ICEBIT

LITERACY AND EDUCATION ON YARD ENVIRONMENTAL FOOD SECURITY THROUGH DIGITALIZATION

Drs. Bagus Qomaruzzaman RE,M.P.
Institut Technology and Sains Mandala
Jember
Telephone 082257030496
bagus@itsm.ac.id

ABSTRACT

Food security is a condition in which all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs for an active and healthy life.Meanwhile, a yard is an area of land around a house or residential building that is usually used for various purposes, such as planting crops, raising animals, or open space for daily activities. Yards are often an important part of households in both rural and urban areas because they have various useful functions.Yards are often an important part of households in both rural and urban areas because they have various useful functions. In this research, a descriptive method is used through a literature review study that is in accordance with the theme of the Conference. Food security literacy and education through digitalization is an approach to increasing community understanding and knowledge of food security using digital technologies. This is essential to ensure that individuals and communities have the ability to access information, make informed decisions about food, and contribute to sustainable food systems.

Keywords : literacy, yard, food security, digital

1. INTRODUCTION

Food security is a condition in which all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs for an active and healthy life.

Meanwhile, a yard is an area of land around a house or residential building that is usually used for various purposes, such as planting crops, raising animals, or open space for daily activities. Yards are often an important part of households in both rural and urban areas because they have various useful functions.

Yards are often an important part of households in both rural and urban areas because they have various useful functions, including:

1. Household Agriculture: Yards can be used to grow vegetables, fruits, herbs, and medicinal plants. This helps meet daily food needs and reduces dependence on the market.

2. Greening: Planting various types of plants in the yard contributes to greening the environment, improving air quality, and creating a cooler environment.

3. Small Animal Care: Yards are often used to keep small animals such as chickens, rabbits, or birds, which can be an additional source of protein for the family.

4. Recreation and Relaxation: The yard area can be a place to relax, play, or do outdoor family activities.

5. Aesthetic Enhancement: A yard that is well-maintained and decorated with ornamental plants, ponds, or other decorative elements can enhance the beauty of the house.

Digitization is the process of converting information, data, or objects from physical or analog form into a digital format that can be processed, stored, and accessed through computer technology and electronic devices. Digitization allows data that was previously only accessible manually or in physical form to be more easily accessed, processed, and shared electronically.

Through the digitalization system, it is possible to improve the quality of literacy and internal education of the yard to be increasingly recognized by the public.

2. STUDY LITERATUR

2.1 Food Security

1. Food Security

Food security refers to a condition in which food needs from the country level to the individual are adequately met. The importance of paying attention to aspects of religion, beliefs, and community culture is also a factor that should not be ignored. The main goal of food security is to achieve a healthy, active, and productive life sustainably for all individuals (Law No. 18 of 2012)

FAO defines food security as a condition in which an individual or household receives access, either physically or economically, to obtain food for all household members. In addition, access to obtain food does not have the risk of losing members of the household or the food they want to obtain. In the context of food security, the desired

condition is when each individual or family has the physical and economic ability to obtain sufficient food for all family members and does not face the risk of shortages in terms of physical or financial access. 2. Yard

2.2 Yard

Rahayu and Prawiroatmodjo (2005) define a yard as a piece of land that has certain boundaries, on which there is a residential building and has a functional relationship, both economic, biophysical and socio-cultural, with its occupants.

2.3 Digitaization

According to Lasa (2012:17) who stated his opinion that digitalization is the process of managing printed documents into electronic documents.

3. RESEARCH METHOD

In this research, a descriptive method is used through a literature review study that is in accordance with the theme of the Conference.

4. DISCUSSION

Some planting systems that can be applied in the yard (Noer, 2020) are:

1. Verticulture system, which is a vertical farming method by arranging plants in tiers from bottom to top. This system is most suitable for narrow land yards.

2. Aquaponic system, is a farming method that combines aquaculture and hydroponics where this system relies on fish to provide organic food and nutrients to help plants grow. Plants that are often used in this system are vegetables.

