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The Development of a Web Academic Appeal Portal for HCT-IT: A Knowledge Management System Approach

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Abstract—Knowledge Management is a way of finding what is needed in the firm or organization that includes KM activities such as: discovering of a new knowledge, capturing the subsisting knowledge, sharing and applying knowledge that KM will provide the benefits in a cost-effective fashion. The study aimed to study the existing problems encountered on the existing student's appeal of Higher College of Technology-IT Department. The study proposes the KM infrastructure by developing the web academic portal with the integration of KM. Applying KM solutions known as Knowledge Management System (KMS) helps the college to discover, capture and utilize the knowledge and turn into intellectual assets of the organization.

Keywords: Knowledge Management, Appeal, Web Portal, Knowledge Management System, KM Infrastructure

I. INTRODUCTION

The emerging Knowledge Management (KM) has been utilized globally to bring new challenges to organizations with the use of information technology. It is common spectacles that any institutions or organizations are trying to manage their knowledge resources as well as to adapt, accept new changes and compete on the basis of capturing and utilizing knowledge to produce the stakeholder's satisfaction, improve the operation and even to speed their transaction. The advent of this desire to have a new way of management is "Knowledge Management (KM)". Combining such efforts and information systems together with the support of KM process is called Knowledge Management System (KMS).

Knowledge Management is a way of finding what is needed in the firm or organization that includes KM activities such as: discovering of a new knowledge, capturing the subsisting knowledge, sharing and applying knowledge that KM will provide the benefits in a cost-effective fashion (Irma Becerra-Fernandez, 2004). Managing of KM involves the performing activities in any firm or institution as serve as the vital tool in the achievement of firm's goal. KM relies on KM processes such as: discovery of knowledge, capturing, sharing and application. Most of the companies are looking forward for the solution to preserve the knowledge and locating the right knowledge for any specific task as well as increases the complexity of the operations. Organizations are realizing the importance of knowing what they know and to create an "organizational memory" (Macintosh, 1999; Kühn and Abecker, 1997; Dieng, 1999). In view of this, the application of technology and promoting Information Systems is called **Knowledge Management System (KMS).** The objective of KMS is to support creation, transfer, and application of knowledge in organizations (Irma Becerra-Fernandez, 2004). Moreover, nowadays there are few, efficient and effective methodologies to help in designing the system with dual purposes of managing data and information knowledge for helping the decision-maker in decision support framework using the DSS and KM approach. Application of Knowledge Management System (KMS) in any firms requires data mining on the input and histories of stakeholders along with the provision or sharing of electronic documents to help them in critical decisions. Web Academic Portal is an innovative tool (computerized) system used to help the institution to preserve, capture, and use, disseminates the knowledge and its application to each stakeholder in doing their everyday task. Kumar, stated that in order to develop the Knowledge Management System applying to any IT Portal, it needs to provide the activities such as: storing, retrieving, capturing, uses of knowledge, collaboration, finding the sources of knowledge, mines repositories for hidden knowledge and enhances the KM process. The primary objective is to deliver the knowledge from the past to be used in present activity and to increase the level of effectiveness in any organization (Kumar, 2013).

II. LITERATURE REVIEW

During last decade of the 20th century, the concept and name "Knowledge Management" was started and popularized in the business world. The applications of knowledge management nowadays spread to other organizations including government agencies, research, firms, universities and others (Maier, 2002). Indeed, the management of information becomes sphere to the Higher Education Institution and Academic Appeal domains. According to Gotcha, "Knowledge Management" is a newly emerging, interdisciplinary business model dealing with all aspects of knowledge within the context of the firm, including knowledge creation, codification, sharing, and how these activities promote learning and innovation" (Gotcha, 1999). In Student's Appeal System, we can possibly relate the Knowledge Management for process of discovery, creation, dissemination and utilizing the knowledge of a college or universities. It is the same with the Koenig, defines the KM as "*the process of capturing, distributing, and effectively using knowledge"*

(Koenig, 2012). But a few years later, Duhon, B., cited a second definition of Knowledge Management as *"a discipline that promotes an integrated approach of identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedures, and previously un-captured expertise and experience in individual workers"* (Duhon, 1998), which perhaps the most frequently cited one. In both citations, it showed that Knowledge Management plays an important role of managing the knowledge in any organization. In student appeal system, application of assets such as policies, complaints, procedures, process, documents, grades, and experience of individual appeal committee is a substance for knowledge sharing of organization and becomes enthusiasm for Intellectual Capital of its colleges or universities. In line with this, the academic community particularly in student's appeal, aimed as a new branch of learning and new challenge that led to a growing call of Knowledge Management as crucial tool for providing dynamic, effective, and quality service to students and appeal committee personnel. Indeed, satisfying the information requirements of its users, appeal committee changed their work as custodians of information resources to information providers, in providing relevant information.

