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COMMUNICATION NETWORK SYSTEM IN SL-PTT PROGRAM TECHNOLOGY DEVELOPMENT

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Abstrak

Sistem jaringan komunikasi dalam aplikasi program SL PTT merupakan sistem yang harus berkesinambungan satu dengan yang lain. Jaringan memberikan andil dalam pelaksanaan pembangunan. Tujuan penelitian ini adalah membahas dari kerangka konsep bagaimana sistem jaringan SLPTT mampu berjalan dengan baik. Penelitian ini menggunakan pendekatan studi pustaka. Hasil penelitian menunjukkan adanya penjaminan kelangsungan program yang terkendali sehingga dapat dilihat keragaman dari setiap sifat subsistem yang ada di dalam satu kesatuan sistem. Sistem berisi komponen atau elemen, yang saling terkoneksi secara bersama-sama dengan tujuan untuk memfasilitasi aliran informasi, materi, maupun energi. Setiap objek merupakan sebuah sistem yang saling terkait. Kelangsungan SL-PTT tergantung dari subsistem informasi yang tersedia di tingkat bawah.
Kata kunci: Petani, Sistem, SLPTT

Abstract

The communication network system in the SL PTT program application is a system that must be continuous with each other. The network contributes to the implementation of development. The purpose of this study is to discuss from the framework of the concept of how the SLPTT network system can run well. This research uses a literature study approach. The results showed that there was a guarantee of the continuity of a controlled program so that it could be seen the diversity of each nature of the subsystem in a unified system. A system contains components or elements, which are interconnected together to facilitate the flow of information, matter, and energy. Each object is a system.
Keywords: Farmer, System, SLPTT

INTRODUCTION

Development is essentially an effort to achieve a higher quality of living by human values that apply fairly and with dignity. Righteousness means that every human effort in their lives contains proportional reward and punishment consequences (Hamid, 2018). Dignity means the development of self-esteem (dignity) both in a humanist process and in the goal of developing the highest welfare or quality of life. At the highest level, dignity means a just, prosperous, and civilized standard of living. In the context of agriculture, an important component in agricultural development is the Farmer. The concept of agricultural development that places farmers as prime movers is referred to as agricultural development with a populist dimension, which is interpreted as development that favors farmers. To become a prime mover, farmers as human resources (HR) in agriculture must have the ability. The ability of farmers is a condition that can be brought about through the empowerment process (Bahua, 2016).

The characteristics of community empowerment are (1) increasing capacity, (2) encouraging the growth of togetherness (3) freedom of choice and decision, (4) generating independence and (5) reducing dependence and creating mutually beneficial relationships (Narayan, 2002; Jamaludin, 2016). A farmer's independence needs to be directed so that his strength and ability work together to achieve all his goals. In groups, one will find one's identification, because together with others one feels mutual affection, loyalty, shared responsibility, sentiments, traditions, and friendships acquired through communication and mutual activities. One of the efforts to grow the ability of farmers is carried out through institutions or groups that accommodate community development, in this case, farmer groups (Susetyo, 2021).

Based on the Regulation of the Minister of Agriculture Number: 273 / Kpts / OT.160 / 4/2007 concerning Guidelines for Farmer Institutional Development point 5.1, it is stated that the ability of farmer groups is intended so that groups function as learning classes, cooperation vehicles and production units, units providing production facilities and infrastructure, processing and marketing units and supporting service units so that they become strong and independent farmer organizations (Departemen Pertanian RI, 2007).

The development of farmer groups, and central and local governments plays a role in creating a climate for the development of farmers' initiatives and initiatives, providing facilities and information services, and providing legal protection. Achieving a farmer group that can be independent and empowered, is determined by the extent to which the farmer group carries out interaction activities among its members so that it will realize the dynamics of the group (Permentan, 2013). The involvement and participation of individuals, as well as groups in society requires communication resources regardless of the theme of development. Communication in the context of development is an integral part of development, and communication is the acceptance of instrumental variables in bringing about development. Communication plays an important role in the development process.

