

What Effective Framework can be Developed to Harvest and Store Knowledge (Tacit & Explicit) of TETFUND as an Organization for use and re-use

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Abstract

In today's evolving digital era, developing an effective framework to harvest and store knowledge (Tacit and Explicit) in an organisation can help the organisation come up with a good knowledge management strategy that can help achieve its organisational goal. This study develops a framework for the Tertiary Education Trust Fund (TETFUND), which is an intervention agency for Nigeria's public tertiary institution, and success factors indicating challenges, preventions, barriers, and possible outcomes to harvest and store the knowledge within the organisation. This study further reveals that the capturing and storage of Tacit and Explicit knowledge is important to enhance the quality management of TETFund. Knowledge made available can help top management to make effective decisions toward achieving the organisational goals and objectives.

The developed framework can make available a template through which experience from individuals (Tacit) and documented (Explicit) knowledge can be harvested for use and re-use.

Keywords: information harvest, information storage, information re-use, tertiary education trust fund (TETFund) and quality management

INTRODUCTION

In recent times, organizations and businesses have been trying to provide the best services to survive in a fiercely competitive world. Organizations harness their pieces of information to get the right or preferred pattern to achieve their goals and objectives. Knowledge is often mistaken for information; information is data converted. According to Kradoo (2020), effective decision-making, considered at the heart of the management process, is likely dependent on the information available. Organizations are leaning towards accumulating and applying knowledge to create economic value and competitive advantage, and the need to do so has never been greater. Barot. (2004). Knowledge is power, knowledge is that which is rightly created, stored, and applied through the right systems that is power. There are two types of knowledge: Explicit and Tacit. Explicit knowledge can be expressed in work, diagrams or numbers and shared in the form of structured data such as scientific formulae, principles, manuals, orders, specifications, and forth, Explicit knowledge can be transmitted across individuals in a systematic and well-structured manner. Tacit knowledge, on the other hand, is highly personal and harder to formalize, making it difficult to communicate or share with others. Subjective insights, intuitions, and hunches fall into this category of knowledge. The challenge lies in the transfer of such unarticulated knowledge in a person's mind. Furthermore, Tacit knowledge is deeply rooted in an individual's behavior and experience, and in the ideal values, or emotions he or she embraces (Edvinsson & s., 1997). Although knowledge constitutes both Tacit and Explicit knowledge, it is mostly in dealing with tacit knowledge that difficulties arise. Ziaie, Jayaram, Mark, and Krcma, (2009).

This study aims to develop a clear framework for harvesting and storing knowledge (Tacit & Explicit) in the Tertiary Education Trust Fund (TETFund). Capturing the Tacit and Explicit knowledge is important in enhancing the quality management of TETFund. Knowledge can help top management

make effective decisions to achieve the organisational goals and objectives. Kothari et al. (2012) state that frameworks are guidelines on different types of knowledge and evidence that should be used to inform decision-making throughout the planning process. framework that provides a clear and unambiguous knowledge base, which in turn can serve as a platform for the development of an effective knowledge management strategy. Mostert & Snyman (2017).

The objective of this study is to develop a framework that can make available location, processes, and steps in a template through which experience from individuals (Tacit) and documented (Explicit) knowledge in both soft and hard copies can be harvested and stored for use and re-use in TETFund. Although authors like Snyman and Kruger (2004), Ndlela and Du Toit (2001), Von Krogh, Nonaka and Aben (2001) have come up with different frameworks for knowledge management, this uniqueness of this studies is that it is coming up with framework for TETFund's knowledge management.

Tertiary Education Trust Fund (TETFund) was established in 2011 as an intervention agency to provide supplementary support to all levels of public tertiary institutions with the main objective of using funding alongside project management for the rehabilitation, restoration, and consolidation of Tertiary Education in Nigeria. Gidado & Iyamo (2020) state that tertiary education in Nigeria refers to a gamut of all post-secondary education institutions, and it is synonymous with higher education. These include the universities, Polytechnics, and Colleges of Education. Their goals, according to the National Policy on Education (FRN,2014), include.

1. To contribute to national development through high-level relevant manpower training.
2. To provide physical and intellectual skills which enable individuals to be self-reliant and useful members of society.

