

Sinta's Development Directions for The Future

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Abstract

Future studies direction Sinta aims to provide direction for the development of Sinta in the future, by conducting a qualitative research approach with various references to literature studies and phenomena in the field related to the use of the SINTA DIKTI platform in Higher Education so far. Complaints and problems faced in the use of Sinta in higher education show the phenomenon of complaints from lecturers about the weaknesses of SINTA DIKTI. Common complaints are the slow response of the administrators appointed by universities in verifying their performance results, the lack of skills of lecturers in implementing the SINTA application, and the lack of integration of all the features needed by lecturers to include all the results of their work in the Tridharma of Higher Education related to education, research, and community service and their derivatives. SINTA has an important role in increasing the visibility, evaluation, and development of research in Indonesian Higher Education. SINTA DIKTI has offered a platform that is customizable, inclusive, and flexible. In the future, it is expected to continue to adapt and make improvements and refinements that can provide comprehensive metrics for researchers, institutions, and journals in the Indonesian context.

Keywords: Local contribution, research quality, transparency, accountability, Indonesian, academic community

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I. INTRODUCTION

The publication of scientific papers has a crucial role in the development of modern science and the advancement of professional careers [1], [2], [3]. The phenomenon of publications, especially internationally reputable publications, still shows a low number in Indonesia, when compared to the number of publications in several countries in the Asian region. Based on information from the Minister of Research, Technology and Higher Education, one of the causes is the low number of internationally reputable publications in the global flow of researchers in Indonesia, especially in universities, both state and private. So, to increase the number of national and internationally reputable publications, the government through the Ministry of Research, Technology and Higher Education (Kemenristekdikti) is building Science and Technology Index named SINTA. Based on the definition on the Ristekdikti page, SINTA (Science and Technology Index) is a portal that contains information about measuring the performance of Science and Technology which includes, among others, the performance of researchers, authors, journal performance, and the performance of Science and Technology institutions. In the era of increasingly advanced digitalization, organizations around the world are faced with new challenges in managing human resources (HR). Rapid technological developments have not only changed the way of

working, but also demand HR that is more adaptive, innovative, and has digital skills [4], [5], [6], [7]. Therefore, an effective HR management strategy is key for organizations to remain competitive and relevant [8], [9], [10]. One important step in facing the era of digitalization is increasing the capacity and skills of its human resources. Training and development of digital skills should be a top priority for organizations, this can include training in the use of the latest technology, development of soft skills such as creative problem solving and effective teamwork, as well as an understanding of cybersecurity. The quality of human resources determines the progress of an organization. However, HR development in the digital era also needs to be continuously improved so that the organization is more innovative and develops more advanced. So with quality human resources, it will lead the organization in a better direction. One way to maintain the quality of HR performance is to conduct training and development of human resources for each employee in the current digital era. There are several methods of HR development, namely Skill Method Training, Retraining Method, Cross Functional Training Methods, Team Training Methods and Creativity Training Methods.

As part of a large educational organization, the Ministry of Research and Technology really needs to pay attention to various developments in science and technology. Technology as an inseparable part of the world of education, is always in the spotlight for its application in educational programs and activities. The development of technology with the term digitalization in various educational programs and activities has been implemented, including the development of applications and websites for the future of superior education in all lines. However, it has not shown real results in supporting development in Indonesia in terms of scientific publications. The limited competence of human resources is one of the problems, besides that, obstacles also occur in the lack of skills in digitalization due to limited infrastructure and facilities that support digital operations. It is also a polemic about the low number of human resources who are capable and have skills as programmers. One of them is monitoring the development and trends of technology that enter Indonesia, various best applications have been tried to support adjustments and adaptations to change. Always prioritizing and anticipating the needs of educational stakeholders, so that the possibility of the development of the use of technological applications is increasingly massive in the future. SINTA DIKTI has had a positive and significant impact on research and scientific publications in Indonesia. The ranking and scoring system in SINTA DIKTI, then researchers in Indonesia are encouraged to improve the quality and visibility of their publications. So that SINTA DIKTI (Science and Technology Index DIKTI) is a platform that plays a quite important role, also as a center for increasing the visibility and quality of academic research in Indonesia.

