

Agripreneurship

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Abstract

This study examines the relevant and critical agricultural-related information available on the official government web portals of thirteen (13) agencies operating under the Ministry of Agriculture (MoA). A structured review of the agricultural-related content was conducted to identify information elements that hold significant value for aspiring agropreneurs. The primary goal of this study is to develop a model of an online platform consolidating essential agricultural information from various government agencies' web portals. The model of information elements undergoes the validation process that comes from experts and potential agropreneurs. The method of research employs a qualitative research approach and adopts the interpretive research paradigm to analyze the collected data. More specifically, it adopts a hermeneutic approach to the analysis process. The focal point of this research is presenting the state-of-the-art of critical and relevant agricultural and agripreneurship information elements, which eleven (11) information elements of agricultural-related and agripreneurship form a cornerstone of this endeavor. It confines its scope to the official web portals of government departments and agencies under the Ministry of Agriculture (MoA). The ultimate contribution of this research lies in its ability to provide an intricate understanding within the realm of information management context of agriculture and agripreneurship that would cater to the potential agropreneurs or youths lacking prior agricultural knowledge and equipping them with essential information to embark on their journey.

Keywords: Information Management, Information Element, Agricultural Information, Agripreneurship

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1.0 Introduction

Malaysia's economy placed a significant focus on agricultural activities years ago. Nowadays, the agriculture sector is undergoing a vast transformation. The agricultural sector constantly plays an important role in Malaysia's economy, not only helping the country to achieve food security for local consumption but also generating strong export earnings (Kamaruddin, Abdullah, & Ayob, 2018). Pawlak, K. & Kolodziejczak, M. (2020) also have mentioned that food security has become an issue of key importance to countries with varying degrees of economic development, with the agricultural sector playing a strategic role in enhancing food availability. The country's transition from agriculture to agribusiness is driven by private sector investments as the main driver of economic growth, which creates a total number of 55,936 jobs in the agricultural sector (Prime Minister's Department, 2013). However, potential agropreneurs need accessible agricultural-related information to enter this industry. Current trends indicate a pressing need for more youth to participate in agriculture, especially in specialized areas that demand innovative technologies to tackle the challenges posed by climate change (Zaremohzzabieh & et al., 2022). Therefore, adequate youths or potential entrants with knowledge transfer on agriculture-related topics are required to strengthen the agriculture sector.

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Generating interest in agripreneurship opportunities among youths poses a significant challenge from an information management perspective. Upon initial scrutiny, it was observed that the challenge is that the agricultural-related information resources are currently isolated and scattered (Sa'udi & Rahman, 2018, 2019). This circumstance is due to every agriculture department having distinct functional roles, which results in the provision of varied agrarian information on their web portals (Sa'udi & Rahman, 2018, 2019). Whereby potential readers may visit the agricultural portals to retrieve essential agricultural-related information such as potential products for commercialization, current agricultural activities, or the latest technologies and equipment being used. As mentioned by Sa'udi & Rahman (2019), the 13 web portals under the MoA disseminate information about their core business through the official web portal but provide limited information on the elements of agripreneurship. Every web portal that has been analyzed lacks endeavor standardization or uniformity in presenting agricultural information and services. These circumstances would hinder potential entrants from retrieving agricultural information resources based on their specific needs. Therefore, it is crucial to improve the provision of agricultural information to facilitate the information searchers by providing relevant, adequate, coherent, and integrated resources.

Nowadays, information resources can be accessible through online platforms. However, retrieving the desired information from online portals is quite challenging as it requires sifting through numerous search results and identifying the right information from reliable online resources. In a previous study conducted by Singh & Sharma (2015), the use of semantic web and agent technology was explored to retrieve personalized information from the web in the agriculture domain. In the agricultural context, information can be retrieved from various sources such as extension agencies, mass media, fellow farmers, input dealers, and others (Adio, E. & et al., 2016); (Madhuri, Ghosh, & Kumari, 2019). Whereby agricultural information can be obtained from the related agencies that publish on their web portals (Shoaib & Basharat, 2010). Unfortunately, the agricultural information provided is isolated and scattered throughout the official web portals. The trusted information providers served the agricultural information with distinct contents, structures, and presentations as those departments primarily promoted different agricultural information contexts.

