Research Article

Investigating Interpersonal Dynamics among Researchers and Innovators: An Ethnographic Study of Communication's Role in Fostering Innovation

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Abstract.
University plays an important role in innovation because of their role as producers of knowledge. Through researchers, the innovation ecosystem can develop and contribute to the progress of society. Complex innovation processes involve developing innovation systems that adapt to the uncertainty inherent in innovation. These networks, formed by researchers during the innovation process, encourage the continuous evolution of innovative ideas. The purpose of this research was: 1) Mapping the main problems of researcher concern to developing innovation. 2) Develop an institutional communication model to form a researcher ecosystem that develops high scientific impact. This research method is qualitative with an ethnographic communication approach. Informants are lecturers who are active in conducting innovative research and who are related to the scope of research activities in the institution. Data collection techniques were carried out using interviews, observations, and literature. Data processing was carried out by testing the validity of the data by triangulation through credible sources and references. Research findings were as follows: 1) Effective interpersonal communication drives researcher-stakeholder interaction in innovation. 2) The development of society is based on effective communication, which is formed by the mastery of science and technology. Scientists steer progress and growth by using communication tactics.

Keywords: innovation, communication model, researcher, interpersonal communication, actor

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1. INTRODUCTION

For Indonesia to maintain its demographic advantage, innovation—the invention of new knowledge with economic and social value—is essential. Outsiders, however, frequently take advantage of these chances. It requires institutional support as well as individual effort. Procedures, marketing plans, and management frameworks all benefit from

innovation to increase output and effectiveness. Innovation is fueled by external forces including competition, deregullation, resource scarcity, and client demand. To maintain competition and performance, businesses change their organizational structure and behavior [1]. Institutions of higher learning are essential for innovation because their researchers support innovation ecosystems. However, difficulties do exist, such as a high level of unpredictability and the requirement for efficient teamwork. These institutions' researchers are required to foster an environment that is supportive of innovation, build networks with others who use knowledge, and maintain relationships both internally and internationally.

The user's current ring contains 34 characters. " 1) When academics collaborate with multiple stakeholders, innovation builds relationships. These relationships are driven by interpersonal communication, which is visualized through the stages of interaction. 2) Effective communication, which is formed by the mastery of science and technology, is the foundation of society's progress. When they employ communication strategies, scientists and innovators direct development and encourage expansion. Using good interpersonal communication, innovation "builds connections through researcher-stakeholder interaction, shaping societal development," according to ChatGPT. Interpersonal communication in building innovation networks is a means for researchers to build networks (Interpersonal Communication for Innovation Network). The existence of different understandings and interests requires effective communication in order to solve various problems that may arise. Communication should be carried out not only with other researchers but also with users and even the industry. Interpersonal communication arises because of human awareness as social beings. Interpersonal communication examines why humans develop relationships. In everyday life, humans cannot be separated from the need to build relationships. Behaviorism must be relevant to everyday life. The patterns of human behavior are more everyday and practical in nature. When someone is going to build relationships with other people, there are many factors that must be considered. It's not just about understanding behavior. One of the goals of interpersonal communication is to influence both attitudes and behavior. In addition, providing convenience in various forms is also important. Building comfort in communicating is an important factor by considering the strengths at the hood, namely (1) power in the relationship, (2) power in the person, and (3) power in the message. In the final section of this part, we address the issue of resisting power and influence [1].

Relationships are prone to disagreements, particularly when considerable dependency and divergent interests are present. Every relationship addresses challenges in a different way, inspired by close partnerships' cultural traits. Shared actions and objectives provide the foundation of effective communication participation. Relationship intensity and personal investment have a big impact on intimacy, which is crucial for developing interpersonal communication. These elements support a person's sense of community and belonging in relationships.McMillan (1976) contended (a) that working for membership will provide a feeling that one has earned a place in the group and (b) that, as a consequence of this personal investment, membership will be more meaningful and valuable. This notion of personal investment is paralleled by the work of cognitive dissonance theorists [2]. Relationships face challenges because of dynamic people, yet strengthening relationships is essential for overcoming challenges and preserving efficient communication. Depending on the parties involved and the severity of the interruptions, relationships can be repaired. The possibility of stronger relationships through changes and improvements offers hope. For smoother interpersonal communication, pay attention to the stages of effective communication and relationship-building.