There are established guidelines for accessing TETFund's intervention by the beneficiary institutions. To benefit from these interventions, the institution must submit its needs in hard and soft copies to the Fund. All submissions by the beneficiary institution must be processed manually or using (automated system) computers by the staff of the Fund at different departments and levels. Long-term sustainable growth relies on the efficient dissemination of knowledge, which makes knowledge management an inevitable part of an organization. Frequently referred to as a mechanism for capturing and transferring the knowledge that exists within the organization, knowledge management, in a nutshell, is the leveraging of knowledge towards the improvement of organizational performance. Ziaie, Jayaram, Mark, and Krcma, (2009). Proper Knowledge management in an organization breeds quality Management and determines quality policy, objectives, responsibilities, plans, actions, inspections, evaluations, and verifications across enterprises to fulfil customer satisfaction. In addition, Quality Management is a set of methods to design, develop, improve, ensure and declare the quality of a product or service. Quality Management is to certify that all activities in enterprises are effective, appropriate and efficient for the whole system and its performance. (Ch, Khobreh, Nasiri, & Fathi,2014) Quality Management is defined as an approach to management that has a set of mutually reinforcing principles, each of which is supported by a set of general practices and specific techniques. Dean & Bowen. (1994).

METHODOLOGY

This research employs a qualitative methods approach. All research requires a methodology to reach its conclusions: it must have ways of producing and analysing data so that theories can be tested, accepted, or rejected. Without a systematic way of producing knowledge, the findings of the subject can be dismissed as guesswork, or even as common sense made to sound complicated. Methodology is concerned with both the detailed research methods through which data are collected, and the more general philosophies upon which the collection and analysis of data are based. Issues of this type are referred to as epistemology. Haralambos & Holborn (2013). The proposed methodology for this research includes the following steps:

- a) Literature Review: Conduct an in-depth review of relevant academic literature, industry reports, and case studies to establish a theoretical foundation and identify best practices in TETFund's knowledge strategy.
- b) Use of the literature review to derive a Tacit framework and Explicit framework respectively.

c) Data Collection: Employ interviews, surveys, and focus groups to gather qualitative and quantitative data. This data will help identify common challenges, success factors, and performance indicators related to information.

d) Combine both Tacit and Explicit frameworks into a single knowledge management framework.

LITERATURE REVIEW

Knowledge harvesting is not a catch-all solution. It hinges on trust, which is engendered by shared context. It cannot succeed in adversarial environments, where potential knowledge contributors think they will jeopardize their status or job security if they share their know-how. However, in learning organizations, it can be leveraged judiciously to codify some human expertise in such ways that others can use it. Serrat (2017) states that knowledge transfer is a process by which new information is shared between and among organizational members. Samuel & Odor (2018) Other techniques for knowledge capture and storage before, during, or after include peer assistance, after action reviews and retrospect, storytelling, staff profile pages, and exit interviews (This said, knowledge harvesting is less about capture and decidedly much more about connection and conversation.) Serrat (2017). Knowledge-focused firms need to have appropriate knowledge available when and where it can be applied, not to generate new ideas for their own sake. Davenport & Prusak (1998). Due to the criticality of continuity in an organization and the importance of employee knowledge to the operations, organizations should include knowledge harvesting as part of their overall continuity management plan. Knowledge harvesting has the ability to capture employee knowledge (Beazley, Boenisch & Hardin, 2002; DeLong, 2004; Eisenhart, 2001; Field, 2003). However, simply harvesting employee knowledge is not enough; it needs to be managed to be effective. A database or knowledge management system provides the ability to collect, store and provide access to the harvested knowledge (Brands, 2011).

Knowledge storage is an entity that acquires and applies knowledge to survive and prosper, an organization must have knowledge storage and retrieval processes to ensure that knowledge that has been gained previously is available for current and future use. The purpose of the knowledge storage and retrieval process is to store knowledge and to enable the retrieval of relevant knowledge when it is needed. In addition, the process must ensure that the stored knowledge does not get lost or become corrupted and that no unauthorized access is gained to the organization's knowledge base. Mostert & Snyman (2007).

ORGANISATIONAL KNOWLEDGE

Knowledge can be thought of as ‘information combined with experience, context, interpretation, reflection and is a highly valued form of information that is ready for application to decisions and actions within the organization.’ In any organization, there are two knowledge tacit knowledge and explicit knowledge. Natek & Dusan (2021)

I. EXPLICIT KNOWLEDGE

Explicit knowledge is a kind of information that can be defined easily; it can be expressed in words, diagrams, or numbers and shared in the form of structured data such as scientific formulae, principles, manuals, orders, specifications, and so forth. Explicit knowledge can be transmitted across individuals in a systematic and well-structured manner. (Edvinsson & S., 1997).