The concept of an information centre needs to apply in information management as well, where it provides the public users with the right information and services in an integrated platform. The idea of centralized information is to provide convenience and a multitude of services and resources to the targeted audience; hence, it would implicitly create the opportunity for governments and private sectors to deliver information. According to (Wimmer & Tambouris, 2002), the online one-stop government is referred to as the integration of public services from a citizen's or customer of public service's point of view, which is accessible through a single window (Verma & Mishra, 2010) in a well-structured and constructive manner. According to Verma & Mishra (2010), the one-stop solution concept for e-government systems makes people easier to obtain desired information and services. In West Java, the provincial government has introduced various e-government initiatives to improve public services and governance. These initiatives include establishing Public Service Centers that offer integrated services and serve as a one-stop destination for citizens (Fauzi et al., 2023). Hence, the primary purpose of a one-stop information centre is to provide scattered information into a single platform for people accessing a variety of information, including the services provided by different organizations into a single platform.

The concept of a centralized government portal has been extensively discussed in the information architecture field. According to Sedek, Sulaiman, & Omar (2011), the lack of interoperability in existing government portals requires users to access government services from other websites. However, most developing countries, such as the Republic of South Korea, the United States, and Canada (United Nations, 2010), have implemented state-of-the-art e-government portal technology that provides high-quality services to citizens and contributes significantly to their success (Kim & et al., 2004). These countries have successfully conducted systematic reviews of existing architecture-based approaches to find suitable approaches to develop an improvised version of architecture-related e-government portals that align with their requirements. A study was conducted by Sedek, Omar, & Sulaiman (2015), and an enterprise architectural approach was proposed for the integration and interoperability of e-government applications and services. An effective one-stop e-government portal was designed, implementing a hybrid and distributed e-government model. The researchers considered various issues and barriers related to integration and interoperability (Wimmer, 2002), (Goldkuhl, 2008), (Markande, 2011), redundancy of services (Tambouris, 2001), building trust among departments and agencies as service providers (United Nations, 2012) and selecting the exemplary enterprise architectures to adopt the e-government projects (Ahuja, A. & Ahuja, N., 2008) in proposing the e-government portal. Therefore, by implementing an integrated web portal, citizens and businesses can complete transactions with government agencies without visiting separate ministries and departments in various locations (Ebrahim & Irani, 2005). As a result, the distributed architectural design for e-government, comprising a centralized government information portal, e-government application providers, and e-government service providers, is presented as a solution.

2.0 Research Methodology

This study is associated with the qualitative and interpretive research paradigm from the feature of qualitative research itself. The Hermeneutic analysis is applied in analyzing the data collection. Considering the nature of this study, the most suitable paradigm aligns with interpretivism. As acknowledged by Merriam (2009), in the interpretive paradigm, meaning is constructed by human beings as they engage with the world; they interpret, which makes them dependent on context and personal frames of reference (Ajjawi and Higgs 2007). In this study, meaning pertains to the verification by respondents on information elements related to agriculture and agripreneurship, agricultural subsectors, and the contents of the proposed model. Aligned with the three phases of research design, the following methodological approach is applied: -

Phase 1 – The initial phase of the study aims to achieve the first research objective, which is to examine the relevant and critical agricultural-related information provided. The critical review of relevant literature on the issues was studied. The preliminary interview was conducted by interviewing an officer from the MARDI agency.

Phase 2 – The second phase is to develop a model containing the essence of information that pique the interest of potential agropreneurs. A critical review of the role of agricultural information provided by the government's web portals in nurturing awareness and interest in agribusiness and agriprenurship has been done in this stage. The criticality of the web content was subsequently analyzed to identify the essential information needed for the potential agropreneurs. The essential agricultural-related information was derived from the government's web portals in the next phase.

Phase 3 – In the final stage, the process of consolidation and unification of the elements have been taken into account upon analyzing all the components and information related to agriculture and agriprenurship. The related and critical agricultural information elements for agribusiness and agriprenurship were modeled and validated by the respondents who are from expertise in the agricultural sector and potential agropreneurs who are interested in pursuing their careers in the agricultural sector. Fig. 1 illustrates the research design of this study.