Several similar studies have been carried out, namely, research entitled "Community Groups and Female Entrepreneurship in Developing Countries" was conducted by Mamour Ndour and Laurice Alexandre-Leclair Cedag. The question in this research is, "What motivates women to choose traditional associations for entrepreneurship? How is their entrepreneurial process influenced by the institution? [3]. The research topic "The Roles of Industrial Engineering Education for Promoting Innovations and Technology Commercialization in the Digital Era", was conducted by W. Sutopo in 2019 [4]. Sannino conducted research entitled "CEO characteristics and sustainability business models in financial technology firms. Primary evidence from the utilization of innovative platforms", This paper aims to investigate and find the demographic characteristics of corporate leaders (CEOs) in fintech sector companies that represent the implementation of sustainable business models [5]. The research entitled "The Impact of Internal, External, and Enterprise Risk Management on the Performance of Micro, Small, and Medium Enterprises", was conducted by Dewi Hanggraeni et al. This paper aims to develop the role of internal factors, external factors, and risk management variables on MSME business performance [6].

The urgency of this research is that innovation is a must, as it will bring social and economic value. Higher education institutions or universities should develop an

innovation ecosystem through researchers. Various networks are built by means of communication, especially interpersonal communication between researchers and different parties involved in developing innovations. This research will develop a communication model, particularly interpersonal communication, to build an innovation ecosystem through researchers. This study formulates specific objectives as follows:

1. Mapping the main issues addressed by researchers in developing innovations
2. Developing an institutional communication model to develop an innovation ecosystem

2. METHOD

This research was conducted using the ethnography of communication approach by tracking communication patterns developed from the interactions of actors in a particular community group. Ethnography of communication is an approach that is applied to obtain cultural values that exist in a certain condition through the process of interpersonal communication [7]. This study discusses the theme based on characteristics, background, and objectives. By applying the ethnography of communication approach, the research will focus on the communication patterns of institutional communication for the innovation ecosystem and map researchers and institution relationships to transform research into innovation.

Three methods of gathering data were used in the study: 1) Researcher development and dissemination of innovative ideas, as well as institutional support for innovation culture, were the main areas of observation. 2) Extensive conversations with scientists who effectively shared advances with the public. 3) Document assessments of records of collaboration, research findings, and innovation usage. The subjects of this study are innovator research scientists who maintain a variety of communication patterns with industry and other stakeholders. The research chart that describes the frame of mind as the reference for this study is shown below:

The research chart is structured to make it easier in mapping out the research stages, while at the same time guiding the monitoring process more substantively on the research process and results. Based on the chart, the institutional communication model for developing an innovation ecosystem is developed in four main stages: mapping the main issues addressed by researchers in developing innovation.

