

Strengthening Education Governance Management University in Penta Helix Perspective Towards the Era Society 5.0

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ABSTRACT

The Revolution industrial era 4.0 which moves to society era 5.0 requires universities to improve and strengthen synergistic collaboration between various parties so that their human resources are able to face challenges and take advantage of existing opportunities. Human resources in question are educators (lecturers), education staff and students. The world of universities is considered an institution that is able to produce graduates who have intellectual abilities and competitiveness globally, so it is very important to develop soft skills and hard skills for human resources so that they can increase the relevance of educational institutions to the world of work, both business and industry. Thus, the efforts that must be made by universities are strengthening education governance in universities that lead to digital transformation through the MBKM program. The purpose of this study was to determine the strengthening of higher education governance management in the penta helix perspective, especially in the Public Administration Study Program, University of Muhammadiyah North Sumatra. The method used in this research is qualitative method. The results obtained in strengthening the ability of higher education human resources are through key performance indicators (IKU) which include curriculum development, learning methods and increased collaboration with various parties including the existence of MoU and MoA.

Keywords: *management, governance, education, penta helix, MBKM, IKU*

1. INTRODUCTION

Advances in technology and information have emerged as a new phenomenon created by the times in the era of globalization. This condition demands that educational organizations including universities are always required to create various innovations and have competitive advantages in terms of product quality, services, costs and human resources. Higher education must be able to face the biggest challenges in the development of technology and information so that it can become an opportunity in improving the quality of education.

Technology that is growing slowly will disrupt the education sector, namely the need for quality and superior human resources so that they are ready to use in the world of work. Efforts to develop and improve the quality of human resources in a sustainable

manner are absolutely necessary because of their dynamic and progressive nature. Higher education as an educational institution is a strategic place to increase the capacity and integrity of human resources. Thus, in accordance with the demands of society on universities as higher education institutions, they must be able to form competent and professional personnel so that they have the ability to work.

The revolution industrial era 4.0 moves to society era 5.0, bringing considerable changes to the education system in Indonesia. The world of education is considered a leading institution that is able to face challenges and take advantage of opportunities in the era of digital transformation, so it has a great responsibility in producing human resources (HR) who are ready to work and are

competitive and able to compete in the industrial world. The world of education can produce workers with special skills according to industry needs.

Based on data obtained from the Central Bureau of National Statistics [1], that in February 2014 there were 195,258 unemployed persons; In February 2015 it was recorded that the unemployment rate increased quite a lot to 254,312 people; then in February 2016, the number decreased slightly to 249,362 people; and February 2017, the unemployment rate is almost the same as last year but tends to increase by 249,705 people. This is the basis for the government to create programs that can reduce unemployment through improving the education system and improving the quality of education so that it can produce human resources who are able to compete and are ready to work in the industrial world. The data above is a big challenge for the world of education, especially higher education, so breakthroughs and significant changes are needed in responding to these challenges.

Higher education is a higher education institution that must be able to answer various challenges faced in the 4.0 revolution era and be able to implement this MBKM policy by achieving the goals of the national education system in Indonesia. This is because the world of education can produce workers with special skills according to industry needs that are oriented towards achieving key performance indicators (KPI). There are 8 KPIs, namely 1) Graduate Work Readiness (IKU 1); 2) Off-campus students (IKU 2); 3) Lecturers off campus (IKU 3); 4) Percentage of permanent lecturers (KPI 4); 5) Application of lecturer research (IKU 5); 6) Academic partnership (IKU 6); 7) Classroom Learning (KPI 7); 8) International Accreditation (IKU 8)

Improving the quality of education through the achievement of 8 KPIs in higher education is one of the efforts in responding to challenges in this era of globalization, namely the era of the industrial revolution 4.0 towards the era of society 5.0. Universities are expected to be the key to development by implementing educational

policies that are oriented towards achieving competence and producing adaptive, competitive, superior and characterized human resources (HR). Zahruddin [2], that universities are transforming into entrepreneurial universities in order to build institutional capacity, universities in Indonesia are expected to be able to compete in the era of globalization which is marked by advances in science and technology with universities from neighboring countries such as Malaysia, Singapore. and others, even more are expected to be able to compete at the international level. Furthermore, Nurdin [3] that in developing higher education institutions into quality and superior educational institutions, several changes must be made to support modernization, including: 1) Implementing programs to formulating/implementing programs; 2) Centralized decisions become joint/participatory decisions; 3) Limited movement space becomes flexible space; 4) Centralized to decentralized; 5) Individual becomes cooperation; 6) The bureaucratic base becomes a professional base; 7) Set to be independent; 8) Malregulation becomes deregulation; 9) Limited information becomes open information; 10) Wasteful to be efficient; 11) Delegation becomes empowerment; 12) A vertical organization becomes a horizontal organization.