The government is currently actively trying to boost various research results to be published at the global level. Published research results are a very important state asset because the level of civilization of a country can be seen from the number of publications produced. Universities as the gateway to research in Indonesia have implemented various applications to improve the work system to be more effective, efficient, transparent, and accountable. Several applications that have been implemented in higher education services for international publications such as Sinta, Sister, Garuda, Bima, and others. Publications, especially international publications, are an arena for various countries to show their performance in publication, and it is undeniable that now every country is competing to get the highest ranking in international publications.

A. *Sinta's Problems in College*

There are still complaints and problems faced in the use of Sinta in universities, the phenomenon shows that there are still complaints from lecturers about the weaknesses of SINTA DIKTI. Common complaints are the slow response of the administrators appointed by universities in verifying their performance results, and the lack of overall integration of the features needed by lecturers to include all their work results in the Tridharma of Higher Education related to education, research, and community service and their derivatives. Although the activeness of lecturers in scientific publications for journal indexing and choosing to publish their research in SINTA DIKTI indexed journals is increasing. Publication of research results by lecturers is starting to get good rankings and scores in SINTA DIKTI, so that it can improve its reputation in academic circles, researchers will become better known in the scientific community, get invitations to collaborate in cross-disciplinary research, and finally succeed in getting larger research funds for their research projects.

SINTA DIKTI can be used as a guide for universities, these institutions can conduct internal evaluations of the quality of research produced by their lecturers and researchers. It can encourage academic staff to publish their research in SINTA DIKTI indexed journals and provide support and resources to improve the quality of their research. Over time, institutions can successfully improve their SINTA DIKTI rankings and scores, so that the overall improvement in the quality of higher education can be recognized by the academic

community. These institutions will gain greater trust and support from government agencies, industry, and partners both domestically and internationally. SINTA DIKTI can provide encouragement to improve the quality of education, facilities, and reputation of educational institutions, as an effort to get a better ranking in SINTA DIKTI. Universities should involve their academic staff in conducting quality research, and encourage institutions to provide greater support for research, including access to adequate research facilities, financial resources, and training for lecturers and researchers. All of this will lead to universities as a whole experiencing an increase in quality and capacity in conducting relevant research that has a good impact on the progress of the quality of education.

The influence of SINTA DIKTI on improving the quality of higher education is also reflected in improving the quality of teaching. The involvement of academics in research allows them to continuously update their knowledge and improve their skills, which can be applied in teaching activities. Lecturers who are involved in good research have a deeper understanding of the development of science and technology in their fields, so they are able to provide relevant and up-to-date teaching to students. Despite having a significant impact, the implementation of SINTA DIKTI also faces several challenges. One of the main challenges is the tendency to focus on quantitative assessments, such as the number of publications, journal rankings, and number of citations, without considering the quality of research and the real impact it produces. This can trigger a race to produce as many publications as possible without considering their relevance and quality. In addition, the limited availability of SINTA DIKTI indexed journals is also an obstacle in efforts to increase research visibility. Sometimes, researchers are limited in choosing SINTA DIKTI indexed journals due to availability and strict requirements. This can limit their access to a wider audience and affect the development of science globally. In addition, it must be recognized that SINTA DIKTI is a tool that continues to develop and requires continuous improvement.

The challenges and criticisms of this system indicate that there is still room for improvement. The government and related institutions need to involve stakeholders, including researchers, lecturers, and educational institutions, in the process of developing and improving SINTA DIKTI. By combining insights from various parties, this system can continue to be improved to be more accurate, transparent, and relevant to the needs of the academic world. Given the ongoing challenges and criticisms, it is necessary to focus on quantitative assessments and the limited availability of SINTA DIKTI indexed journals, which will be an obstacle in achieving holistic research evaluation to increase research visibility at the global level. The government and related institutions need to commit to continuing to improve SINTA DIKTI by paying attention to aspects of quality, relevance, and transparency in research assessment. Collaboration between stakeholders is also important in building a better and more effective system. Appropriate steps are needed so that SINTA DIKTI can continue to play a role as a tool that supports the development of science and technology in Indonesia and encourages improvements in the quality of research and education in higher education.