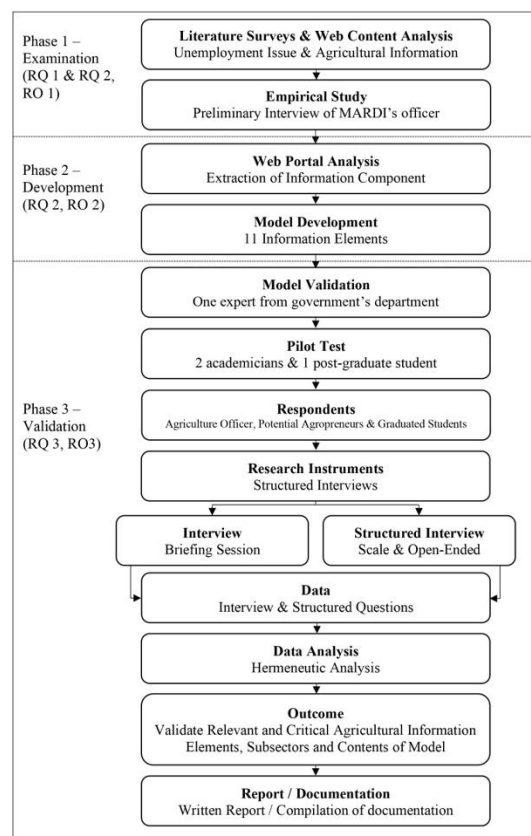


Fig. 1. The Research Design

2.1 Research Population

The research population refers to the total set of individuals or entities that meet specific criteria. In this study, it comprises employees with expertise in the agricultural sector and potential agropreneurs aiming to pursue a career in agriculture. A brief interview was conducted via WhatsApp and telephone calls to inquire about their background and interest in the agriculture field. These preliminary interviews allowed the researcher to align the research needs with the respondents' backgrounds.

2.2 Research Sampling

- 1) Agricultural Officers – Three officers from selected agricultural departments and agencies possess significant knowledge about agriculture and agriprenurship.
- 2) Potential Agropreneurs – Individuals interested in entering the agropreneurial sector without having an agricultural background. This means that the respondents have no background in agriculture. Five respondents were selected from this category.

2.3 Research Instrument

A structured questionnaire was designed to collect data from the respondents. This choice is supported by Hunter, Dik, and Banning (2010) and Bunderson and Thompson (2009), who highlighted that questionnaires enable direct and structured evaluation. Thus, using questionnaires as the research instrument in this study is justified.

3.0 Result and Discussion

3.1 The Model Validation Approach

The Hermeneutic Analysis (HA) applied in Atlas.ti was used for data analysis during the model validation processes. The analysis presented in this section specifically focuses on the open-ended responses/statements provided by eight (8) respondents. Atlas.ti 7 was utilized for interpretive analysis alongside the Hermeneutic analysis for both data collection methods: Likert scale and open-ended questions. Within the Hermeneutic Analysis (HA), respondents' ratings and responses were quoted and coded using Atlas.ti Editors. This analysis approach offers a method to comprehend textual data and is executed in two steps. In the first step, each quotation and code is individually analyzed to extract the respondents' opinions on each information element in the questionnaire. Subsequently, a collective interpretation is conducted using a sub-technique known as Productive Hermeneutic Analysis (PHA). Two types of results are produced from the Atlas.ti HA. The first result is the Frequency Code Table, which displays the frequencies of codes or code groups that have been applied in a document. The outcomes of the Frequency Code Table are based on the structured questions consisting of 12 frequency codes encompassing overall information elements and another 11 information elements. Fig. 2 shows one of the examples of a Frequency Code Table and Code-Quotation List from this study.

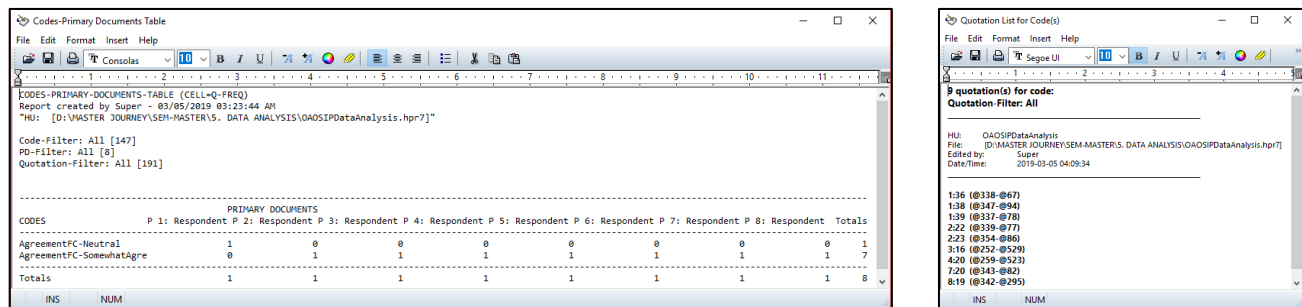


Fig. 2. Examples of Frequency Code Table and Code-Quotation List

3.2 The Consolidation Process of Appropriate, Relevant, and Critical Agricultural Information Elements

The information that was extracted from the portals ranged from services, activities, resources, courses, training, products, research and development, entrepreneurship, current events, exhibitions, consultation and advisory, technology and equipment, agropreneurs communities, marketing, funding and capital, and current or future program. The consolidation process of the classification was made according to the most appropriate sub-agriculture sectors and the relevancy of agricultural-related information. The final elements are Potential Business, Procedures, Consultation & Advisory, Courses & Training, Funding & Capital, Market & Marketing, Events & Exhibitions, Technology & Equipment, Entrepreneur & Community, Research & Development and Products.