III. CONCEPT OF KNOWLEDGE MANAGEMENT (KM)

The focus of knowledge management is mainly to improve performance of the organization through sharing past mistakes and lesson learnt. So in a way, the activities of knowledge management are related to organizational learning. The knowledge gained and learned through sharing would help to retain tacit knowledge from those appeal members retiring, decrease redundant work and make the workforce more resilient to changing market situations and environments (McAdam, 2000). Quaggiotto, explained in his journal that KM increased call for transparency and development context of organizations on how effectively spend their funds and what mechanism they put in place in order to avoid mistakes that can cause to spending much high cost in financial and humanitarian terms. In view of this, the practice of capturing and disseminating lessons learned that connects to KM must be closely monitored and evaluated in order to attain the goal of organization (Quaggiotto, 2005).

Lee stressed out that the recent advances in information technology and systems underpin information management. The growing interest in knowledge management has been raised in the minds of each institution regarding the difference between information and knowledge and information management to knowledge management (Lee, 2005). Consequently, *Knowledge resources management* in an academic appeal needs to have an exponential growth in human knowledge in a variety of formats develop their resources access and sharing strategies from printed to electronic and digital resources in relation to their mission and charges (Lee, 2005). Projection on the number of students who will apply for the appeal on the next semester is a great potential of preserving the captured knowledge on any college or university and higher education institution. Evidently, the knowledge in a form accessible to other firm or organization attempts to capture at least some even not all in the application of Knowledge Management System. Irma Becerra-Fernandez, discusses that KM solutions comes in a variety of ways where KM is facilitated. The fig. 1 below shows the four broad levels of KM Solutions: KM Process, KM Systems, KM Mechanism and Technologies and KM Infrastructure (Irma Becerra-Fernandez, 2004). The KM Process involves the following: discovering, capturing, sharing and applying. KM System is the systems that will integrate the technologies and mechanism that are needed to develop the software to support the above KM Process. KM mechanism and technologies are used in KM systems which includes the latest innovation and technology of Academic Appeal place into the Web Academic Portal in order to project and present standard procedures and policies of appeal of HCT: Re-sit, Make-up and Against Exam Result. Hence the KM infrastructure is referring to an Information Technology (IT) infrastructure that constitutes a key component to develop the KM systems.

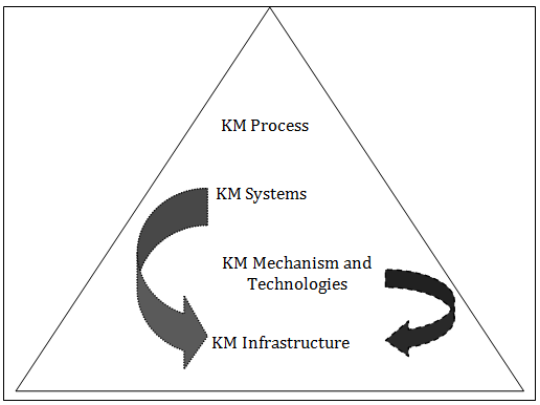

Fig. 1 - Overview of KM Solutions

IV. CONCEPT OF KNOWLEDGE MANAGEMENT SYSTEM (KMS)

Application of Technology and promoting Information Systems is called Knowledge Management System (KMS). The objective of KMS is to support creation, transfer, and application of knowledge in organizations. Their turned their attention to IT as a solution to KMS (Caesarius, 2008). Nowadays there are few, efficient and effective methodologies to help in designing the system with dual purposes of managing data and information knowledge for helping the decision-maker in decision support framework using the DSS and KM approach. Application of Knowledge Management System (KMS) in any firms requires data mining on the input and histories of stakeholders along with the