B. Sinta Provides Solutions for Higher Education Institutions)

Indonesia has increased the development of the Sinta Application by accommodating various developments in the digitalization of education, as a challenge to the bets that exist in augmented reality (AR) and Virtual Reality (VR). Both AR and VR are futuristic technologies that are vital for the future, needed in the development of Sinta applications in universities. The use of the Sinta application as a measuring tool to see complete publications of lecturers in universities, must optimize its services which have so far been considered inadequate and limited. Ideally, the Sinta application can be used by every lecturer to see data and information on their academic activities, especially research, community service, books, intellectual property rights, patents and other publications. Adaptation and renewal are needed that prioritize sophistication and speed in providing integrated services, thus facilitating the work of lecturers with one data information. Sinta has changed the way lecturers perform, lecturers sometimes prefer to use the Sinta application because it can provide a built-in ecosystem to find various integrated information through the camera screen. Sinta should use Augmented Reality (AR) reality, where AR is an augmented or added reality to see living objects, or graphics in the physical world through the camera field. Also adding Virtual Reality (VR) which creates a virtual world around us by closing the real world that can be seen through a specially designed virtual reality device. Augmented reality is getting more advanced and more widespread because virtual reality only takes a little time, but has the potential to offer an immersive 360-degree experience. Next is how to use the highly anticipated wireless technology that will change the landscape of sinta application development. Accommodation of 4G development towards 5G will offer unimaginable speeds, which will be 100 times faster than what 4G can offer on the SINTA DIKTI platform.

Phenomena include increasingly diverse application users, can be in the form of hardware capacity usage, behavioral changes, new market opportunities, all of which affect the development of web-based application research information systems. Trends known in Indonesia such as Sister, Sinta, Garuda, Bima, are considered to make it easier for lecturers to work. Sinta can meet the various needs of lecturers in carrying out his work. It is highly expected to be in applications that can answer various educational program needs in college. Sinta is a web-based research information system, here is the development of an application called Sinta. Sinta which will be increasingly widely used in the future, if it is able to adapt to the development of mobile applications based on the Cloud model. The development of web-based research information systems and cloud- based applications burdens other application development models because it is increasingly possible to develop big data applications with the cloud. Scalability and unlimited space are some of the main factors driving the trend of cloud -based application development. In addition, cloud integration offers lower equipment costs, simplified processes, increased productivity, increased collaboration, lower hosting costs, and other benefits for mobile application development. Cloud development hybrid and quantum computing is the future of cloud - based mobile application development.

AR and VR can facilitate the Ministry of Research and Technology to supervise, evaluate, and analyze the performance of lecturers in universities, so that they can have the key to living more luxuriously in the sense of facilitating and providing comfort and convenience in excellence in the future. Then what is the relationship between this and the development of the Sinta application, namely network speed is not the only factor that needs to be considered, because this powerful cutting-edge technology will change AR / VR, maintain data security, and other good and bad things for the perfection of the Sinta application in the future. A device that can help Sinta get closer to its users anywhere, anytime, and make it easier for anyone. Sinta will become a necessity, just like the Sinta device on mobile. AR and VR can help the comfort and security of Sinta users, because the various other devices in it will make it easier for anyone to help complete their work and improve their performance.

Human resource development in the digital era can now be supported by implementing various strategies such as the following opportunities for employees to channel ideas, an organization certainly requires employees to play a role as a driving force for the development of the organization. For that, employees also have the right to express all the ideas and concepts they have. By giving employees the opportunity to channel their ideas, it means allowing the employees to develop and develop their potential. The importance of providing training, training is needed in the development of human resources in the digital era like today. You can do individual development in the form of improving skills, knowledge and attitude. Conducting training in the digital era today is also very important for the development of human resources. So as management, you will directly get quality human resources. Giving awards to employees who excel in their work is one of the strategies for developing human resources, by giving rewards or recognition so that they are motivated to be better and will also make a big contribution to the development of the organization. Looking at the results of the HR development evaluation process, it is important to trace what results were obtained during the development process in the organization. Determine the KPI (Key Performance Indicator) that will be used for evaluation before the technology implementation is carried out. The KPI will be used to evaluate whether the results obtained are in accordance with the organization's digitalization goals. The evaluation results can be used to determine what aspects need to be improved and what should be maintained. In addition, organizations also need to adopt a more flexible work culture. Technology enables more dynamic work models, such as remote work or flexible working hours. Thus, organizations must adjust policies and procedures to better suit the needs of employees in the digital era.