3. Hydroponic system, which is a method of cultivating plants without using soil media but utilizing water/nutrient mineral solutions needed by plants and other materials as a substitute for soil media containing nutrients. There are several types of hydroponic systems that are commonly used, namely the Wick System (Seasoning System), Water Culture, NFT System (Nutrient Film Technique), Drip System, and DFT System (Deep Flow Technique). The types of plants that are usually planted with this system are vegetables, fruits, ornamental plants, and biopharmaceutical plants.

4. Aeroponic system, is a way of growing vegetables in the air without using soil, where nutrients dissolved in water are sprayed in the form of mist on the roots of hanging plants. 5. Tabulampot system, is a system of planting fruit plants in pots. This system is very suitable for cultivating fruit in narrow land. Some fruit plants that can be grown with this system are oranges, sapodilla, mango, water apple, guava, star fruit, grapes, strawberries, figs, dragon fruit and papaya.

Benefits of Implementing Digital Technology

1. Efficiency and Productivity: With more precise monitoring and management, farmers can reduce the waste of resources such as water, fertilizers, and pesticides, while increasing yields.

2. Risk Reduction: Better weather predictions and real-time monitoring of crop conditions help farmers reduce the risks associated with extreme weather conditions or pest attacks.

3. Sustainability: More efficient use of resources also supports sustainable agriculture by reducing negative impacts on the environment.

Food security literacy and education through digitalization is an approach to increase public understanding and knowledge about food security using digital technology. This is important to ensure that individuals and communities have the ability to access information, make informed decisions about food, and contribute to sustainable food systems.

Some ways digitalization is used in food security literacy and education:

1. Online Learning Platforms

• Online Courses and Webinars: Many institutions and organizations provide online courses, webinars, and virtual workshops that focus on food security. These cover topics such as sustainable agriculture, nutrition, food management, and food safety.

• MOOCs (Massive Open Online Courses): Platforms such as Coursera, edX, or FutureLearn offer free or paid courses on food security, which can be accessed by anyone around the world.

2. Digital Apps and Tools

• Educational Apps: Mobile apps designed to educate users about agriculture, nutrition, and food security. For example, apps that help farmers learn best agricultural practices or apps that provide information on nutrition and healthy eating patterns.

• Educational Games: Digital games that teach children and young people about food security concepts in an interactive and engaging way.

3. Social Media and Online Communities

• Awareness Campaigns: Social media can be used to spread information about food security, the importance of nutrition, and ways to reduce food waste. Hashtags, infographics, and educational videos can reach a wide audience.

• Forums and Discussion Groups: Online communities on platforms like Facebook, Reddit, or WhatsApp can be a place for people to share knowledge, experiences, and resources about food security.

4. Widely Accessed Digital Content

• Blogs and Articles: Many websites are dedicated to food security, providing articles, reports, and guides that are freely accessible to the general public.

• Podcasts and Educational Videos: Podcasts and YouTube channels that discuss various aspects of food security, from local agriculture to global food policy, allow listeners and viewers to learn flexibly.

5. Maps and Data Analysis Tools

• Interactive Maps: Digital maps that show areas vulnerable to food insecurity, access to markets, and local resources. These can be used by governments and organizations to make better decisions about food distribution.

• Dashboards and Visualization Tools: Digital tools that visually display data on food security, helping people understand trends and challenges faced in different areas.

6. Collaboration and Collective Learning

• Collaborative E-learning Platforms: Platforms that enable learners, farmers, experts, and other stakeholders to collaborate on projects related to food security. This includes sharing best practices, research, and innovations.

7. Access to Food Resources

• E-books and Digital Resources: Digital books and guides that discuss ways to improve food security, including guides on urban agriculture, food processing, and food storage.

5. CONCLUSION

By leveraging digitalization, food security literacy and education can be significantly expanded, giving communities the tools and knowledge they need to contribute to more equitable, sustainable and secure food systems.

Food security literacy and education through digitalization is an approach to increasing community understanding and knowledge of food security using digital technologies. This is essential to ensure that individuals and communities have the ability to access information, make informed decisions about food, and contribute to sustainable food systems.

6. REFERENCES

Hardyasti Noer, S.P. (2020) First Agricultural Product Quality Supervisor. Department of Agriculture and Food Security of the Special Region of Yogyakarta.