Jurnal Multidisiplin Sahombu
Volume 5, Number 02, 2025, DOI 10.58471/jms.v5i02
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

The Effect Of Leadership And Innovation On UMKM Performance Mediated By Emotional Intelligence

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Article Info
Keywords:
Science and Technology,
Collaboration,
The role of public relations in building a positive image,
Socialization of Science and Technology programs

ABSTRACT
The development of the Master Plan for the Development of Science and Technology (IPTEK) is a strategic step to advance Indonesia in facing the competitive era of globalization. With abundant natural and human resource potential, Indonesia is faced with challenges such as limited research budget, lack of quality human resources, and weak collaboration between research institutions, universities, and industry. This master plan is expected to provide a roadmap for innovation that is oriented towards community needs and increases the nation's competitiveness. This research is a research that uses qualitative research, namely a type of research that is guided by subjective, non-statistical and non-systematic assessments, namely assessments not in the form of numbers and scores but rather quality. This article discusses the importance of international collaboration, the development of STEM-based curriculum, and strengthening resources and infrastructure to support a sustainable innovation ecosystem. In addition, the master plan also focuses on increasing community and stakeholder participation in the development of IPTEK. The challenges faced in implementing this plan are also presented, as well as the role of public relations in building a positive image and socializing IPTEK programs to the public. In conclusion, this master plan is the key to sustainable social and economic transformation, in order to create a better future through the use of technology.

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INTRODUCTION

Science and Technology (IPTEK) has become the backbone of a nation's progress. In an increasingly competitive era of globalization, the development of IPTEK is becoming increasingly crucial. Indonesia, as a country with abundant natural and human resource potential, is required to continue to innovate and increase its research capacity. Indonesia still faces various challenges, such as limited research budgets, lack of quality human resources, and weak synergy between research institutions, universities, and industry. To overcome these challenges, careful and integrated planning is needed. The Master Plan for IPTEK Development is expected to be a systematic solution to overcome existing obstacles and encourage more rapid growth of IPTEK.

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One concrete effort that can be done is through the development of a comprehensive and sustainable Master Plan for the Development of Science and Technology. This master plan will be a roadmap for Indonesia in realizing its vision of becoming a developed country based on science.

In a report published by UNESCO (2020) on science and technology education in developing countries, Indonesia is considered to be lagging behind in terms of developing a curriculum oriented towards practical technological skills. This has an impact on the low number of skilled workers in the high-tech sector. The Science and Technology Development Master Plan must prioritize the development of a more integrative and applicable STEM (Science, Technology, Engineering, and Mathematics)-based curriculum.

International cooperation in science and technology is key to accelerating technology and knowledge transfer. Indonesia needs to develop partnerships with developed countries and international institutions to accelerate the adoption of new technologies and increase research capacity. In addition, Indonesia must facilitate training and development of human resources who can work together with global experts.

The development of the Master Plan for the Development of Science and Technology will provide various benefits for Indonesia. Among them are increasing the nation's competitiveness, creating new jobs, and encouraging sustainable economic growth. In addition, this master plan will also contribute to solving various social problems, such as poverty, health, and the environment.

METHOD

Types of research

This research is a research that uses a qualitative research type, namely a type of research that is guided by subjective, non-statistical and non-systematic assessments, namely the assessment is not in the form of numbers and scores but rather its quality.

Research Procedures

(Moelong, 2006) said that "Qualitative research procedures can produce data in the form of words, both written and oral from people and observed behavior". The analysis in this study uses a qualitative approach because the data analyzed is not in the form of numbers and calculations but describes clearly and in detail and obtains in-depth data from the research focus on "Development of the Master Plan for the Development of Science and Technology".

Method of collecting data

Data collection method is a determining step in research activities, without data collection method, researchers will be chaotic and difficult in searching for information or data to support research. In addition, because the purpose of the research itself is to obtain data. Neuman (2014:41) argues that "Qualitative research data comes in various forms: photos, open interviews, observations, documents, and others".

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DISCUSSION

The Master Plan for the Development of Science and Technology (IPTEK) is a strategic document or guideline prepared by the government or related institutions to design and direct the development of the IPTEK field in the long term. This plan identifies concrete steps, resources needed, and policies that will be implemented to encourage the advancement of science and technology in a particular country or region. In general, this master plan aims to guide the development of science and technology, identify research priorities, and ensure that the resulting technology can be used to improve the quality of life, economy, and competitiveness of a country.