II. TACIT KNOWLEDGE

Tacit knowledge, on the other hand, is highly personal and harder to formalize, making it difficult to communicate or share with others. Subjective insights, intuitions, and hunches fall into this category of knowledge. The challenge lies in the transfer of such unarticulated expertise in a person's mind. Furthermore, tacit knowledge is deeply rooted in an individual's behavior and experience, as well as in the ideals, values, or emotions he or she embraces (Edvinsson & S., 1997) Kothari et al (2012). The term 'tacit' knowledge was first described by Polanyi (1958) he stated that tacit knowledge is difficult

to communicate and acquired through practice and experience rather than through language.

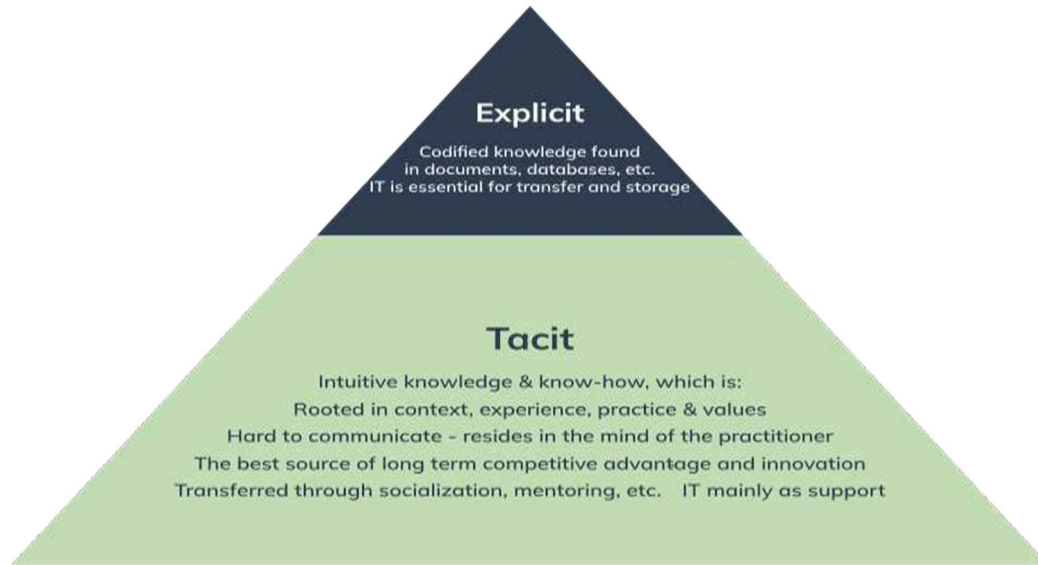


Figure 1: Kumar, M. R. K & Sivakumar, R. (2023)

Having stated the important role of knowledge in an organization, this study establishes an effective framework in which TETFund can harvest and store both Tacit and Explicit knowledge. Frameworks are guidelines on different types of knowledge and evidence that should be used to inform decision-making throughout the planning process. Kothari et al. (2012) state that capturing knowledge in an organization is important to enhance the quality of management's decision-making in order to achieve the organization's goals and objectives. Knowledge management (KM) is the cornerstone of every successful community, whether it is a small organization, a giant company, or even an entire society. Nations that succeeded in distributing and storing knowledge and passing it on to the next generation are the ones that were able to expand their learning, build empires, and extend their territory beyond their borders. Science, art, and culture are a result of receiving the experience and skills of their predecessors, revamping them, and ultimately bequeathing them to their successors. Ziaie, Jayaram, Mark, and Krcma, (2009).

