

The Role of Universities in Preparing Local Governments for the Era of 5.0 Society

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ABSTRACT

This research aimed to identify the challenges of the 5.0 Society era and the role of universities in preparing local governments to face such challenges. This research was carried out by following the stages of a systematic literature review which consisted of designing a review, carrying out a review, analyzing, and writing a review report. The data were taken from national and international electronic scientific journals related to the topic being studied. Data were collected by purposive sampling using certain keywords through the google search engine. The collected data was then analyzed using content analysis techniques. This research found that various challenges must be faced in 5.0 Society, and universities have a strategic role in preparing the government to develop strategies to turn the challenges of 5.0 Society into opportunities both in terms of preparing the necessary human and technological resources. The findings of this research, First, the challenges of local governments in entering the era of Society 5.0 include the readiness of human resources and technology. Second, in facing these challenges, universities have a vital role in helping local governments. Universities, as centres of technology development and dissemination, are able to assist local governments in preparing and improving the quality of human resources and technology required by local governments. For this reason, it is recommended that local governments collaborate with various universities so that they are ready to enter the Society 5.0 era and are able to turn these challenges into opportunities.

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1. INTRODUCTION

Technology is a completeness or infrastructure that is needed by humans today. Humans need an item or tool to meet their needs and survive (Sporn, 2015). He continues that technology is growing

daily so that humans feel it is easier to do various things, especially in carrying out their activities and the existence of technology clearly has a positive impact on human life. The positive impacts include facilitating access to communication or exchanging information, improving work quality, and creating effectiveness and efficiency in doing or doing various things (Cavdar & Aydin, 2015). So, it can be said that technology is able to make human life easier (Lau & Wong, 2001). Therefore, the use of technology is now widely used by people in all sectors around the world.

Because people are recently used to being assisted by technology, this affects their expectations in various ways. Everyone today expects that everything can be solved easily and quickly and from anywhere and anytime with the help of technology (Wang et al., 2016). This also applies to people's expectations of obtaining services from the government. With the existence of increasingly sophisticated technology, people hope that the services provided by the government can be carried out more effectively and efficiently.

Therefore, the government must follow technological developments to improve service quality and realize community expectations through e-governance (Ioppolo et al., 2020). However, realizing e-governance in accordance with the needs of the Society 5.0 era is not an easy problem. In realizing e-governance that is able to provide effective and efficient services, the government needs the support of competent human resources and qualified technology because superior human resources will be able to create and deal with all forms of existing technological developments (Sołtysik-P & Zdonek, 2021).

In order to prepare human resources and technology universities, as the highest educational institutions, have a very important role in preparing human resources and technology. Higher education is an institution whose job is to produce quality human resources who are ready to work. Likewise, in technology development, most of the existing technology is the work of academics and researchers at universities.

Formerly, previous researchers made several efforts to document the roles of universities as higher institutions in preparing human resources for applying technology. In 2006, Whittier & Lara conducted a study about how Boston University prepared future teachers to use technology through faculty development. This three-year project was among the initial movements of higher institutions to commence human resource development using technology. Currently, the studies are growing rapidly due to the advancement of technology (see Voogt & McKenney, 2017; Kong et al., 2017). This movement is influential in developing a country. Therefore, it has become a crucial issue faced by governments in all parts of the world.

Considering the importance of the government following technological developments and the role of universities in facing the Era of Society 5.0, this research aimed to identify the challenges of Era Society 5.0 and the role of universities in preparing local governments to face the challenges of Era Society 5.0 (Roblek et al., 2020). Specifically, the identified challenges are viewed from the human and technological side that must be considered by local governments. Likewise, the role of universities is also focused on preparing human resources and technology for local governments.

2. METHODS

This research was carried out by following the stages of a systematic literature review which consisted of designing a review, conducting a review, analyzing, and writing a review report (Snyder, 2019). The data were taken from electronic scientific journals published from 2018 – 2021, both nationally and internationally, related to the topic being studied. The following table provides information about the articles that were taken as the data for this study.

| Year | Author | Year | Author |
|------|----------------|------|------------------------|
| 2021 | Amry et al. | 2020 | Ellitan |
| 2021 | Kim et al. | 2020 | Ibad & Lolita |
| 2020 | Yasmeen et al. | 2019 | Helaludin |
| 2020 | Irawati | 2019 | Effendi & Wahidy |
| 2020 | Supriatna | 2019 | Supendi & Nurjanah |
| 2020 | Tabaa et al. | 2018 | De Moortel & Crispeels |

Data were collected by purposive sampling technique using certain keywords through the google search engine. Furthermore, the researchers analyzed the data that had been collected qualitatively using content analysis techniques.