provision or sharing of electronic documents to help them in critical decisions. As the organization or firm moves towards to the collaborative electronic technology, it arises to become more leverage on decision making in expanding the KM through Knowledge Management System. Apparently the KMS as defined by Rusli, "*as a phrase in creating of knowledge repositories, improvement of knowledge access and sharing as well as communication through collaboration, enhancing the knowledge environment and managing knowledge as an asset for an organization".* The applications of knowledge management nowadays spread to other organizations including government agencies, research, development departments, universities and others. Indeed, the management of information becomes domains to the appeal committee (Rusli Abdullah, 2005). Knowledge Management System is an object which is relevant with the concept of IT function that can handle data and information efficiently with KM. IT plays an important role to connect together the people and social system as to achieve knowledge creation, sharing and interaction among member of the communities (Irma Becerra-Fernandez, 2004). Apparently, the Appeal System that corresponds to the decision support system and fosters the Knowledge Management (KM) activities will known as KMSS *(Knowledge Management Support System)* that primary goal is to share information easily and participate in knowledge sharing (Ginsburg, 2002). Similarly, Aidemark, discusses the KMS in his study entitled "*Strategic Planning of Knowledge Management Systems: A Problem Exploration Approach",* that information systems that are used to support KM process are called KMS that includes creation, capture, storage and dissemination of competence and knowledge. The study discusses the problems in the strategic point of view to support the creation of KMS portfolio that can be developed for an organizational unit and need for multiple-paradigm- a content method balance and the pragmatic implementation of the socio-technical dimension of strategic planning for the people who wanted to research, chose and develop of KMS (Aidemark, 2007). Moreover, the application of KMS in this study will start by using the student's data of Appeal System as a good starting point for evaluating student performance in a KMS. Dong & Lucey**,** emphasized that the student assessment performance through rigorous assessment activities is a direct measure to evaluate the student's achievements. He also believes that collaboration at work in student's educational experience provides the strong relationship of student satisfaction and assessment performance in contemporary higher education (Dong, 2013). Organizations that requires working infrastructure is known as Knowledge Management Support Systems (KMSS), and meaningful policies for knowledge sharing. Such an infrastructure allows users to share information easily, provide incentives to members to participate in knowledge sharing and refinement activities (Ahmad, 2011). In addition to the concepts of (Firestone, 2003)**t**he *social dimension of KM interventions* deals with people and processes using a variety of tools and methods including recruiting, communities of practice, knowledge café's, social process redesign, and many others. While the *technological dimension*, deals with technology-based interventions, such as enterprise knowledge portals, community support software, text- mining software and other KM related applications (Firestone, 2003).

V. KNOWLEDGE PROCESS

Drucker, stressed that KM process the creation, sharing and leveraging of the organizational knowledge (Drucker, 1994). Below are the four processes in knowledge management process.

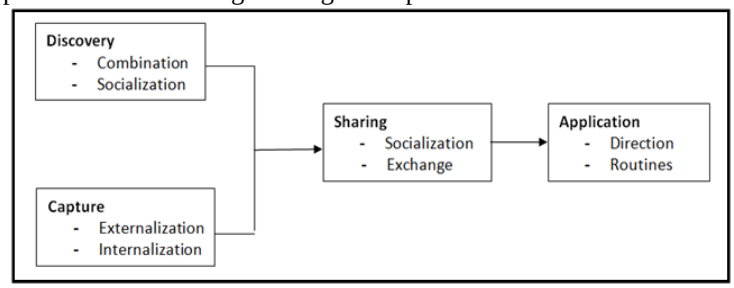

Fig. 2 - Knowledge Management Process

Socialization or sharing of knowledge is one of the mechanisms in knowledge discovery. It caters the development of new knowledge from the key people understanding the needs in the firm or organization (Nonaka, 1994). The knowledge can be combined with the knowledge within the firm and the knowledge that can discover from the development of the proposal. Socialization presents the transferring of ideas on each individual to reach a knowledge discovery. In Appeal Committee, it allows to project the list of students who will expecting to be filed an appeal as go from one phase to another phase of approval. Knowledge capture is a process of retrieving either explicit or tacit knowledge that resides within people or organizational entities (Irma Becerra-Fernandez, 2004). Knowledge may be resided in a manual form which is known as explicit and resides in the mind of each individual that called tacit. The externalization and internalization processes help to boost knowledge capture. This is turn leads to sharing of knowledge. Sharing of knowledge process can enhance an individual or organization's innovativeness and performance. Finally, this will lead to application of knowledge in decision-making and shape the performance of various tasks using the obtained knowledge (Al- Qasmi, 2010). In addition, Lindvall, emphasized that knowledge sharing and organizational learning is more efficient if organized. Indeed, it is not an option but necessity that the amount of information and knowledge that needs to be captured, stored and shared, the geographic distribution of sources and consumers, and the dynamic evolution of information makes the use of software tools (Lindvall, 2003). Apparently, Nguyen discusses that KM process from dynamic approach is conceptual in nature. Failure to apply KM Process may hinder the potential of integration of infrastructure and process to organizational competitive advantage (Nguyen, 2010).