The main thing that development communication does is to open understanding, and insight into thinking, enrichment of knowledge and skills, and empowerment of the community as a whole. Pragmatically, according to Quebral in Dilla (2007), development communication can be formulated as communication carried out to carry out the development of a nation. As a process of change and renewal of society, development requires communication contributions. Change and renewal in society require effective communication. Simply put, communication is said to be effective if people succeed in conveying what they mean (Milad, 2013).

In the context of agriculture, farmer empowerment is defined as increasing farmer power, controlling agricultural resources, and decisions that affect the life of a farmer. The starting point of empowerment is power, as an answer to the powerlessness of society. Power itself is not a vacuum and isolated, power is always present in the context of human relations (Abna, et al 2022). Power is created in social relations, therefore power and power relations are always changing. This concept of power is a concept of power that is not static, but dynamic. On a group scale, group power or empowerment is also dynamic, including in farmer groups, it has farmer group dynamics.

The potential of human resources is needed in various lines of life, including farmer groups. However, the condition of the human resource level in some farming communities still cannot free themselves from the situation they are facing, even if they do not feel the situation. This peasant society did not see it as an injustice, but only in the form of

"unfortunate fate" and misfortune commonly experienced by humans. Even if they realize and feel, they are still on the side that is always helpless. This shows that in reality farming communities are often faced with circumstances that do not allow them to express themselves and communicate their circumstances, so it is often difficult to create cohesiveness, cooperation, and solidarity among them to deal with problems or effect change. In reality, there is no change in society without the role of communication. Thus, it can be said that communication is present in all efforts aimed at bringing about change. Although it is said that communication comes to bring about change, it is not the only tool in bringing about social change. In other words, communication is only one of many factors that give rise to societal change. Communication is the glue of society. Society would not exist without communication. Social structures are created and sustained through interaction. The language used in communication is to create social structures. Simply put, communication can be said to be successful if there is a similarity of meaning between the people involved in interacting. This similarity of meanings can be said that communication is said to be effective. In other words, the people who interact with each other (communicators and communicants) have stimuli and responses that can both be understood by them (Romadona, 2019, Arwati, 2018).

Changes in society and individuals have many factors influence. In addition to communication itself, the effectiveness and level of empowerment of farmers are also influenced by external factors such as public policies from the government, the intensity of counseling, information, and the availability of production facilities that can support farmers' activities. Based on the description above, the purpose of this study is to explain the communication network system and technology development of the SL-PTT program.

METHOD

This research uses the concept of literature study by discussing communication network systems in the development of SL-PTT program technology. A theoretical approach based on the opinion of researchers is used to argue for agricultural development in terms of integrated crop management field schools (SL-PTT).

RESULTS AND DISCUSSION

A system is a unit of many elements (components) that can produce a certain output. In the most general sense, a system is *a collection of things that have relationships among them*. In slightly different language editors, a system is also defined as: "*a group of interacting, interrelated, or interdependent elements forming a complex whole*." Of the many notions of systems that evolve, one thing that is certain is about the aspect of "*wholeness*". A system is a composition of a number of elements that interact with each other to form a *unified whole*. The word "system" comes from Latin and Greek which means "*combine, to set up, to place together*". So, a system contains components or elements, which are interconnected together with the aim of facilitating the flow of information, matter, and energy. Each object is a system.

Information systems are a collection of hardware
namely computers and networks, software in the form of special systems or programs to run the system, humans (brainwave) and supported by data to be processed both in the form of filling forms, procedures, and other data. Based on these various definitions, Sidh (2013) defines information systems as follows:

1. A system made by humans consisting of components in the organization to achieve a goal, namely presenting information.
2. A set of organizational procedures that when implemented will provide information for decision makers and/or to control the organization.
3. A system within an organization that meets the transaction processing needs, supporting operations, managerial, and strategic activities of an organization and providing certain outside parties with the necessary reports.