The long-term science and technology advancement master plan is prepared for a period of 25 (twenty five) years and can be reviewed once every 5 (five) years. Meanwhile, the medium-term science and technology advancement master plan is prepared for a period of 5 (five) years. The long-term science and technology advancement master plan is a guideline in the implementation of science and technology that is macro in nature, so it is expected that changes will not be made frequently.

The long-term master plan for advancing science and technology at least contains:

1. vision, mission and strategy for advancing science and technology;
2. Targets and stages of achievement of science and technology advancement;
3. Empowerment of science and technology institutions;
4. Development of science and technology resources; and
5. Strengthening science and technology capacity.

Meanwhile, the medium-term science and technology advancement master plan at least contains:

1. The target of advancing national science and technology;
2. Focus on science and technology development;
3. Stages of achievement in the advancement of science and technology;
4. Development of science and technology institutions;
5. Development of science and technology resources;
6. Development of science and technology networks; and
7. Priority activities for the implementation of science and technology advancement.

Objectives of the Master Plan for the Development of Science and Technology

The objectives of the Science and Technology Development Master Plan are as follows:

1. Enhancing Innovation and Research: The main objective of the master plan is to encourage continuous research and innovation in the field of science and technology, so that it can produce discoveries and technologies that will benefit society and industry.

   Example: Development of new technologies in the fields of renewable energy, health, or digital technology that can reduce dependence on foreign technology and increase domestic technological independence.
2. Supporting Economic Development: The development of science and technology is expected to create new economic sectors, increase productivity, and strengthen the country's competitiveness in the global market. The technology developed can support

the industrial, agricultural, health, and other sectors.
Examples: Agricultural technology that enables increased crop yields or the development of digital technology that drives a digital-based economy.

3. Developing Human Resources (HR): This master plan aims to improve the quality of HR in the field of science and technology, by involving education, training, and skills development to create experts who can contribute to technological progress.
   Example: Improving the quality of vocational and higher education to produce scientists, engineers, and skilled workers who are ready to face technological change.
4. Enhancement of Science and Technology Infrastructure: The development and provision of infrastructure that supports research, innovation and technology development, including laboratories, research facilities and innovation centers, is an important part of this master plan.
   Example: Establishment of research laboratories and innovation centers that support the development of new technologies.
5. Encouraging Collaboration and Synergy: The master plan aims to create synergy between various parties, such as the government, private sector, educational institutions, and the community. This collaboration is important to create a mutually supportive innovation ecosystem.
   Example: Collaboration between universities and technology companies to create technological solutions that can be applied in society.
6. Increasing Technological Independence: The development of science and technology is expected to reduce dependence on foreign technology by encouraging the development of domestic technology, which is in accordance with local needs and conditions.
   Example: Developing domestic technology, such as medical devices, renewable energy, or information technology, which does not depend on imports.
7. Responding to Global Challenges: The master plan also aims to prepare the country to face global challenges, such as climate change, health crises, and rapid technological advances. The development of relevant science and technology can help the country adapt and compete on the global stage.
   Examples: Development of environmentally friendly technologies to address climate change or health technologies to address the pandemic.
8. Accelerating Digital Transformation: another goal is to accelerate the digital transformation process across sectors, thereby accelerating the adoption of new technologies that can improve efficiency and effectiveness.
   Example: Application of 5G technology, Internet of Things (IoT), and artificial intelligence (AI) in everyday life.

The Role of Public Relations in Developing the Master Plan for the Development of Science and Technology

The development of communication technology affects almost all aspects of life, including the public relations profession. Public relations in today's era, not only uses traditional media, but also uses digital media such as websites, social media and other

platforms to establish broader and more targeted communication. "PR" or "Public Relations" which is often abbreviated as "PR". Public relations is not an exact science but also not just an art. Talking about public relations, our minds often turn to things related to communication, press conferences, information, public relations. In short, it is easily likened to the delivery of all information. According to the Fund and Wagnal dictionary, the American Standard Desk Dictionary published in 1994 as quoted by Anggoro1, the term public relations is defined as all activities and strategies/tricks used by organizations or individuals to create or maintain a good attitude and response from outside parties to their existence and actions. In pursuing a goal, all results or levels of progress that have been achieved must be clearly measurable, considering that public relations is a real activity.