From the explanation above, it can be concluded that the development of science and technology is an important factor for adjustment in various aspects of education, such as the direction of educational policy that is oriented to the achievement of competence. Thus, universities are required to be able to produce human resources who are ready to take part in society, the business world and industry in accordance with the demands of competence in the 4.0 revolution era. However, there are fundamental problems in developing higher education, namely the low quality of graduates, the problem of equitable access to education and the problem of relevance between the competencies possessed by graduates and the competencies required by the world of work. So, it is highly expected that there will be educational policies and programs that can realize the needs of the community, the

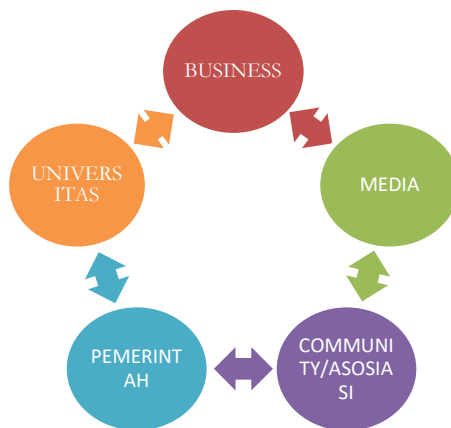
business world and industry in the 4.0 revolution era.

The era of the industrial revolution 4.0 which is moving to the era of society 5.0 demands a change in the education system, especially in universities, where human resources are no longer required for manual and procedural skills but are required more for creative, communicative, collaborative and problem-solving skills, oriented to integrated skills between knowledge, skills and attitudes and mastery of technology and information systems. Human resources referred to in higher education are educators (lecturers), education staff and students.

The government's policy regarding the Independent Learning Program - Independent Campus (MBKM) is one of the government's efforts to respond to changing times that are influenced by the development of science and technology. This change is an important factor in determining the direction of education policy that is oriented to the achievement of competence and producing human resources (HR) of universities that are adaptive, competitive, superior and have character. Thus, a well-planned education governance management is needed according to the provisions that have been set so that it can produce quality human resources and are ready to compete in the business and industrial world (DUDI) in the era of society 5.0.

The world of education has a responsibility in creating prospective workers who have the ability and skills in the business world and the industrial world because education (university) is an integral part in the process of preparing quality and competitive human resources. Thus, human resources owned by universities must be strengthened by synergistic collaboration between various parties so that they are able to face challenges and take advantage of opportunities that exist in the era of the industrial revolution 4.0 and towards the era of society 5.0.

Increasing the relevance of educational institutions in the world of work, business and industry, called the link & match model, aims to produce students or graduates who are not only capable in academic terms but are also able to master information technology and adapt to the development of the industrial world. Link & match collaboration related to collaboration between educational institutions and industry is the Penta-Helix model, which includes government, academia/universities, private sector/business/industry, communities/associations and the media. The collaboration of 5 (five) penta-helix components can strengthen each other and interact on an ongoing basis.



Future 1 Scema Penta Helix
Source: Lindmark, et.al

Lindmark, et.al [4], in collaboration that produces synergistic cooperation is expected to realize an innovation that is supported by resources that interact synergistically.

Rizkiyah [5] The collaboration of 5 (five) Penta-Helix components has interrelated contributions, namely: 1) Academics/universities are knowledge

resources, including concepts and theories; 2) Business is an entity that has activities in processing goods or services; 3) The government is one of the stakeholders that has regulation and responsibility; 4) Communities/Associations are people who have the same interests and are relevant to existing developments; 5) Media are stakeholders who have more information to develop and promote.

Synergistic collaboration between components can realize increasingly intelligent services through the use of technology to face challenges and opportunities in the industrial revolution era 4.0. The benefits of this synergistic collaboration, the world of education can produce workers who have special skills according to what is needed by industry and produce professional and competent human resources. So, it is necessary to strengthen education governance in higher education institutions in Indonesia, including in universities, especially in the Public Administration Science Study Program, University of Muhammadiyah North Sumatra.