The need and availability of agricultural innovation are two aspects that are interrelated in a unified agricultural innovation information network system. Each institution involved in the agricultural information network system as a subsystem has different tasks and functions, so it needs agricultural innovation in different forms, formats, and types. The innovation needed is an input that will be utilized to produce output for other subsystems. Further inputs will be processed internally through certain activities to be able to produce outputs following the set targets. Throughout the process of processing inputs into outputs, storage facilities are needed, both temporary and fixed.

Success in producing outputs for the environment (other subsystems) depends largely on the availability of agricultural innovations from other subsystems as well. The synergy between one subsystem and another greatly determines performance in processing agricultural innovations into outputs that are beneficial to other subsystems. System liaison is needed to synergize one subsystem with another. As a system, Sumardjo *et al*. (2010) state that there are at least seven identifiable elements or characteristics of agricultural information network systems, namely 1) *Boundary*, 2) Environment, 3) *Input*, 4) *Output*, 5) Component, namely process or activity, 6) Storage both permanent and temporary, and 7) Liaison (*interface*).

The process of managing agricultural innovation by related institutions into outputs that are useful for other institutions in the agricultural innovation network subsystem is still patterned on the formality mechanism of achieving institutional targets and has not been user-oriented, especially end users, namely farmers. The output produced by the institution is still mostly stored in the institution concerned in the storage system both electronically and in hardcopy. Even if it has been distributed, there is still a lot of agricultural innovation information stuck in other related subsystem institutions. For example, agricultural technology packages in electronic and hard copy form are still widely stored in the Agricultural Extension Center and related Agricultural Agencies.

System integration institutions that can distribute agricultural innovation information while reprocessing it into appropriate innovation information by involving formal and independent agricultural extension workers need to be developed. Thus, synergies between institutions can be optimized and outputs can be translated back according to end-user conditions. System integration institutions also need to function as a filter for feedback from end users to related institutions that are members of the agricultural innovation information network system to be able to produce sustainable agricultural innovations from the perspective of knowledge sharing between institutions and institutions with end users. With the development of information technology, the knowledge-sharing process can be accelerated as needed. *Cyber Extension* is one of the efforts to support the occurrence of knowledge sharing in the mechanism of developing agricultural innovation information networks.

One way to identify systems (agricultural innovation information communication networks) is to use *the black-box* theory. The concept used in black box analysis is a black box in which it is not known what happens inside, but only known inputs that enter and output that come out of the dark box. In compiling the dark box, three pieces of information must be known, namely (1) input modifiers, (2) output modifiers, and (3) parameters that limit the system (Eriyatno, 1996).

Inputs consist of environmental inputs, which come from outside the system (exogenous) and inputs from within the system (endogenous). Inputs from within the system are divided into controlled inputs and uncontrolled inputs. Output consists of *desirable output* and undesirable output. The expected output usually results from meeting the needs specified in the requirements analysis step. While unexpected output is generally in the form of impacts caused and may be dangerous.

In the agricultural innovation information communication network system, controlled inputs include the vision, mission, and objectives of each institution included in the system, agricultural innovation information needed with the form, type, and format as well as distribution media by the main tasks and functions of each related institution, agricultural innovation communication activities or programs, infrastructure support and budgets for agricultural innovation communication activities applied, the quality of information and communication technology applications, and the quality of agricultural innovation communication actors. Meanwhile, uncontrolled inputs include the quality of human resources of network system users (agribusiness actors), the socioeconomic status of farmers, the behavior of network system users or agribusiness actors, market potential, the availability and role of local institutions of farmers, and the behavior of non-governmental organizations (NGOs).

Environmental inputs that can influence the black box analogous to the information communication network system of agricultural innovation include laws and regulations, policy development of access and information and communication infrastructure based on information and communication technology, physical conditions of the environment, especially the installation of information and communication technology networks, as well as traditions and culture of the community (Kristanto, 2008).