Organizational management is also an important part of HR management strategy in this era. Organizations need to manage the transition from traditional to digital systems well, ensuring that all employees feel supported and involved in the change process. This can be done through transparent communication, providing clear information, and providing the support and resources needed by employees. The application of technology in HR management, such as the use of HR information systems (HRIS), big data, and predictive analysis, can also increase the efficiency and effectiveness of employee management. With more accurate and real- time data , HR managers can make more informed and proactive decisions. Overall, HR management strategies in facing the digitalization era must focus on improving skills, flexibility, change management, and optimal use of technology. Thus, organizations can not only adapt to changing times, but also take advantage of digitalization as an opportunity to grow and develop.

II. RESEARCH METHOD

The qualitative method was chosen as the method in this study, namely the qualitative approach is a research procedure that produces descriptive data in the form of written or spoken words from informants,

namely people who are informants and are related to the problems that are the focus of the research, in terms of how Sinta and her development for the future. Qualitative research is carried out with the characteristics of describing the actual facts or conditions about Sinta's condition and her future, where the reports made must pay attention to scientific interpretation so that the results are good. The qualitative characteristics are explained, namely: 1) Natural background (naturistic inquiry), 2) Researchers are key instruments, 3) Descriptive, 4) Qualitative research emphasizes the process more than the results, 5) Data analysis is carried out inductively, and 6) Qualitative research emphasizes more on meaningfulness. This study uses a descriptive qualitative approach [11], [12], [13], with a survey method, namely research conducted with the aim of accurately describing certain situations about Sinta's condition, and groups to find out the frequency and distribution of certain relationships between one thing and another in the academic community at the university.

III. RESULTS AND DISCUSSION

In the future, SINTA is expected to be more advanced and different from existing indexing tools, such as Google Scholar, Portal Garuda, Indonesia Science. and Technology Index or InaSTI, and Indonesian Publication Index (IPI). Sinta is already heading towards a global indexing portal, such as Scopus which already has more complete features because it is equipped with several features such as: Citation, Networking, Research and Score. The Citation section displays the h-index in a period of one year for Google Scholar and Scopus. While in the networking section, we can find out networking with other researchers who have collaborated. SINTA, or Science and Technology Index (SINTA), is an online system to measure the performance of science and technology in Indonesia. This system provides access to research publications, citations, and research performance metrics for institutions, researchers, and journals.4 Jun 2024. Sinta (Science and Technology Index), can provide access to citations and expertise in Indonesia. This web-based research information system offers fast, easy, and comprehensive access to measure the performance of researchers, institutions, and journals in Indonesia. Sinta provides benchmarking and analysis, identification of each institution's research strengths to develop collaborative partnerships, analysis of research trends, and expert directories.

Science and Technology Index (SINTA), is an online system to measure the performance of science and technology in Indonesia. The system provides access to research publications, citations, and research performance metrics for institutions, researchers, and journals. SINTA aims to increase the visibility and accessibility of Indonesian research output and improve the evaluation and assessment of research performance. SINTA is managed by the Indonesian Ministry of Research, Technology, and Higher Education. The main features of SINTA include Publication and Citation Metrics: SINTA provides data on the number of publications and citations, helping to assess the impact and productivity of researchers and institutions. Researcher Profile: Researchers can create and manage their profiles, showcasing research results, collaborations, and academic achievements. Institutional Rankings: SINTA ranks universities and research institutions based on their research performance. Journal Metrics: Includes information about Indonesian journals, their impact factors, and indexing status. SINTA aims to support the development of science and technology in Indonesia by promoting transparency and accountability in research activities.

A. Sinta Provides Solutions for Higher Education Institutions

The existence of SINTA (Science) and Technology Index) in calculating its metrics using a combination of bibliometric indicators and other evaluation criteria. Here is an overview of how the SINTA calculation structure works Number of Publications, Citation Metrics, Journal Metrics, Institutional Performance, Researcher Profile & Additional Metrics.

SINTA DIKTI can aggregate existing metrics to produce overall performance scores and rankings for researchers, institutions, and journals. This multi -faceted approach allows SINTA to provide a comprehensive evaluation of the research landscape in Indonesia. The system can be periodically updated to reflect new publications and citations, always updated to ensure that the data remains current and relevant. SINTA (Science and Technology Index) is currently very important for several reasons, especially in the context of research and academics in Indonesia which has a role in assisting lecturers, universities, and the government, especially the Ministry of Research and Technology in the following matters

1. Research Visibility and Accessibility

Enhanced exposure SINTA increases the visibility of Indonesian research by providing a centralized platform to access publications, citations, and researcher profiles. Global Reach Helping Indonesian researchers and institutions gain international recognition by showcasing their work on widely accessible platforms.