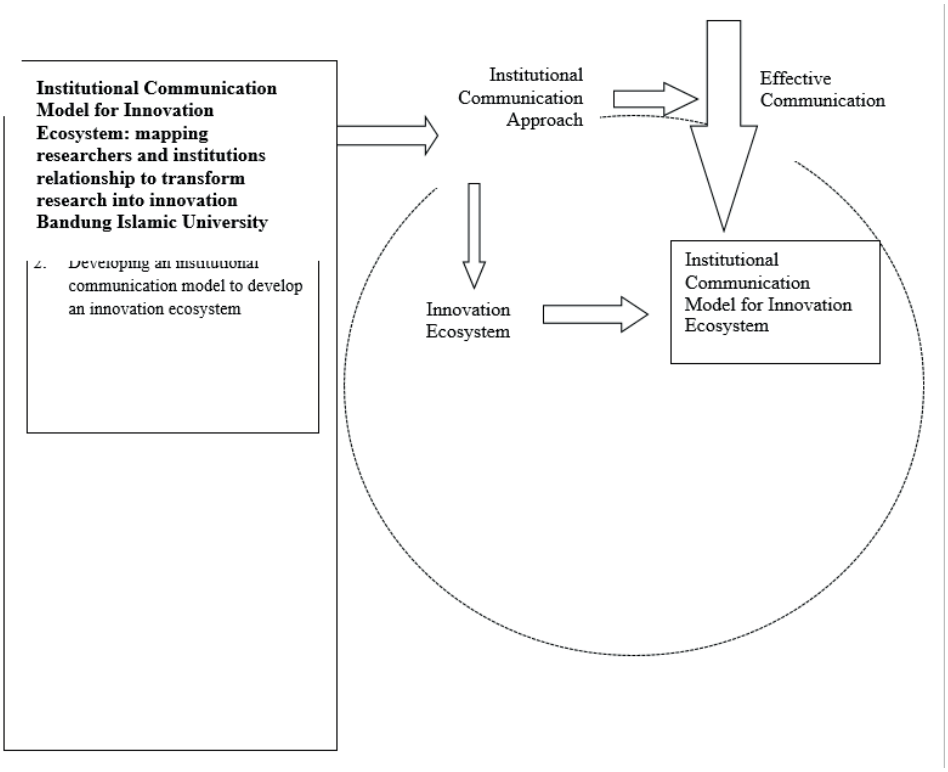

Figure 1: Research Flowchart.

3. RESULTS AND DISCUSSION

3.1. Mapping the Main Issues Addressed by Researchers in Developing Innovations

Researchers interviewed innovators of sunscreen products and anti-oxidants for the face to find out the innovation process and how relationships were built during it. The process of researching sunscreen products for patents began in 2015–2016. This sunscreen product is made from cocoa peel waste, which is still produced on a laboratory scale. The output that has been produced from this research is the research articles published in international journals indexed by Scopus Q2 and the copyright product. The moral atmosphere of a corporation and its innovation The ability of a business to innovate is now a crucial component of organizational effectiveness in the face of globalization. In this line, earlier research has sought to pinpoint the elements enhancing an organization's capacity for innovation (Hirst et al., 2009; Mumford et al., 2002). Examples of factors that have been considered indicators of an organization's innovation include slack resources, a unique strategy, creative human capital, and inventive systems. 1988) [8]. Production is carried out in collaboration with cocoa in

Ciamis, West Java, which is taken from cocoa plants for production, such as extracted from the skin. The scope of the plantation is still small, and there is no cooperation with the regional government. Nevertheless, this product was once a finalist in the West Java provincial government competition held at Gedung Sate, where the place is the office of the governor of West Java. Examples of factors that have been considered indicators of an organization's innovation include slack resources, a unique strategy, creative human capital, and inventive systems [8].

Unisba, as an institution that facilitates the implementation of research, has a department that facilitates the development of research products. It's just that there has been no more concrete follow-up because there has been no production feasibility test. The researchers are a team of lecturers from the field of pharmacy. During the innovation process, various obstacles were encountered. To become a product that can be enjoyed by the public requires various standardization efforts that have been determined. Much is expected of technological innovators in terms of addressing current and future societal challenges. Current academic technological research grant applications even have dedicated sections in which applicants are asked to highlight possible future technology implementations in light of resolving societal issues, e.g., environmental sustainability and healthcare relevance. At the same time, commercial and industrial research institutes are more and more expected to take corporate social responsibility not merely as a guideline but as a starting principle for their innovation practices. So, both industrial and academic institutes are stimulated to deploy'responsible research and innovation' (RRI) practices, either via market demand or public policies [9].

The industry wants the extract to be made in a laboratory that has been certified as Halal and natural. Regulations owned by the government are not yet supportive. So to get to the community, some stages must be passed. The product must be extracted first. Innovation can involve creating or re-engineering products or services to meet market demand, introducing new processes to improve productivity, and developing or applying new marketing techniques and new forms of management systems to improve operational efficiency. According to Damanpour and Schneider (2009), innovation can be determined by pressure coming from the external environment, especially by competitiveness, deregulation, shortage of resources, and custom er demand. For these reasons, a company changes its behavior and organization to maintain or improve its performance and remain competitive in the market [10].

