

Innovation in Management System Information For Supervision Nutrition and Health

Bunga Ratu Portuna Dewi Santriani¹

ABSTRACT

Innovation in management system information (IS) has a very important role in supervision nutrition and health, especially in the digital era this. System effective information can support collection, analysis, and distribution of health data fast and accurate, so that increase quality service health society. Article This discuss implementation innovation in IS management for supervision nutrition and health, with focus on technology latest like system cloud-based, big data and intelligence artificial intelligence (AI). Innovation This allow nutritional status monitoring individuals and groups with using more real-time data accurate and can accessed by various stakeholders interests, including power medical, government, and society. In addition that, system integrated information with mobile application allows more personal and responsive supervision to change condition health individual. Research This also examines challenges and solutions faced in implementation system information this, like problem data privacy, accessibility, and engagement various party in data collection and utilization. Research results show that innovative IS management can increase efficiency supervision nutrition and health, as well as contribute to improvement health public in a way overall. Therefore that, it is necessary existence collaboration between sector health, technology and policy For support success implementation system this.

Keywords: Management System Information, Supervision Nutrition, Health Technology

1 Introduction

In the middle rapid development technology information, sector health face a big challenge in manage data and information related health society, including in supervision nutrition. Supervision effective nutrition is very important For prevent and overcome problem health related with malnutrition, obesity, and disease related pattern Eat others. For that, the use of management system advanced and innovative information technology (IS) become very necessary For support accurate and fast data collection, analysis and distribution. Through system accurate information, supervision nutrition can done in a way more efficient and comprehensive, as well as allow monitoring health individual and society in real-time. Along with with development digital technology, systems information health has experience Lots innovation, start from use technology cloud based up to implementation intelligence artificial intelligence (AI) in health data analysis. Technology This No only help in data collection, but also deep processing information the For produce more recommendations accurate regarding nutritional status and health society. Besides that, system cloud-based enables health data For accessed in a way more wide by various party related, both at the level of local, national, and international. This is open opportunity big For increase coordination between institutions involved in supervision nutrition and health.

In context supervision nutrition, existence system efficient information plays a very important role in detect and monitor problem nutrition in the community. Use of application mobile-based and connected wearable devices with system information can provide more personal and accurate data about intake nutrition and condition health every individual. With Thus, society can more proactive in guard pattern eating and style life healthy, while power medical can more easy give appropriate

¹Universitas Muhammadiyah Malang

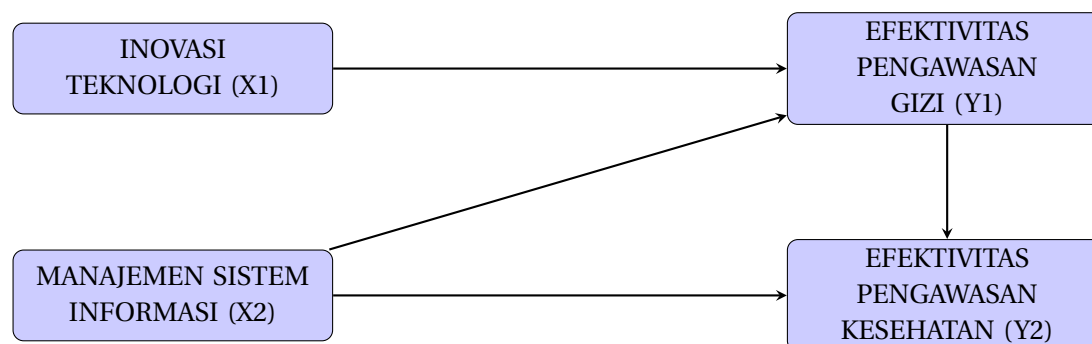
intervention in accordance with the existing data . However , the implementation system information in supervision nutrition and health also not off from various challenge . One of the challenge main is problem privacy and data security . In managing health data , important For ensure that information personal user still protected with good so as not to misused . Besides that , limitations access technology in some areas , especially in the areas isolated , become obstacle alone in implementation system information this . Therefore that , effort For increase accessibility and usability technology become the important thing in implementation system this.