The role of Public Relations (Public Relations) in the development of the master plan for the development of IPTEK (Science and Technology) is very important. This role is divided into 3 parts, namely strategic roles, operational roles and roles in developing the master plan. Here are some of the roles and responsibilities:

1. Strategic Role

Strategic roles are roles that focus on corporate management practices and business methods. This role involves using data from various sources, such as market research, surveys, performance reports, and financial forecasts, to create effective strategies for the company. This strategic management can help the company identify growth opportunities that are in line with the company's vision and mission and can conduct a thorough analysis of the company's internal and external environment. The following are strategic roles, namely:

   a. Communication and Information: Conveying the vision, mission, and objectives of science and technology development to the public, media, and stakeholders.
   b. Building Image: Increasing public awareness and trust in the development of science and technology.
   c. Managing Expectations: Managing the hopes and expectations of society regarding the development of science and technology.
   d. Developing Networks: Building networks with educational, research, industrial and government institutions.

2. Operational Role

Operational roles are part of operational management that deals with the day-to-day activities in an organization or company.

   a. Needs Analysis: Identifying community and stakeholder needs.
   b. Strategy Development: Developing communication and science and technology development strategies.
   c. Project Management: Managing IPTEK development projects, including budget and resources.
   d. Evaluation and Monitoring: Evaluating and monitoring the progress of science and technology development.

3. Role in Master Plan Development

   a. Identifying Objectives: Identifying the goals and objectives of science and technology development. Identifying objectives in developing a master plan for

science and technology development means determining and formulating what is to be achieved through the development. These objectives must be: Specific, measurable, achievable, relevant, and time-bound (deadline).

b. Analyzing Needs: Analyzing the needs of the community and stakeholders.
c. Developing Strategy: Developing a strategy for developing science and technology.
d. Allocating Resources: Allocating resources for the development of science and technology.
e. Developing Indicators: Developing indicators to measure the progress of science and technology development.

Examples of Successful Implementation of Public Relations Strategy in the Development of Science and Technology

1. Digital branding strategy of the Indonesian Institute of Sciences (LIPI) through social media by Lyra V. Ferbita, Yanti Setianti and Sussane Dida (2020).

Social media is one of the media used by LIPI to eliminate the rigid and bureaucratic perception. Social media is used to popularize research results and become a medium for branding, namely through a digital branding strategy. The LIPI Public Relations Team in creating a digital branding strategy is in accordance with the I-Branding approach, namely, Understanding Customer, namely social media is created by considering the different information needs of followers on each social media platform, Marketing Communication, namely as a brand LIPI understands the importance of two-way communication with its followers in order to create positive communication, Interactivity, namely social media as a forum for discussion and stimulating the public to discuss and provide input related to the institution, and Content, namely information content is made interesting, easy to understand, using popular language and has been scientifically verified so that it can be accounted for. In managing its social media, the LIPI Public Relations Team conducts audience mapping which determines the type of content and information that will be posted on social media. It can be concluded that with limitations and obstacles in equipment, Human Resources (HR) and funding can be overcome with the right digital branding strategy so that one of LIPI's social media, namely Instagram, has the most followers in all LPNK under the Ministry of Research and Technology of the Republic of Indonesia and becomes a reference for scientific information.

2. Public Relations Strategy in Socializing the Smart Electricity Program of PT. PLN (PERSERO) Suluttenggo Region in Ranotana, by Marlanny Rumimpunu, Dra. Dessie Warouw, M.Si and Stefi Harilama, S.Sos. Msi (2014)

The success of the Smart Electricity Program, one of which is from the public relations strategy in socializing it. The results of the study showed that there was a public relations motive in socializing the "Smart Electricity Program" of PT. PLN (Persero) Suluttenggo Region. The motives are, public relations motives in the past and public relations motives at present. in socializing the "Smart Electricity Program".

The strategy used by Public Relations in socializing the “Smart Electricity Program” is through open communication, talk shows, and establishing relations with the local press and conducting publications.

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Obstacles in socializing the "Smart Electricity Program" to the community consist of cognitive, affective and conative aspects. Cognitive barriers are in the form of lack of knowledge from the community about the advantages and benefits of using "Smart Electricity". Affective barriers are the result of the lack of some people who are not willing to switch from using postpaid electricity to prepaid electricity. Conative barriers are caused by the long-standing habit of people using postpaid electricity so that they are still reluctant to waste their time switching to prepaid electricity. From the results of this study, it can be concluded that in socializing the "Smart Electricity Program" there are past and present motives, which are carried out with open communication strategies, talk shows, and press publications, although there are obstacles in the form of cognitive, affective and conative. Based on this article, public relations is also advised that in order to increase public participation in using "Smart Electricity", PLN Public Relations needs to increase promotional activities and campaigns to change the habits of people who have long used postpaid electricity.