3. FINDINGS AND DISCUSSION

3.1. Society 5.0 Era Challenges for Local Government

In carrying out their duties, local governments have at least eleven mandatory authorities that must be carried out. These powers include public works, health, education, culture, agriculture, transportation, industry, trade, the environment, cooperatives, and employment. In carrying out this authority, local governments often deal directly with the community. Considering the large number of people whom government must serve, if it is handled using a service system that is still manual, the services provided by the local government will be ineffective and inefficient,

In the face of the Society 5.0 era, which requires alignment between humans and technology, changes must be made. However, surely, these changes will go through various challenges. The challenges local governments face in the Society 5.0 era in terms of human resources and technology based on the data obtained are described below.

3.2. Challenges for HR in Local Government

HR is the most needed thing for every institution, where humans are the main actors. HR is the first factor that affects the progress of an institution. If there is a lack of human resources in an institution, then it is most likely that the institution will not be able to develop and will face many obstacles in its development (Ellitan, 2020). In its role as workforce, it is very important for HR to have superior abilities which are able to develop their respective roles. HR is very influential on the smoothness and success of an institution (Yasmeen et al., 2020). In the era of society 5.0, human resources with superior capabilities are needed. In general, there are various challenges faced by HR in the era of Society 5.0. These challenges include:

3.2.1. Digital Skills

In carrying out their work, all human resources in the local government environment must have good digital skills. Digital skills in question are skills in using the latest technology in an effort to operate or realize e-governance. Because in this era, many people are already classified as a smart society or people who already have digital knowledge and skills (Foresti et al., 2020; Hadiyat, 2014).

However, the number of people who have low digital skills is still quite large, even in DKI Jakarta (Arrochmah & Nasionalita, 2020). Those who have good digital skills will want everything to be done more easily using technology, but those who have low digital skills are likely to experience obstacles in utilizing the technology provided (Sampoerno & Herwandito, 2021). To realize e-governance, it is necessary to have human resources who have good digital skills so that they are able to serve the community optimally to meet smart society's expectations and help people who experience obstacles (Larsson, 2021).

However, unfortunately, until now, there are still many human resources available in local governments who have problems with digital skills, as happened in the Manado city government (Ruth et al., 2018), Sidoarjo District (Mariano, 2019), and Central Java Province (Irawati, 2020). Thus, this

becomes a big challenge for local governments in implementing e-governance in the face of the Society 5.0 era.

3.2.2. Creativity and Innovation

Human resources owned by local governments must be creative and innovative to provide the best service. This is because community needs and community problems in the Society 5.0 era are increasingly complex. For this reason, creativity is needed in creating various solutions to solve these problems. In this era of Society 5.0, it is also important to have innovative capabilities to produce new solutions that are sustainable and by the development of community needs (Ferreira & Serpa, 2018). In other words, higher-order thinking skills such as critical, creative, and innovative thinking are needed in the Society 5.0 era (Supendi & Nurjanah, 2019).

In reality, the creativity and innovation of human resources in local government are still low (Agusta & Jaya, 2021; Sulistio, 2010). This situation requires regional leaders to motivate their human resources to be more creative and innovative (Supriatna, 2020). Especially in terms of creativity and innovation in terms of the creation and use of technology that can unite the community with technology to facilitate services so that services that meet the expectations of a smart society are realized (Phuyal et al., 2020).

3.2.3. Multitasking

Considering the complexity of services and community problems in the Society 5.0 era, human resources owned by local governments are required to have multitasking abilities or become smart state civil servants (Chrisnandi, 2019). Multitasking means having various skills that support work implementation to be effective and efficient (Abdullah, 2020). Thus, multitasking will affect one's productivity (Shin et al., 2020; P. Wang et al., 2020). In addition, with the simplification of the bureaucracy, it is important that human resources are owned to master various types of expertise so that they are able to handle various jobs and problems. This is because, in the Era of Society 5.0, the problems faced by the community will be more complex (Elim & Zhai, 2020).