The process of strengthening education governance in the Public Administration Science Study Program, University of Muhammadiyah North Sumatra, must also have a synergy of cooperation and build networks with industry parties who have the world of work. This is intended so that the Public Administration Study Program of the University of Muhammadiyah North Sumatra can carry out the learning process outside the campus by gaining expertise in the industrial world so that students who graduate from these universities can become graduates who are ready to work and are competitive. Related to curriculum development and good learning needed in the implementation of the MBKM program to achieve IKU 8, then the Public Administration Science Study Program of the University of Muhammadiyah North Sumatra also builds synergy with expert groups or associations that coordinate certain sciences so that scientific development can be sustainable and oriented towards completion. problems and the achievement of development goals. The existence of a synergistic collaboration between these components is the main reason for the government to create the Merdeka Learning - Independent Campus (MBKM) program. The MBKM government program is a program that is in line with the vision of the

Public Administration Science Study Program, Muhammadiyah University of North Sumatra, which is to become a superior study program (graduates produced are human resources needed, their abilities are recognized in the world of work).

2. METHODS

The research method used is a qualitative method, which is a type of research that seeks to describe the object or subject under study in accordance with what it is with the aim of systematically describing the facts and characteristics of the object under study correctly and understanding each context of the phenomenon as a whole. Creswell [6], that qualitative methods by a number of individuals and groups of people are methods to explore and understand the meaning of social or humanitarian problems. The data analysis used in this study is qualitative data analysis with an interactive model, Miles, Huberman and Saldana [7] explain that there are three activities in the interactive model data analysis, namely word condensation (data condensation), data presentation (data display) and conclusions/verification, (drawing/verifying) which must be done continuously and repeatedly by the researcher until it finally produces valid and complete results. The locus of this research is the Public Administration Study Program, University of Muhammadiyah North Sumatra.

3. RESULTS AND DISCUSSION

Education has a very important role in advancing the civilization of a nation that can encourage the creation of a quality, creative and productive society. Yustiyawan [8], that that a valuable investment in shaping human resources in improving the civilization of the nation and state is called education. Furthermore, Nuraeni [9] education is the main factor in producing superior human resources in order to achieve a better life. Thus, education is one of the most important sectors in developing the region through the development of human resources who have excellence and integrity.

Mulyasa [10] that in the context of the National Education System that, education is a process to improve, improve, change the knowledge, skills and attitudes and behavior of a person or group in an effort to educate human life through guidance, teaching and

training activities. The educational process shows the existence of active activities or actions and dynamic interactions that are carried out consciously in an effort to achieve goals. Then, Basri and Rusdiana [11] state that the national education system shows the need for an organized, directed, structured national education management in a single unit. Thus, the implementation of the national education system in Indonesia requires strengthening education governance so that it can face challenges in the 4.0 revolution era.

Suharsaputra [12], that the national education system provides a portion of higher education in roles and functions, to: a) Develop and grow abilities, shape the character, and civilization of a dignified nation in order to educate the nation's life; b) Developing innovative, responsive, creative, skilled, competitive and cooperative academics through the tri dharma of higher education; c) Developing science and technology by paying attention to and applying humanities values.

Based on Suharsaputra's explanation, it is important to have education management in universities, especially Muhammadiyah universities as an effort to realize quality education and produce graduates who are competent in their fields so that they can be accepted and ready to be used in the business and industrial world. Nurfadillah [13] that education governance is related to the control system and management information as well as the existence of accountability and transparency and accountability, in the efficient use of resources. Then Wisnumurti [14] explained that education governance towards independent and advanced higher education includes: a) Accountability which describes the ability and commitment to account for all activities carried out to all internal and external stakeholders. Accountability that must be accounted for includes academic and non-academic, namely by meeting the standards set by the university; b) Transparency which describes the openness and ability to present relevant information appropriately and accurately to stakeholders in accordance with applicable laws and regulations. This transparency is also to facilitate the accessibility of stakeholders to obtain information related to academic and non-academic data; c) Non-profit, every activity carried out by the university does not

aim to seek profit; d) Oriented to quality assurance; e) Managed effectively and efficiently.

Educational governance in higher education is the utilization of human resources or other resources needed to achieve certain goals. The determination of the dimensions of governance is based on the delivery of effective education services so that it becomes the starting point in overcoming the weaknesses or shortcomings that exist in universities so that they can improve educational performance. The OECD [15] explains that governance systems include a complex network of frameworks, the characteristics of institutions, and how they relate to the whole system, how money is allocated to institutions and how their responsibilities include the relationships and structures that direct and influence behavior. The implementation of good higher education governance is not only in compliance with laws and regulations, but also relates to efforts to innovate and improve on an ongoing basis that refers to the principles of good governance.