3. Implementation of Cyber Public Relations in Improving Positive Image Through Instagram Social Media at the Class I TPI Special Immigration Office in Semarang, by Eva Fatimatuzzohroh, et al. (2024)

This study aims to evaluate the implementation of Cyber Public Relations (Cyber PR) in improving positive image through Instagram social media at the Class I TPI Special Immigration Office in Semarang. With the development of digital technology, social media has become the main platform for public interaction and information delivery by government institutions. The results of the study indicate that the implementation of Cyber PR at the Class I TPI Special Immigration Office in Semarang through Instagram has had a positive impact on the image of the institution.

The strategies implemented include transparent information delivery, responsiveness to public questions and complaints, and the use of attractive visual content. These activities have succeeded in increasing user engagement and improving public perception of the immigration office. Data shows an increase in the number of followers, interactions, and positive feedback from the public. However, the study also found several challenges, such as limitations in content consistency and rapid response to emerging issues.

Recommendations from this study include increasing the frequency and consistency of posting, additional training for social media managers, and developing better crisis management strategies. By implementing these recommendations, it is hoped that the Semarang Class I Special TPI Immigration Office can be more effective in utilizing social media as a tool to build and maintain a positive image and improve relations with the public.

4. Public Relations Strategy of UIN KH Abdurrahman Wahid in Building Brand Image as a Humanistic University, by Teguh Maulana (2023).

The impact of this branding concept is a significant growth in the number of student applicants and public trust. UIN KH Abdurrahman Wahid Pekalongan's Public Relations strategy in building an image as a humanist university in Indonesia involves the "Push Strategy" approach, which is an effort to push messages or information to targets or audiences through social media campaigns such as Facebook, Instagram, and websites. "Pull

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Strategy," which is a strategy that focuses on creating strong demand or interest from the audience so that they actively find out more about the UIN campus through newspapers and blogs built by the campus, and "Pass Strategy," which is a strategy used to build collaboration with parties who have strong influence in society such as community leaders, religious leaders, alumni who have achieved and others. This includes the use of social media, storytelling, open communication, partnerships, social activities, online content, academic reputation, and evaluation measurements.

By implementing this strategy, UIN KH Abdurrahman Wahid Pekalongan can build a positive image, attract students who have strong humanitarian values, and provide a positive impact on the surrounding community and society. However, suggestions so that UIN KH Abdurrahman Wahid Pekalongan can always build a positive image or brand image, namely maintaining consistency and vision and mission, always being able to establish good relationships in order to collaborate with humanitarian organizations and always conducting periodic evaluations.

CONCLUSION

The Master Plan for the Development of Science and Technology (IPTEK) is a strategic foundation designed to drive national progress in the modern era full of challenges and opportunities. As a long-term planning document, this plan not only aims to provide direction in the development of science and technology, but also to build an ecosystem that supports social, economic, and cultural transformation in Indonesia. With a vision oriented towards technological independence, global competitiveness, and sustainability, the Master Plan for Science and Technology Development underlines the importance of synergy between various stakeholders. The government, academics, the private sector, research institutions, and the general public have crucial roles in implementing this plan. Close collaboration between these parties is needed to ensure that the resulting innovations not only meet domestic needs but are also able to compete in the global market. Some of the main components that are the focus of this plan include improving the quality of human resources through technology-based education and training, strengthening research and innovation infrastructure, and empowering strong IPTEK institutions. In addition, development strategies that include the use of digital technology, industrial transformation 4.0, and adaptation to global challenges such as climate change and health crises are important pillars in realizing this vision. However, the successful implementation of this plan is not without challenges, such as limited resources, lack of coordination between institutions, and obstacles in the adoption of new technologies by the community. Therefore, a continuous evaluation and revision mechanism is needed to ensure that this plan remains relevant and responsive to changing needs and developments in science and technology at the global level. In addition, the role of communication and education is very important in building public awareness of the importance of science and technology in everyday life. Social media, scientific publications, and information technology-based approaches can be used to convey information about the benefits of science and technology development, so that the public is not only a beneficiary but also actively participates in supporting and applying the resulting technology. Ultimately,

the planned and integrated development of science and technology will be the main catalyst in bringing Indonesia to a higher level in the global competitive map. This success can only be achieved through commitment and cooperation from all elements of the nation. With a strong foundation in the development of science and technology, Indonesia has great potential to not only answer global challenges, but also create a better, more independent, and more sustainable future for all its people

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