In this article , we will discussed more carry on about innovation in management system information For supervision nutrition and health . Focus main article This is on technology the latest that can integrated to in system information health , as well as How technology This can help increase efficiency and effectiveness supervision nutrition in the community . In addition that , article this will also to study challenges and solutions that can be taken For overcome existing obstacles in implementation system information this.

2 Literature

Tabel 1. Studies Literature

No.	Writer	Year	Title	Topics Discussed	Methodology Used
1	A. Sarjito	2024	Free Nutritious Meal Program as a Human Resource Development Strategy to Support the National Defense Program	Human resource development strategy through free nutritious food programs for supporting national defense	Studies analysis HR development policies and programs
2	N. Suryani	2023	Advanced Health Services Program Evaluation Age in Work Area Health Center The Treasure Regency Siak	Evaluation of health services for elderly in the work area of health centers	Evaluation of the program based on survey and interview
3	D. Mulyanti	2023	Innovation Technology in Health Management: Utilization of Electronic Health Information System at Hospital	Utilization of information technology in health management systems in hospitals	Descriptive qualitative study based on case studies
4	L. Adam & A. Suryana	2021	Development of Food Systems Through Strengthening the National Food Agency	Development and strengthening institutional system in national food	Literature review and food policy analysis
5	E. Djuwendah	2020	Counseling Innovation in Products and Marketing of Small Food Industry in Gunung Manik Village, Tanjung, Sumedang	Extension strategies for product innovation and marketing in the small food industry	Field studies and participatory counseling methods



Gambar 1. Innovation in Management System Information For Supervision Nutrition and Health

3 Research Methods

Study This use method studies literature For to study innovation in management system information in supervision nutrition and health . Methods studies literature chosen Because study This aiming For dig and analyze various relevant sources related implementation technology information in supervision nutrition as well as challenges faced in its implementation . With method this , research will collect and analyze various existing references , either in the form of article scientific , report research , books , and documents relevant policies and technologies with topics discussed . The main data sources used in study This is article published scientific papers in journals international and national related system information health , technology health , and supervision nutrition . Besides that book text and report related research with innovation in management system information as well as implementation technology in supervision health also becomes important data sources . The selection process literature This done with using relevant keywords, such as "management system information", "supervision nutrition", "technology health" and "digital innovation in health" .

Next , research This organize collected literature based on themes main thing that appears in Topic research , such as implementation technology cloud -based , use of big data and intelligence artificial intelligence (AI), as well as challenges and solutions in management system information health . Analysis process literature done with method read and understand every collected sources For to obtain more insight deep about role technology in supervision nutrition and health . In analysis , research This also identifies difference approaches applied in various countries or area related supervision nutrition and health use system information . In addition that , research This also examines effectiveness use technology like mobile applications , wearable devices , and cloud- based platforms in support nutritional status monitoring society . From the analysis this , it is expected can found practice best and challenges that need to be faced in implement innovation mentioned in various context.

Synthesis process literature done For unite existing findings and describe How innovation technology in management system information can increase supervision nutrition and health . Researchers will compile conclusion based on the evidence collected from various analyzed literature , with give recommendation about development more carry on in field this . With use method studies literature this , it is expected study can give a comprehensive overview about role innovation in management system information For supervision nutrition and health , as well as give contribution to development policy and implementation system more information effective in the sector health society . The synthesis process literature this will also consider various factors that can influence success implementation technology in management system information , such as readiness infrastructure , skills source Power humans , and obstacles technical and non- technical in the field . Researchers will dig relevant literature For understand challenges faced in implementation technology , as well as supporting factors or hinder adoption technology in the sector health society . Besides that 's important For analyze various models and approaches that have been applied in various countries or area in context supervision nutrition and health , so that can interesting useful lesson For implemented in Indonesia.