Specificity is required in grant applications. Testing for skin irritability ensures the safety and skin friendliness of sunscreen. Standardization preliminary animal experiments on herbal medications are positive. Market and laboratory comparisons are made using chocolate. The difficult part, requiring ethics commission approval, is ethical clearance. Cosmetics and other innovative items take into account market alignment and aroma. For a larger audience, cooperation with mediators is crucial. The cosmetic product made from cocoa waste underwent two stages of development with the intention of being used by a larger audience.The ability of researchers to build relationships through interpersonal communication is needed. Both the initial stages of research and the results of this innovation can be enjoyed by the wider community. In building relationships, the presence of mediators to help realize innovation is an important part. Interpersonal channels play a crucial role in the transmission of innovations in a community-based organization because they enable information mobility (Gainforth, Latimer-Cheung, Athanasopoulos, Moore, & Ginis, 2014). Consumers who have not yet embraced new technology favor interpersonal channels based on conversational channels for information rather than written channels (Lee, Lee, & Schumann, 2002). People who are familiar with technological advancements like computers and computer programs can access knowledge and skills through their efforts (Lichty, 2000), but they also make use of interpersonal channels like managers, coworkers, and technical experts (Lichty, 2000; Stuart, 2000; Weenig, 1999). [11]

3.2. Developing an Institutional Communication Model to Develop an Innovation Ecosystem

The innovation regarding medical devices proposed is to protect health workers when examining COVID. This is also to address the scarcity of PPE, where the need is very high but the availability is very low. The proposed research is a development scheme for products that have Domestic Content Level (TKKDN) certificates. The level of domestic components used for the development of products to SNI standards and reach a wide market. However, initial research on this product has been carried out through PTUPT's 2 years of research, prototype, development, and assignment. The output of this research is the copyright of a product and an article in an international journal. These communicative wishes, rather than the intentions or motives behind communication, set out the innovational process. These pieces of knowledge were not known to their holders beforehand. Moreover, these knowledge outcomes were not ordained by an

analytic outside. Instead, members hew out their knowledge as well as the knowledge of others through living communicatively. Innovations thus resulted from knowledge-enriching communicative actions. Such an innovation stands upon knowing oneself through knowing the community in the enterprise, and thus it engenders conviviality. [12]

The innovation results regarding the development of a medical device called Shield at the domestic component level are quite high. The concept of medical device products is manifested by entrepreneurs. To reach the public, the results of this innovation must be considered through the legal process to maintain reputation. This health technology has helped Al Islam and Al-Ihsan Hospitals with PPE shortages during the COVID period. In addition to these medical devices that have helped hospitals during the COVID period, they are also shield medical devices. Apart from medical devices, research has also been conducted on soursop leaves for liver cancer and is in the process of obtaining a patent for 2 years (UKI), because it is not a simple patent, so it takes a long time. The insulator product can be used for the development of synthetic drugs. At least as early as Schumpeter (1911, 1939), who acknowledged that the innovations of the industrial period contributed to economic well-being, this relationship has been studied. Innovation is still associated with increased firm-level productivity, macroeconomic growth, and development (e.g., Andergassen et al., 2017; Kaplinsky et al., 2009; Fagerberg, 2005). Innovation has been a fascinating research issue for academics and policymakers due to its potential high impact on the socioeconomic growth of various economic agents and countries [13]. To implement innovation into a product that is recognized for its usefulness by society, a long process and intensive communication are required to build relationships with related parties so that the innovation process is in line with the objectives. “Organizational processes and structures that permit and strengthen responsible communication” and that allow “openness and access to information and the possibility of engagement” for all groups of stakeholders (Garcia-Marzá, 2017, p. 271).[14]

4. CONCLUSSION

It is crucial to map the concerns that entrepreneurs solve, as demonstrated by initiatives like sunscreen and the creation of antioxidants using leftover cocoa peel. On this path to invention, researchers must overcome obstacles like patent research, publications, and

business partnerships. Despite the cocoa industry's potential, development is hampered by a lack of regional government cooperation. Initiatives to standardize are essential for gaining public approval. The presentation of these advances requires effective communication. Science and technology mastery are essential for a country's prosperity, and communication between scientists and entrepreneurs working to meet social requirements is crucial. The development of COVID-19 protection devices depends on effective communication in the medical device sector. The goal of this study is to develop a model for institutional communication that supports the growth of the innovation ecosystem. It is crucial to overcome challenges including obtaining Halal and natural certifications, complying to laws, and passing difficult tests. The difficulties of putting innovative ideas into practice are highlighted by the complicated connections between business owners, organizations, and regulatory bodies. Interpersonal communication is essential for the successful deployment of innovations and allows researchers to translate their findings into real-world applications. Innovative ideas rely on clear communication to unearth previously unknown information and motivated objectives, promoting knowledge exchange and collaboration..

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