 1985; Sallis, 2010). Quality control is followed by quality assurance (Sumardjoko, 2010) and continues to continuous quality improvement, because innovation and quality demands are also continuous (Mulyasana, 2011; Alifuddin, 2012; and Yusuf, 2011). To implement quality management, contemporary leaders and leadership are needed (Indrajit, 2006; Drucker, 1999; Johnson, 1995), namely visionary, democratic, autonomous, team, inclusive, managerial, educator and holistic. Contemporary leaders and leadership are vision-oriented (Indrajit, 2006; Sumardjoko, 2010; Usman, 2009; Tilaar, 2009), and have the ability to influence all elements in an effort to achieve the vision (Danim, 2010; James Stoner, AF Freeman, R. Edward, 1996). Democracy because it comes from below, the result of fellow choices and working together with subordinates (PP Number 60 of 1999), not employing or ordering subordinates (Indrajit,

2006). Autonomous because of the independence of higher education management (Law of the Republic of Indonesia Number 20 of 2003; PP Number 12 of 2012; Adar, 2007). Team or top leadership treats employees as partners, technology-based, vision-focused, global partners (Indrajit, 2006). Critical inclusiveness, open to change by maintaining the values of religious and national identity and integrity (Nandika, 2007; Smith, 1999; Widdah, 2012; Sutjipto, 2012; and Nugroho, 2010).

Managerial skills with the ability to make strategic planning, organizing, coordinating, controlling, and evaluating (Akdon, 2009; Gitusudarmo, Mulyono, 2009; Abbas, 2009; Kaplan, 1996). Managerial skills are combined with holistic skills, namely as educators, administrators, supervisors, leaders, innovators, and motivators, abbreviated in English as EMASLIM (Mulyasa 2009:98; Yusuf 2011).

The contemporary leaders and leadership described above, synergize with quality management. In other words, quality management can be applied by contemporary leaders and leadership. Thus, the purpose of this study is to find the causes of the weak quality of leaders and leadership that cause weak management of higher education by using a cause-and-effect diagram, known as the Ishikawa Fishbone Diagram.

CONCLUSION

Higher education in the 21st century requires leadership that is adaptive, innovative, and responsive to technological changes and global dynamics. The Directorate General of Higher Education needs to develop policies that encourage the implementation of technology in learning and improve the quality of human resources. Situational, transformational, and service leadership models can be effective strategies in managing quality and globally competitive higher education.

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