4 Results and Discussion

1. Implementation Cloud Technology in Supervision Nutrition and Health

Use technology cloud based in management system information health has bring Lots change significant in supervision nutrition and health . Cloud computing enables large health data storage with easy , fast and efficient access . One of benefit main from cloud technology is his ability For integrate data from various sources , such as House hospitals , clinics and health centers , in one platform that can accessed by various stakeholders interests . With method This is data related to nutritional status and health. public can monitored in real-time by manpower medical and government , so that make it easier taking fast and accurate decisions . In addition that , cloud computing also allows better data management safe and secure , with existence system encryption and automatic backup that reduces risk data loss . Technology This allow development mobile application that can used by the community For monitor nutritional status they alone , like application that calculates intake calories or analyze pattern eat . This is No only increase involvement public in guard health , but also provides data that can used by power medical For do more intervention right . Even though own Lots advantages , implementation cloud technology in supervision nutrition and health are also faced with several challenges . One of them is problem privacy and data security . Because health data nature sensitive , important For ensure that cloud system used fulfil standard tight security For protect personal data User . Policy clear and transparent privacy become very important aspect in implementation system This . Challenge other is dependence on a stable internet connection . Although cloud technology offers easy accessibility , in some areas that have inadequate internet infrastructure good , usage system cloud based can hampered . Therefore that 's important For notice readiness infrastructure technology information in each area before apply system This in a way wide . Although Thus , various research and study cases in several countries show that implementation cloud technology in supervision nutrition and health own potential big For increase efficiency system health . Therefore that , development more carry on to infrastructure technology and policies that support implementation of cloud computing becomes key For optimize its benefits . In overall , usage technology cloud based in supervision nutrition and health give Lots opportunity For increase effectiveness and efficiency system Health . Technology This allow more data collection and analysis fast , transparent and accurate , which can helping stakeholders interest in make more decisions Good For health public .

2. Utilization of Big Data for Analysis Nutrition

Big data, which refers to large and complex data sets that are not can processed with use method traditional , have an increasing role important in management supervision nutrition . In supervision nutrition , big data enables collection more information broad and deep about pattern eating , nutritional status , and factors that influence health public . The use of big data in analysis nutrition allow For to obtain a better picture accurate about nutritional status a population in different regions and groups social . Big data enables data processing and analysis from various sources , including record medical electronics , results survey nutrition , as well as data from wearable device that monitors activity physical and pattern Eat individual . With big data analysis , can found previous patterns No visible , for example connection between pattern eating and prevalence disease certain in various regions. This is can give more insight in about factors that influence problem nutrition in the community . One of the implementation big data concrete in supervision nutrition is related data analysis prevalence lack nutrition or obesity in a region. Through big data analysis , data retrieval policy can know level severity problem nutrition in a particular area and determine priority more intervention right . Big data can also help in monitor change pattern eating and habits life public along walking time , so that make it easier in designing more prevention programs effective . However , the use of big data in supervision nutrition also faces a number of challenges . One of them is problem quality of the collected data . Because the data used originate from various source , quality and consistency of data can varies . Therefore that 's important For ensure that the data collected is valid, standardized , and can be accountable . Besides that , big data analysis requires device hardware and devices sophisticated software as well as skills high analytical , which may be become constraints in some area with source Power limited . Although Thus , the potential the greatness that big data has for analyze trend health and nutrition at the level macro make technology this is very valuable in system supervision nutrition . Therefore that , it is necessary There is more investment big in development capacity analytics and infrastructure technology For maximize benefits of big data in supervision health and nutrition . In general overall ,

the application of big data in supervision nutrition offer Lots profit in matter accuracy and effectiveness analysis . With big data utilization , decision makers policy can more easy identify trend health society , designing more intervention focused , and finally increase welfare public through supervision more nutrition Good .