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on an ongoing basis that refers to the principles of good governance.

1. This MBKM policy intends to encourage students to master various useful and useful sciences in entering the world of work, namely the industrial world so that students are ready to work and are competitive. The UPI MBKM Guide [16] states that the implementation of MBKM is carried out for several purposes, namely:
2. The MBKM policy launched by the Minister of Education and Culture is a framework to prepare students to become graduates who are tough, adaptive and in line with the needs of the times, and are ready to become future leaders with a high national spirit.
3. Through this policy, wide opportunities are opened for students to enrich, deepen and improve their insight and competence in the real world in accordance with their potential, talents, interests, spirit and ideals.
4. Learning can be done anywhere, learning is not limited, not only in classrooms, libraries and laboratories, but also in industry, research centers, workplaces, places of service, rural areas and communities.
5. Through close cooperation between universities and the world of work and with the real world, universities will be present as springs for the progress and development of the nation, as well as directly color the nation's culture and civilization.
6. With this policy, the competence of graduates will increase, both non-technical skills (soft skills) and technical (hard skills), so that graduates are more prepared and in line with the needs of the times, and are more capable as future leaders of the nation with superior and personality. Experience-based learning programs with flexible pathways are expected to be able to facilitate students to develop their potential according to their potential.

Efforts made by the Public Administration Study Program of the University of Muhammadiyah North Sumatra, are implementing the MBKM program which is oriented towards the achievement of KPI 8. Implementing this MBKM program The Public Administration Study Program of the University of Muhammadiyah North Sumatra aims to strengthen education governance

management through; a) development of the MBKM-based curriculum model as an effort to improve the competence and achievements of graduates of the Public Administration Science Study Program, University of Muhammadiyah North Sumatra based on KKNI and SN DIKTI; b) increasing the cooperation of the Public Administration Study Program with partners through field practice program activities as well as; c) maximizing students' abilities for intelligent services through the use of information technology.

The targeted targets in strengthening educational governance management of the Public Administration Study Program at the University of Muhammadiyah North Sumatra are a) to produce a curriculum for the Public Administration Science Study Program based on MBKM based on KKNI and SN DIKTI; b) implementing lecture programs with a curriculum that has been adapted to the MBKM program and giving students the freedom to choose programs and learning activities according to their interests; c) produce a model of cooperation with partners based on competencies that are adapted to the MBKM curriculum; d) produce graduates who have good soft skills and hard skills and are better prepared to elaborate on global information and science and technology as a means of carrying out administrative reforms, problem solving and capacity building for public services.

The MBKM program is expected to be able to encourage the Human Resources of the Public Administration Science Study Program, University of Muhammadiyah North Sumatra to make breakthroughs that result in innovation, creativity, professionalism and competence in their fields so that they can collaborate directly with parties related to the world of work. Not only students, but lecturers as educators must also improve their abilities and professionalism in their fields or knowledge. One of the challenges that must be faced by educators (lecturers) as higher education human resources is being able to create innovative and useful research (research) in society. Then, lecturers must also be able to publish research results as innovations created in international publications so that they can support the development of the education system towards the era of digital transformation. Suwardana

[17], there are several benefits obtained from the publication of scientific papers: a) For Lecturers; facilitate responsibility for the authenticity of his guidance work, facilitate the fulfillment of credit scores; b) For Students; able to read scientific papers, able to write scientific works (analytical), recognize scientific journals to look for references; c) For the State; improve the reputation of the State; d) For Higher Education; make it easier to carry out its role, liven up campus life, improve the reputation of the College.

The ability of lecturers to publish research results at the international level is one of the stages that can push universities towards the era of society 5.0 through the development of science and technology. Improving the ability of human resources in the Public Administration Study Program at the University of Muhammadiyah North Sumatra is related to improving the education system and quality of education in universities to achieve excellence and professionalism in their fields towards the era of society 5.0.

The achievement of excellence and professional and HR competencies in the Public Administration Science Study Program, Muhammadiyah University of North Sumatra in the era of the industrial revolution moving towards the era of society 5.0 through this MBKM program can provide broad opportunities and opportunities for HR lecturers of the Public Administration Science Study Program, Muhammadiyah University of North Sumatra. to conduct international research, publish research results in indexed international journals, build scientific communities internationally so that they can contribute to community service as a liaison and mutual understanding between people and nations. This achievement is also a support for improving the quality of higher education at the international level.