HARVESTING KNOWLEDGE

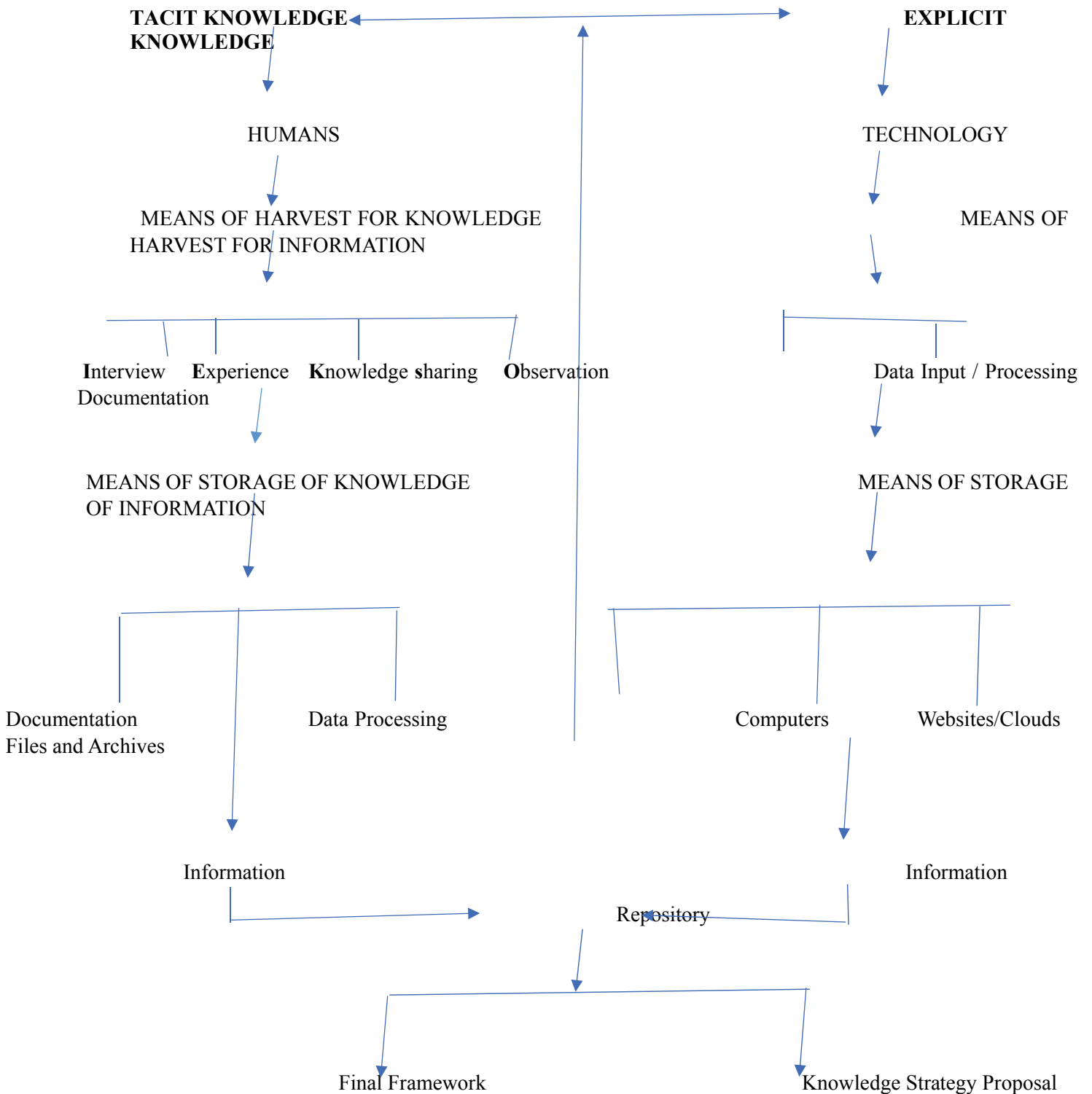
Knowledge harvesting is a process that involves the elicitation of knowledge, as well as the encoding, collection and storage of this information so that it is available at a time in the future. The goal of the process is not a random collection of expressed work-related knowledge, but to intentionally support the goals of the organization (Davenport & Prusak, 1998; Eisenhart, 2001). The existing expertise or know-how can be captured and formalised into software so that the organisation can leverage it and preserve it.

STORING KNOWLEDGE

Knowledge storage involves both the soft or hard style recording and retention of both individual and organizational knowledge in a way as to be easily retrieved. Knowledge storage utilizes technical infrastructure such as modern informational hardware and software and human processes to identify the knowledge in an organization, then to code and index the knowledge for later retrieval (Nonaka and Takeuchi, 1995; Santo, 2005; Armstrong, 2000:2006). This approach encourages people to document the approach. A repository, as argued by Armstrong (2006), allows many people to search for and retrieve codified knowledge without having to contact the person who originally developed it. This saves time and other organizational resources and thus improves performance. According to Mostert & Snyman (2007), although the organizational knowledge base consists of both tacit and explicit knowledge, the knowledge storage processes are only responsible for the storage of explicit knowledge.

Tacit knowledge cannot be separated from the individuals of whom it is part and can, therefore, not be stored by the organization.

FRAMEWORK FOR KNOWLEDGE STORAGE, HARVESTING, USE AND REUSE.



→ Direction
 — Elements

Figure 2: Framework for harvesting and storing knowledge.