2. Performance Evaluation

Benchmarking: SINTA enables the evaluation and comparison of researchers, institutions and journals based on various bibliometric indicators. Informed Decision Making: Institutions and funding bodies can use SINTA data to make informed decisions about research funding, hiring, promotions, and collaborations.

3. Promotion of Quality Research

Quality Assessment by emphasizing metrics such as citations and journal impact factor, SINTA encourages researchers to publish in high-quality journals and strive for impactful research. Raising Standard Fostering a competitive environment that motivates researchers and institutions to improve the quality and productivity of their research.

4. Institutional Ranking

National Rankings SINTA provides rankings of universities and research institutions in Indonesia, which can help identify leading institutions in various fields of study. International Comparison The rankings also allow Indonesian institutions to compare themselves with international partners, helping to identify areas for improvement and collaboration.

5. Research Policy and Planning

Policy makers can use data from SINTA to develop and implement research policies that promote scientific innovation and development. Strategic Planning Institutions can leverage SINTA data for strategic planning, focusing on areas where they can improve their research output and impact.

6. Academic Collaboration

Networking SINTA facilitates networking and collaboration between researchers by providing detailed profiles and publication records. Collaborative Projects Help identify potential collaborators for research projects, both within Indonesia and internationally.

7. Accountability and Transparency

Open Data by making research performance data publicly accessible, SINTA promotes transparency and accountability within the research community. Public Trust Helping build public trust in the research results and contributions of Indonesian researchers and institutions.

Overall, SINTA plays a vital role in advancing the research ecosystem in Indonesia by providing valuable data, fostering a culture of quality and excellence, and promoting international visibility and collaboration.

B. *Sinta is superior*

SINTA can be a place to offer research publications by university lecturers, as well as an approach that can be adapted to evaluate and promote research in Indonesia. Local publications can provide various breakthroughs in solving problems faced on a local scale of development, by considering local contexts and needs, and providing a comprehensive picture of the performance of research results from various universities in our country. On the other hand, international metrics and databases such as Scopus, Web of Science, and Impact Factor provides a broader global insight with strict quality control, while Google Scholar offers a more inclusive but less accurate platform. Each existing system has its strengths and limitations, making them useful for different purposes, audiences, and audiences. If Sinta can add Geographic Information Systems (GIS) in the digital era, it will further complement its work system which will be broader with the use of Geographic Information Systems (GIS) in computer data analysis becoming increasingly relevant. GIS allows the integration of spatial and computer data, adding a dimension of geographic context to data analysis. The advantages of GIS include its ability to reveal spatial patterns and its applications in various sectors such as epidemiology and business analysis. However, technical challenges and implementation costs remain barriers. With the continued development of technology, there is optimism that more efficient and affordable solutions will be available in the future, facilitating the wider use of GIS in computer data analysis.

IV. CONCLUSION

SINTA (Science and Technology Index) has an important role in increasing the visibility, evaluation, and development of research in Indonesian Higher Education. SINTA DIKTI has offered a platform that is adaptable, inclusive, and flexible. In the future, it is expected to continue to adapt and make improvements, and refinements that can provide comprehensive metrics for researchers, institutions, and journals in the Indonesian context. SINTA's focus on local contributions, supported by the government, makes it an important tool for improving the quality of research and encouraging transparency and accountability in the Indonesian academic community. Compared to other metrics and databases such as Scopus, Web of

Science, Google Scholar, and Impact Factor, SINTA stands out for its regional emphasis and accessibility. While global systems offer broader reach and stringent quality control, SINTA's local approach ensures that Indonesian research is well represented and assessed. Overall, SINTA will complement global metrics by providing specific insights and benchmarks for research in Indonesia, promoting national and international collaboration, and supporting informed decision-making in research policy and funding. The importance lies in SINTA DIKTI's ability to foster a culture of excellence in improving lecturers' publications in a single platform that can accommodate all information on universities and their lecturers on an ongoing basis.

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