Marasabessy [18], there are several advantages including, among others, excellence in research that is recognized by the international academic community through international publications; excellence in teaching staff (professors) who are highly qualified and best in their fields; excellence in academic freedom and intellectual excitement; management and governance excellence; adequate facilities for academic work; such as complete libraries, state-of-the-art laboratories, and adequate funding to support teaching and

learning processes and research. One of the keys to higher education performance is the main performance indicator of higher education through MBKM is the development of lecturer professionalism, in accordance with KPI 3 and KPI 5 which have been set by the Ministry of Education and Culture. Where, lecturers are encouraged to be able to carry out problem-based, collaborative learning and not only rely on classroom learning so that they are able to apply research results in the community based on their knowledge in accordance with the development of science and technology. The development of classroom learning in the era of the industrial revolution 4.0 also supports IKU 7 as a lecturer's academic scientific activity on campus and off campus.

The MBKM program implemented by the Public Administration Study Program at the University of Muhammadiyah North Sumatra in the era of the industrial revolution 4.0 towards the era of society 5.0 also measures the performance of IKU 1 and KPI 2, which can produce graduates who are competent in their fields. Students as college human resources as well as university results that can be created in the world of work and industry, must be able to hone skills in innovative, flexible, curiosity-based learning situations and be able to provide solutions or answer demands in society or industrial needs, so that when students graduated as a graduate, has been able to become human resources who are ready to work, have innovation, creativity and high competitiveness.

The implementation and achievement of KPI 8 in the higher education system of the University of Muhammadiyah North Sumatra must be able to collaborate with various parties who support the MBKM program in the industrial revolution 4.0 era leading to the era of society 5.0. The most important opportunities and challenges in the era of society 5.0 are preparing quality human resources who have the ability to communicate, collaborate, be creative, think critically and be able to provide solutions in problem solving. One of the efforts made by the Public Administration Study Program at the Muhammadiyah University of North Sumatra is to design curriculum and semester learning in the MBKM program grouped according to needs and produce documents that support the implementation of the MBKM

program in implementing the curriculum in the IAP FISIPOL UMSU PRODI. The documents needed in implementing the curriculum through the MBKM program are: 1) Guidelines and SOPs, especially for Field Practice Program/PPL activities; 2) Guidelines and SOPs related to partner cooperation; 3) Field Practice Program Module. These documents are Field Practice Programs both within the Study Program and outside the Study Program, and as an effort to support the MBKM program.

Furthermore, building networks through synergistic collaboration with various parties to implement the MBKM-based curriculum, both with the government, scientific associations and with DUDI (business world and industry). The synergy of collaboration between universities and the world of industry (private/business parties), government, associations and the media must have a memorandum of understanding so that every activity carried out can be carried out in accordance with the flow of the cooperation agreement that was built, with a memorandum of understanding (MoU) it can be followed up with an MoA, which can provide feedback from the results of the cooperation. As revealed by Muktiyo [19], that this program can support the development of learning, instilling noble character based on national culture to fend off violence, radicalism and intolerance, as well as revitalizing the curriculum to respond to the needs of sustainable development in the era of the industrial revolution 4.0 which is moving towards an era of globalization. digital transformation 5.0.

Based on the explanation above, it can be concluded that strengthening the management of education governance in higher education in the penta helix perspective must be done by strengthening all components of higher education, especially in the Public Administration Science Study Program so that they can carry out and realize the implementation of the tri dharma of higher education in accordance with the vision, mission, goals and objectives. The process of strengthening governance at universities must also have a synergy of cooperation and build networks with industry parties who have a world of work.

4. CONCLUSION

Strengthening the management of education governance in higher education in the pentahelix perspective through the Independent Learning Program - Independent Campus (MBKM) towards society era 5.0, is to prepare all components of education higher to improve the quality and professionalism of their knowledge. One of them is to create and prepare students not only to study on campus but also to develop learning through students' thinking power through strengthening soft skills, then provide opportunities and develop the competence and expertise of lecturers in producing professionals in their fields. Strengthening the management of education governance in tertiary institutions, especially the Public Administration Study Program, Muhammadiyah University of North Sumatra, by developing an MBKM-based curriculum so as to provide benefits for Universities; have the opportunity to improve the quality of tri dharma and cooperation with partners based on the link & match model and can maximize the acceleration of KPI achievement and improve the image of universities.