Figure 2 Visualised the whole framework of Tacit and Explicit Knowledge identified, where it is located, and how it can be harvested/ shared and stored for reuse within an organisation, using the various processes of harvesting the knowledge and different ways of storing the information and knowledge identified. According to Alavi & Leidner, 2001; Argote et al., 2003. Knowledge storage in an organization can be referred to as the organisational memory formation process, in which knowledge is formally stored in physical memory systems and eventually retained informally as values, beliefs, and rules that are associated with culture and organisational structure. Lin (2007) explains that knowledge storage implies a conversion process involving organisation, structuring, storage, and, finally, the combination of knowledge to facilitate future use by those concerned. Knowledge Harvesting is capturing expertise and putting it into a software product so that widespread knowledge sharing is possible. Snyder and Wilson. (2000). The purpose of Knowledge Harvesting is to capture and express expertise in a form that can be easily accessed and used by others who need the know-how in the performance of their tasks. Valuable knowledge about a task or process can be made available to anyone in the organisation who needs it on a just-in-time basis. Since harvesting can be applied to nearly any kind of human knowledge that is procedurally actionable, the existing expertise or know-how can be captured and formalised into the software so that the organisation can leverage it and preserve it. Snyder and Wilson. (2000).

SUCCESS FACTORS FOR KNOWLEDGE HARVEST, STORAGE, USE AND REUSE.

S/N	KNOWLEDGE TYPE	KNOWLEDGE LOCATION	MEANS OF KNOWLEDGE HARVEST	MEANS OF KNOWLEDGE STORAGE	CHALLENGES AND BARRIERS	PREVENTION TO BARRIERS	POSSIBLE OUTCOME
1	Tacit.	Personal.	-Training. - Knowledge Sharing - Observation. - Mentoring.	- Individuals - Information stored in the database. -Archives.	- Knowledge Hiding. - Organisational culture. -Lack of trust in the organisation.	-Good leadership. -Staff motivation	- Availability of information for use and re-use. - Knowledge management strategy.
2	Explicit.	Repository.	-Data capturing - Automation of organisational working process.	- Codification. - Documentation. - Organisational procedures. -Archives	-Lack of Funds. - Codification. -Lack of support from leadership.	- Leadership Support. - Availability of Funds -Available Facility	- Availability of information for use and re-use. - Knowledge management strategy.

Figure 3: Success factors for knowledge use and reuse.

Figure 3 above shows that both types of knowledge originated from individuals, organisations are made up of individuals, and success factors in Figure 3 are responsible for harvesting and storing information, possible challenges, barriers and prevention, if adhered to, TETFund can come out with the possible outcome for effective knowledge management strategy that can help the harvest and store information for use and re-use in the organisation. Both explicit and implicit knowledge originated from humans and is mostly considered in the context of the individual. Mostert & Snyman (2007)

DISCUSSION

Heath (2003), however, argues that Tacit and Explicit KM, when stored together, form a corporate knowledge store or organisational memory. Knowledge ‘objects’ can be catalogued, stored, retrieved, packaged, and shared as necessary through a database. This type of database, he says, is called an organisational memory by Kuhn and Abecker (1997). Heath (2006) “Storage and extraction processes need to be common and well understood across large transnationals otherwise each knowledge unit will become a knowledge ‘island’ with inaccessible knowledge from other islands. Standardisation is the rule for databases and should also become the rule for corporate memories” when back with good management strategy.

The findings reveal how Figures 1, 2 & 3 showed the process and location where identified knowledge (Tacit and Explicit) can be harvested and stored and the success factors for knowledge harvesting and storage. The challenge will be how TETFund’s management can put the findings or available knowledge into use; as Mäkinen (2006) stated in his study, there are challenges in incorporating these memories into the main organisational memory. The major limitation of this study is insufficient knowledge about the importance and benefit of developing an effective framework can be developed to harvest and store knowledge (tacit & explicit) of TETFund as an organization for use and re-use.

The study aims to develop a framework that, if adhered to by TETFund, can make available knowledge for quality management. The study employs a qualitative methods approach, which includes a literature review, interviews, surveys, and focus groups to gather qualitative and quantitative data that helped identify common challenges, success factors, and performance indicators related to the information required, and it shows that its findings are in line with some existing literature as contained in it. Further studies into the development of an effective framework are required to assess the impact of the framework and recommend strategies that will be effective in managing the framework for effective use in TETFund.

CONCLUSION

This study aims to develop a framework that can enable TETFund as an organization to harvest and store its knowledge (Tacit and Explicit) for use and reuse. The framework (Figure 2) shows how knowledge (Tacit and Explicit) is found in different sources: humans (individuals) and technology, which are both sources of knowledge. Tacit knowledge, which is embedded in humans, can be harvested through interviews, experience, knowledge sharing, and observation and can be captured and stored in documentation and data processing, which becomes information and stored in the repository for use and re-use. Explicit knowledge is found in technology, harvested, and stored in computers, websites/clouds, files, and archives as information in the repository for use and re-use in TETFund to enable it to achieve its goals and objectives as an organisation.

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