Output consists of two categories, namely expected output and unexpected output. Expected outputs (by design), are produced through specific activities and output targets that have been set or planned. The main output expected is the expected result of the management of the agricultural innovation information communication network system, namely the fulfillment of the needs of agricultural innovation information appropriately and sustainably. The expected outputs include research reports, products (in the form of seeds, seeds, varieties, agricultural machinery tools prototypes, maps, models, new technology/knowledge), articles for journals or popular scientific and scientific publications, information for agricultural news materials, appropriate technology information, new products/prototypes in agriculture including Means of agricultural production, materials to produce products/knowledge, information management guidelines, abstracts, the latest magazine table of contents, Information on the results of fulltext research/studies that can be accessed offline and online, information search results, electronic journals, agricultural sites, and agricultural innovation communication systems that are dynamic and able to provide information on agricultural innovation in an appropriate sustainable manner.

An unexpected output is a negative result or an unexpected impact that occurs together with the expected output. Some unexpected outputs of agricultural innovation information communication network systems, especially related to information and communication technology applications, are social problems and cultural reduction, social gaps between those who have access to information and communication technology applications and those who do not, and overload information or information that is very abundant received by users so that it is not able to be organized and managed properly according to needs and conditions on-premises resources.

The feedback from the presence of unexpected outputs is the management of information communication network systems, and agricultural innovations. One of the management system mechanisms is the development of information systems based on information and communication technology and control mechanisms which include monitoring and evaluation activities. The researcher's conception of the SLPTT information network system is in Figure 1.

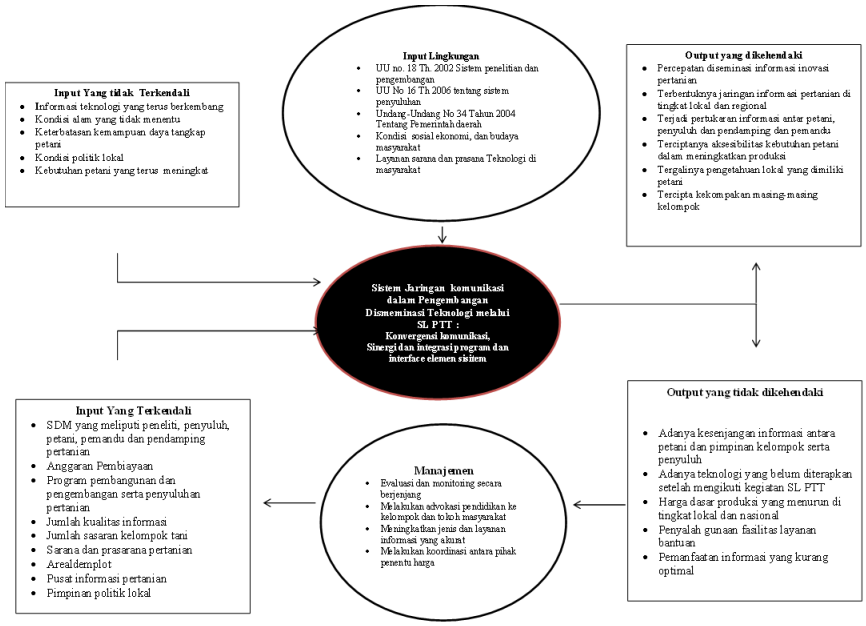

Figure 1. Information Communication Network System Analysis Pattern of Agricultural Innovation Using Black Box Diagram Approach

CONCLUSION

The communication system approach is a structured approach that involves all controlled parties without limiting the surrounding parties. The systems approach guarantees all about the technological conditions developed based on the findings and results that have been achieved so that this approach allows for changes by itself following the system that has been made. The relationship with communication system research in the SLPTT program further illustrates that the communication system approach should indeed be used to ensure the continuity of a controlled program so that the diversity of each nature of the subsystem in a unified system can be seen. A system contains components or elements, which are interconnected together to facilitate the flow of information, matter, and energy. Each object is a system.

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