The existence of multitasking human resources is very much needed by local governments in the era of Society 5.0. However, in reality, it is very difficult to form human resources, namely ASN, in local governments who are able to have multitasking abilities and high productivity. Even research data conducted by several researchers, it shows that the productivity of civil servants in local governments is low (Komara, 2019; Sudiarta, 2020).

3.3. Challenges in terms of technology

Technology in the era of society 5.0 will be highly developed, especially digital information and communication technology (Söderholm et al., 2019; Yasmeen et al., 2020). As technology develops, entering the era of society 5.0, the more and more complex the challenges that must be faced (Gladden, 2019; Phuyal et al., 2020). The following are the problems faced by local governments related to technology.

3.3.1 Limited Supporting Facilities

The supporting devices for the implementation of e-government will affect the success of the e-government implementation (Kumajas, 2021). Adequate supporting facilities and infrastructure for the implementation of e-government will positively impact the implementation of e-government and vice versa (Alshehri & Drew, 2010). In the implementation of e-governance, the obstacle that is often experienced is the existence of insufficient supporting facilities for e-governance implementation (Foresti et al., 2020).

These obstacles are also obstacles experienced in Indonesia (Novita, 2014). such as in the implementation of e-government in Kulon Progo District (Shafira & Kurniasiwati, 2021), in Kota Samarinda (Dewi et al., 2020), and in Gorontalo City (Mohi & Botutihe, 2020). The implementation of e-government in these areas is experiencing problems due to the limited support facilities they have.

3.3.2 Changing Technology

The emergence of Society 5.0 cannot be separated from the emergence of industrial revolution 4.0. Where the industrial revolution 4.0 has produced various kinds of technology that facilitate all aspects of human life. Furthermore, it changes society's social order, which makes society inseparable from technology (Berawi, 2019). With such rapid changes, local governments who wish to implement e-government must be able to continuously update the technology used to facilitate services. For example, changing a web-based system to a mobile-based application system where currently people prefer mobile-based applications such as Android and IOs (Irsan, 2015).

3.3.3 Easy-to-Use Technology

The use of technology is intended to facilitate humans. Thus, technology users have the hope that by utilizing technology, they can do work or activities more easily. This is also the hope of the community with the use of technology by local governments. The community hopes that it will be easier for them to get services (Mariano, 2019).

However, in reality, there are still many e-government systems owned by local governments that have not been able to provide convenience for the community and seem ineffective (Angguna & Gani, 2015; Dewi & Jayanti, 2017; Sudrajat et al., 2003). There are still many existing e-government systems that have not been able to make people feel helped or feel easier (Aprilia et al., 2014).

3.3.4 Eco-Friendly Technology

The existence of environmentally friendly technology is an important issue in Era Society 5.0 (Tabaa et al., 2020). This is because sustainable development is one of the main goals in this era (Kim et al., 2021). The technology applied must use technology that is energy efficient and does not cause pollution (Nagy & Hajrizi, 2019). Therefore, local governments must also ensure that the technology developed and applied to serve the public is environmentally friendly technology.

3.4. *The Role of Higher Education in terms of HR Quality*

This section will explain the role of universities in facing the Era of Society 5.0 from the point of view of the quality of human resources and technology. The following is an explanation of the role of universities in facing the Era of Society 5.0 based on the results of data analysis that has been carried out. Higher education as the highest educational institution, has a very important role in preparing qualified human resources (Boccanfuso et al., 2015; Cintamulya, 2015). This is evidenced by the level of education having a positive effect on the performance and productivity of workers (Benos & Karagiannis, 2016). The same thing applies to human resources in the local government environment. This has been proven from several studies regarding the level of productivity and performance of human resources in local governments such as in Indragiri Hulu District (Wijayanti, 2014), Manado City (Londong et al., 2015), and Central Java (Septiana, 2016). Based on the data obtained, specifically in terms of preparing and improving the quality of human resources in local governments to face the Society 5.0 era, the role of universities includes:

3.4.3 Digital Skills

Currently, universities are required to be able to produce graduates who are able to master digital literacy and skills (Helaludin, 2019; Wijaya et al., 2016). For this reason, universities are required to implement various types of technology that are able to shape students' skills and digital literacy (Effendi & Wahidy, 2019). This means that universities play an important role in preparing human resources that can later be utilized by local governments.