3.3 The Model of Information Elements for Agriculture and Agripreneurship One-Stop Information Portals

Fig. 3 shows the information elements that consist of the layers of agriculture subsectors and information elements.

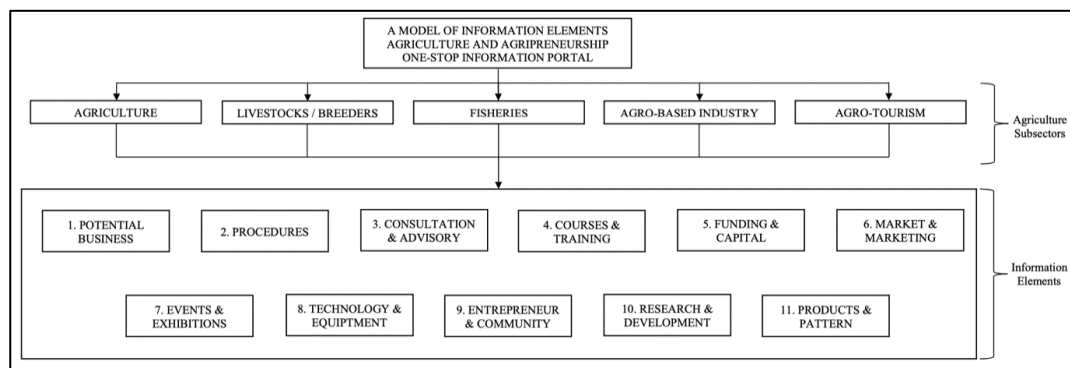


Fig. 3. A Model of Information Elements for Agriculture and Agripreneurship Information

3.3.1 The Relevancy of Agricultural Sub-sectors

The first layer of the model focuses on the relevancy of information in pillars of the agricultural sub-sectors. The potential agropreneurs can acquire a comprehensive understanding of agriculture, livestock/breeders, fisheries, agro-based industries, and agro-tourism sub-sectors.

3.3.2 The Relevancy of Agricultural and Agripreneurship Information Elements

This model incorporates the elements of Potential Business, Procedures, Consultation & Advisory, Courses & Training, Funding & Capital, Market & Marketing, Events & Exhibitions, Technology & Equipment, Entrepreneur & Community, Research & Development and Products where each element holds significant value that will be relevant for the potential agropreneurs.

3.3.3 *The Relevancy of Potential Business Element*

Potential Business includes valuable information and knowledge concerning various aspects of potential business in plants, livestock, dairy products, and processed food. This element provides detailed information and insight into the potential business prospects within this domain, assisting start-up businesses in making informed decisions. Access to this information and knowledge is crucial for new entrants, as it enables them to understand the current demands for plants, livestock, dairy products, and processed food.

3.3.4 *The Relevancy of Procedures Element*

The Procedures element has information on essential processes such as planting, breeding, custody, fishing, and other relevant skills. It provides e-guidance on the fundamental steps in marketing and commercializing agricultural products to local and international. It also serves as a reliable source that explains the necessary procedures to run an agricultural business, validate ideas, and refine business strategies.

3.3.5 *The Relevancy of Consultation & Advisory Element*

The Consultation & Advisory provides information on guidance in various aspects of business planning information, including purpose and objective, location considerations, operational strategies, marketing approaches, and financial aspects. It facilitates one-to-one knowledge sharing and consultation specifically tailored to the unique challenges and risks associated with plants, fisheries, livestock/breeders, and agro-based products. This element aims to assist entrepreneurs in enhancing their products and services, maximizing profitability, expanding their market reach, and capitalizing on emerging opportunities.

3.3.6 *The Relevancy of Courses & Training Element*

This element focuses on comprehensive training programs and short courses by providing sufficient courses and training sessions. It also provides information about seminars, events, and activities organized by any agencies that are suitable for potential young agropreneurs. By actively participating in those courses and training, it ensures that agropreneurs can learn the essentials of business development strategies and implement good marketing techniques.