REFERENCES

- [1] Badan Pusat Statistik Republik Indonesia Tahun 2018
- [2] Zahruddin (2013). Pengembangan Kelembagaan Menuju Universitas Entrepreneurial (Studi Kasus di Universitas Indonesia); Tesis: Universitas Pendidikan Indonesia Bandung
- [3] Nurdin, "Quality Assurance In Higher Education," *J. Adm. Pendidik.*, vol. 10, no. 2, pp. 1–15, 2009, doi: <https://doi.org/10.17509/jap.v10i2.631>
- [4] Lindmark, et.al (2009). Difficulties of Collaboration For Inovation Land University; Swedia.
- [5] Rizkiyah, et.al (2019) Sinergitas Pentahelix Dalam Pemulihan Pariwisata Pasca Bencana Erupsi Gunung Api Sinabung Di Kabupaten Karo, Sumatera Utara. *Jurnal IPTA* Volume 7 No. 2 Tahun 2019; e-ISSN: 2548-793
- [6] Creswell, W. John. (2014). *Research Design (Pendekatan Kualitatif, Kuantitatif dan Mixed)* Edisi Ketiga. Yogyakarta: Pustaka Pelajar.
- [7] Miles, Matthew B, A Michael

- Huberman dan Saldana. 2014. *Qualitative Data Analisis: a Methods Sourcebook*. California; Sage Publication, Inc
- [8] Yustiyawan, Halim, Rachman (2019), Penguatan Manajemen Pendidikan Dalam Mutu Pendidikan Tinggi Studi Kasus di STIE IBMT Surabaya. *Jurnal Dinamika Manajemen Pendidikan*, Vol. 4 No. 1 Tahun 2019.
- [9] Nuraeni, Y. (2010). Perancangan Sistem Informasi Penjaminan Mutu Perguruan Tinggi Bidang Sumber Daya Manusia. *Journal of Information System*, 6 (1), 32-4
- [10] Mulyasa, E. (2010). *Standar Kompetensi dan Sertifikasi Guru*. Bandung: PT. Remaja Rosdakarya.
- [11] Basri, H., & Rusdiana, A. (2015). *Manajemen Pendidikan & Pelatihan*. Bandung: CV Pustaka Setia
- [12] Suharsaputra, U. (2015). *Manajemen Pendidikan Perguruan Tinggi*. Bandung: Refika Aditama
- [13] Nurfadillah, Emi. (2017) *Tata Kelola Pendidikan: Studi Tentang Gerakan Ayo Sekolah Di Kabupaten Bojonegoro Dilihat Dari Perspektif Good Governance dan Sound Governance*. *Jurnal Kebijakan dan Manajemen Publik*, Volume 5, Nommor 3 Edisi September – Desember 2017
- [14] Wisnumurti, Oka, Anak Gede (2017) *Tata Kelola Perguruan Tinggi Swasta Menuju Persaingan Global*. Prosiding Seminar: Revitalisasi Tata Kelola Perguruan Tinggi Juni 2017 (P.1-12). Unit Penerbitan (UP) Pusat Penelitian dan Pengabdian pada Masyarakat (P3M) Unipas Singaraja. ISBN 978-979-17637-3-8
- [15] OECD (2017)/Asian Development Bank. (2015) *Education in Indonesia Rising to The Challenge*, OECD Indonesia
- [16] *Panduan Implementasi Merdeka Belajar Kampus Merdeka Tahun 2020* Universitas Pendidikan Indonesia; Bandung
- [17] Suwardana, Hendra (2017). *Revolusi Industri 4.0 Berbasis Revolusi Mental*. *Jati Link*, 1 (2), 102-110
- [18] Marasabessy, Junaidi, Muhammad. (2016). *Manajemen Mutu Bertaraf World Class University (Multikasus di Universitas Islam Negeri Maliki Malang dan Universitas Brawijaya)*; Tesis: Program Magister Manajemen Pendidikan Islam Pascasarjana; Universitas Islam Negeri Maulana Malik Ibrahim Malang
- [19] Muktiyo, Widodo (2019). *Keunggulan Perguruan Tinggi (Untuk meraih daya saing dan daya sanding, perguruan tinggi perlu terus mengembangkan inovasi)*
(<https://www.suaramerdeka.com/smceta/k/baca/165617/keunggulan-perguruan-tinggi?page=3>)