In terms of improving the digital skills of human resources in the local government environment, universities have a vital role in providing training, mentoring and workshops. Local governments can collaborate with universities to improve the digital skills of human resources in the local government environment (Sulistiyani & Heronica, 2020), such as the training carried out for HR at the Malang City Civil Service Agency (Saputra & Kurniawansyah, 2019), and in Mamminasata area (Masyhur, 2014). The training was carried out in collaboration with the local government and universities.

3.4.4. Creativity and Innovation

The ability to think at higher levels, such as critical, creative, and innovative thinking, has also become an agenda in universities. As agents of change, universities are expected to be able to equip students with higher-order thinking skills (Marhadi & Erlisnawati, 2018). In other words, universities have a vital role in preparing human resources who have the ability to be creative and innovative. Higher education has proven to be able to produce many human resources capable of producing creative and innovative products in the form of technology that can be utilized by the community (Muresan & Gogu, 2012). Even universities are often and centres of creativity and innovation, especially in the field of technology (Moon et al., 2019; Pogodaeva et al., 2015).

So, it can also be conveyed that universities have a strong role in preparing human resources with high-level thinking skills, including the ability to be creative and innovate. Likewise, the increase in creativity and innovation of human resources owned by local governments can be improved through collaborative activities between local governments and universities through training programs. Collaborative activities of universities and local governments in the form of training have been proven to be able to increase the creativity of human resources in the local government surroundings (Sambung, 2020; Wahyuni, 2014).

3.4.5. Multitasking

Multitasking is one of the skills that must be possessed in the 21st-century era (Yoon et al., 2013). This is because, in this era, the world of work expects the realization of labour efficiency, which requires human resources to be able to do various types of work at almost the same time (Matt et al., 2020; Rauch et al., 2020). Therefore, universities are also required to provide multitasking skills for their students. Thus, it can be said that universities also have an important role in forming human resources with multitasking skills.

In relation to human resources in the local government environment, it also indirectly provides universities with human resources with multitasking skills for local governments. So, technically, improving local government human resources' multitasking skills can also be done through collaboration with universities. And multitasking skills are proven to be formed and improved through training programs (Dux et al., 2009).

3.4. *The Role of College from the Technological Side*

Universities have a vital role in the development and dissemination of technology. Universities are one of the main places where technology is developed (Woodward et al., 2006). Furthermore, universities are also places where technology is transferred and disseminated (Amry et al., 2021; De Moortel & Crispeels, 2018).

So that in terms of the limitations of technical support facilities, local governments can cooperate with existing universities so that the facilities owned by universities can be used together. Such as the collaboration carried out by the Bogor Agricultural Institute with the Bogor regional government in the field of agricultural technology that can be utilized by relevant agencies and the community at the same time (Widayat et al., 2011). The same can also be done in implementing other public services.

The availability of technology needed by local governments in carrying out public services can also be supplied by universities. In fact, there are many technology products in the form of web and mobile-based applications that have been developed by universities in an effort to support the implementation of e-government. For example, a mobile-based e-government application developed for the government of Situbondo District (Ibad & Lolita, 2020), Central Kalimantan Province (Widiarty et al., 2015), and in Tanjungsari Village (Zaliluddin et al., 2020).

This shows that for the challenges of technological development and change, the government is able to face this by fostering good relations with universities. Likewise, the development of environmentally friendly technology can also be done in collaboration between local governments and universities.

4. CONCLUSION

In general, there are two important points that can be concluded from this research. First, from the data analysis conducted, it was found that there are various challenges that must be faced in Society 5.0 Era. The challenges faced by local governments in facing Society 5.0 include challenges regarding the readiness of human resources and technology. Second, in facing these challenges, universities have a vital role in helping local governments. Universities as centres of technology development and dissemination, are able to assist local governments in preparing and improving the quality of human resources and technology required by local governments. For this reason, considering the results of this research, the researcher suggests local governments collaborate with various universities and researchers so that they are ready to enter the Society 5.0 era and turn these challenges into opportunities.

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