3. The Role of Intelligence Artificial in Health Surveillance

Intelligence artificial intelligence (AI) is increasingly Lots applied in system information health , including in supervision nutrition and health . AI enables data processing in amount big with much greater speed and accuracy more tall compared to with method conventional . In context supervision nutrition , AI can used For analyze the data obtained from various sources , such as survey nutrition , record medical , and wearable devices , for give more recommendations appropriate related to diet and lifestyle life healthy . One of the example application of AI in supervision nutrition is use machine learning algorithms for analyze pattern Eat individuals and provide related advice change pattern eat that can improve nutritional status . System AI based can also used For predict risk disease related nutrition , such as diabetes, hypertension , and other diseases heart , based on collected data . With Thus , AI does not only help in monitoring nutritional status , but also in prevention disease related nutrition . Besides that , AI can also applied in automation of health data analysis processes , which previously need power man in amount big . With using AI, the analysis process can done with more fast and accurate , so that make it easier power medical and taker policy For make decision more data based good . In matter this , AI does not only increase efficiency , but also reduces potential error man in data processing . However , even though AI offers Lots potential , its application in supervision nutrition and health Still face challenge big , especially related with problem accuracy and transparency algorithm . One of the constraint main is need For proper training for AI algorithms to be able to produce valid and reliable analysis reliable . Besides that , issue privacy and ethics are also attention main in the use of AI in health , considering health data is highly sensitive information . Challenges other is AI integration with system health that has been there is . In some area , infrastructure technology and resources Power limited human can hinder implementation technology advanced like AI. Therefore that , it is necessary There is effort For increase capacity technology in areas that have not been Ready For implementing AI in a maximum . Although Thus , AI has potential big For revolutionize supervision nutrition and health . With research and development more continue , and attention to existing challenges , AI can play role important in increase system supervision nutrition and health globally .

4. Challenge Implementation System Health Information

Although technology innovative such as cloud computing, big data, and AI offer Lots profit in supervision nutrition and health , implementation system information health face a number of challenge . One of the challenge the biggest is problem infrastructure technology that has not been evenly distributed , especially in the regions remote or not enough developing . In many location , limited internet access and lack of device adequate hardness become obstacle main in implementation system information health based on technology sophisticated . Besides that , challenge related with skills and training power medical also becomes problem in implementation technology This . Use system based on technology need sufficient understanding and skills from the workforce medical and management system information . Without adequate training , technology This Can So No used optimally , even can at risk reduce effectiveness supervision nutrition and health. Problems other is related with privacy and security of health data . Use system information health cloud -based and big data that stores personal data patient increase risk data leak or abuse information health . Therefore that 's important For own system strong security and policies clear privacy For protect patient data . Without adequate protection , society Possible will reluctant For share their data , which ultimately can reduce effectiveness system supervision health . Integration between various system health that has been there is also to be challenges . Many countries or area Still use manual system or system information that is not connected , so that the data is collected No can analyzed in a way integrated . System integration information health from various source become step important For maximize benefit technology in supervision nutrition and health . Integration process This need time , source power , and careful planning . In face challenges mentioned , it is necessary There is collaboration between government , provider technology , and power medical For design and implement system more information efficient and safe . Government need ensure that supportive policies implementation technology in the sector

health can be applied in a way evenly distributed throughout the region, with notice need local and readiness infrastructure. In terms of overall, although challenge in implementation system information health enough big, with appropriate efforts and cooperation between various party, technology this own potential big. For increase supervision nutrition and health public in a way overall.

5. Recommendation For Development System Health Information

Based on results analysis innovation in management system information for supervision nutrition and health, there are a number of recommendations that can increase effectiveness system this. First, it is important for strengthen infrastructure technology in underdeveloped areas developing. Government and sector private need work the same for ensure that fast internet access and devices adequate technology can available throughout the region, especially in the areas rural and remote areas. Second, training and education for power medical and management system very important information for ensure that they can operate system information with effective. Training programs that include use technology new, like application cloud-based, big data, and AI, must held in a way sustainable for increase capacity source power human in the sector health. Third, strengthening policy privacy and health data protection must become priority. Government and institutions related need develop policies that ensure that personal data user protected with good. Besides that, it is necessary there is clear regulations about health data use and access party third to information mentioned, so that it does not happen abuse. Fourth, to ensure integration system information better health okay, need there is clear standards regarding data formats and interoperability between different systems. This will make it easier health data collection and analysis in a way integrated, as well as ensure that all party related, including House hospitals, clinics and health centers, can each other share information with safe.

5 Conclusion

As closing, discussion this show that deep understanding to every aspects that have been analyzed very important for reach optimal results. With a systematic approach and based on accurate data, we can take more decisions precise and impactful positive in development to front. Every the findings obtained also become base for repair sustainable as well as adaptive innovation to changing times. To front, expected results from analysis this no only become reference while, but also become foundation for long term strategy longer length effective. Evaluation periodic as well as openness to input new will become key main in maintain relevance and success. With commitment together, various possible challenges appear can faced with more solutions creative, innovative and sustainable.

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