3.3.7 *The Relevancy of Funding & Capital Element*

The Funding & Capital element provides information on various schemes, opportunities, and funding that are available for the agropreneurs. To venture into agribusinesses. The information provided elucidates different schemes, including funds, grants, and loans offered as financial assistance to support the establishment and growth of agribusiness ventures. Additionally, this element furnishes the agropreneurs with comprehensive lists of authorities involved and the scheme products that are available in these funding initiatives.

3.3.8 *The Relevancy of Market & Marketing Element*

Information on effective marketing strategies is provided in the Market & Marketing element. The information is mainly about product supply, import-export operations of the products, and market penetration for local and international. The potential entrants could start learning traditional marketing tools and techniques, such as branding, offering marketing, and strategic innovation. By understanding and utilizing this information, they can effectively navigate the market landscape, capitalize on marketing opportunities, and reach their target audience.

3.3.9 *The Relevancy of Events & Exhibitions Element*

The Events & Exhibitions element serves as a platform to update information on current and upcoming programs, events, and exhibitions that are held by all agriculture agencies and private companies. It provides potential agropreneurs with a calendar. This information is crucial as it ensures that agropreneurs will not miss out on the chance to engage with interesting programs and events. By staying informed, they can be actively involved in industry gatherings, networking sessions, and educational programs that will contribute to their career growth in agriculture.

3.3.10 *The Relevancy of Technology & Equipment Element*

Information on modern technological innovations can be obtained in the Technology & Equipment element. It also provides information on services related to equipment upgrades, technical issues, new product offerings, and maintenance of farm technology infrastructure. This element is also considered necessary in ensuring recent and innovative technologies need to be transferred to end-users and the targeted groups.

3.3.11 *The Relevancy of Entrepreneur & Community Element*

The Entrepreneur & Community element provides valuable information about business cooperativeness, potential successors, and a vibrant community of young entrepreneurs in businesses. This will be a platform to foster interaction and collaboration among individuals as well as a platform sharing inspiring success stories of agropreneurs to attract newcomers to venture into agribusiness. One of its crucial aspects is the provision of mentoring initiatives by connecting aspiring entrepreneurs with experienced mentors in this field.

3.3.12 *The Relevancy of Research & Development Element*

This element offers up-to-date information on the research and development of agricultural products, technologies, and equipment to enhance agricultural activities. It plays a crucial role in the agricultural sector's research and development strategy to boost innovation and productivity, as it will keep potential entrants informed on the latest developments in agriculture products, technology, and equipment.

3.3.13 *The Relevancy of Products Element*

The Products & Pattern element provides information to ensure the quality assurance and maintenance of agribusiness products. It guides the new entrants on key aspects such as branding, patterning, and protecting against copyright infringement in the marketplace. This information is crucial for new entrants as it helps them understand the importance of creating distinctive brands and patterns for their agribusiness products.

4.0 Research Contributions

At present, there is no significant research on agricultural information adapting the integrated concept for information retrieval in the agriculture and agripreneurship domain, especially focusing on the potential agropreneurs. This research presented the top layers of the essential information elements for agriculture and agripreneurship. The intended beneficiaries of this model encompass a wide spectrum of users, including individuals engaged in the agriculture sector, like farmers, agricultural academicians, and researchers. Where these users seek tailored information aligned with their distinct interests and needs. The proposed model herein offers an apt solution for effective information retrieval in the context of agriculture.

5.0 Conclusion & Recommendations

In conclusion, this study aims to instill awareness among youths and graduate students about the diverse opportunities in agriculture and agribusiness. It intends to encourage their active participation in agropreneurial activities. Their involvement in agricultural pursuits and agribusinesses holds the potential to mitigate local unemployment rates. Based on this conjecture, it is essential to construct relevant and critical agricultural information resources into a centralized information portal. This integrated platform would serve as a centralized repository, seamlessly presenting a wealth of information sourced from multiple government departments, agencies, and other relevant entities, all revolving around agricultural themes. The envisaged outcome is that this comprehensive agricultural information could stimulate the interest of aspiring newcomers and young graduates to consider the agricultural sector and agripreneurship as viable career paths. The limitation of this study is confined to the information available solely through official web portals of agricultural departments and agencies focusing on agriculture and agripreneurship. This limited scope may hinder potential entrants, like unemployed graduates, from initiating their journey in the field of agriculture. Future research may consider various aspects, including the extension and appropriateness of architectural hierarchy, attributes, sub-attributes, and strategies related to agricultural information provision on the agricultural-centric portals and websites.

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