VI. KM MODEL

Frost, discussed the model of KM (see fig. 3) that attempts to offer a more realistic overview of the KM process. It has three broad categories overlap and interact with one another. It further shows which of the three categories are more people oriented or more technology focused. Apparently, knowledge sharing is technology focused (Frost, 2010). The KM activities are overlapped to one another as shown the needs of each KM activities. The KM activities are: Knowledge Creation & Sensing, Knowledge Organizing & Capture, and Knowledge Sharing & Dissemination. The KM process needs to work one another in the proposed system by identifying the knowledge creation and organized it an orderly manner. It needs to share it to other stakeholder in order to provide better and fast service.

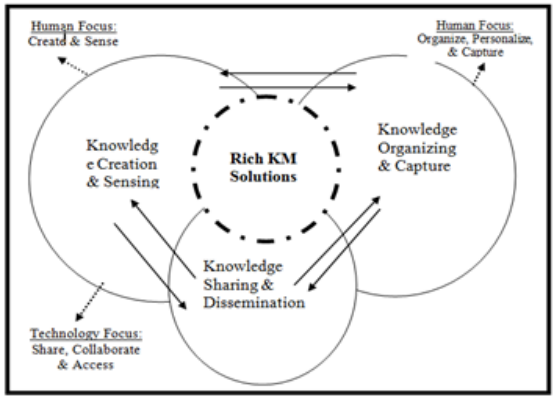

Fig. 3 - KM Model by Botha

- **Knowledge Creation & Sensing**
  The knowledge creation is comprises of the mechanism to create, discover or recognizing the knowledge through sharing of tacit and explicit.
- **Knowledge Organizing & Capture**
  Knowledge organizing and capture is the process of retrieving the tacit and explicit from knowledge creation and sensing and put it into the system (Irma Becerra-Fernandez, 2004).
- **Knowledge Sharing & Dissemination**
  Knowledge sharing system supports the process of sharing either tacit or explicit through technologies facilitating communication that are available in the firm. It can be in a discussion groups or chat groups enabling the individuals shared they knowledge to the rest of the group (Irma Becerra-Fernandez, 2004).

Knowledge Discovery Systems: Systems that Create Knowledge

KM on knowledge discovery systems contains 2 sub-processes such as: combination – enabling the discovery of new explicit knowledge and socialization – enabling the discovery of new tacit knowledge (Irma Becerra-Fernandez, 2004). In academic appeal domains, the mechanism to discover the new explicit knowledge is created through the sharing of documents and information passing from one appeal members up to the other stakeholder. For such, discovering new tacit knowledge is in the form that list of approval will retained in the data store and can be used as the tool in decision-making. According to the study of Richtnér, entitled "*Balancing Knowledge Creation",* that organizational slack and knowledge creation were examined at the level of the product development project to avoid the black box linking. Hence, it is stated that knowledge creation is an important mechanism for the relationship between the organizational slack and innovation that conceptualized the ability to share and transfer knowledge between and among members in product development project (Richtnér, 2004). Apparently the study of Villalba, entitled "*The uniqueness of knowledge management in small companies. Managing Knowledge as an employer strategy for lifelong learning".* It stated that knowledge-enabling environment where organizational process implies that knowledge can be organized formal and informal where it constitutes the tacit knowledge as well as the conditions in place for knowledge creation (Villalba, 2006).

Knowledge Capture Systems: Systems that Preserve and Formalize Knowledge

Knowledge Capture Systems is the process of retrieving explicit or tacit knowledge that resides within people, artifacts, or organizational entities. The people resides within or outside organizational boundaries such as consultants, competitors, customers, suppliers and new employees can capture the knowledge and put it into systems (Irma Becerra-Fernandez, 2004). In academic appeal domains the knowledge capture systems can be in a form of data, procedures and information from academic appeal policy that put into system that requires tacit knowledge. It is called Internalization sub-process. The Externalization falls when the appeal committee captures the tacit knowledge such as the analysing the appeal case and give the appropriate decision, whether to accept or not by the Appeal Decision-maker.

Knowledge Sharing Systems: Systems that Organize and Distribute Knowledge

Knowledge sharing is the process of sharing the tacit and explicit into organization or firm through the use of suitable application technology. Malhotra, discussed the knowledge sharing on their study called "Enabling knowledge creation in far-flung teams: best practices for IT support and knowledge sharing." The far-flung is called virtual teams

worked globally dispersed location in hypercompetitive environment. The IT supports are mentioned and are required in the study such as: task coordination, external connectivity, distributed cognition and interactivity. The study also emphasized that far-flung is used to overcome the barriers in knowledge sharing and successful creating of knowledge even they are far away from each other **(**Malhotra, 2004). Ives argued that to be competitively in knowledge based economy, there is need to cultivate knowledge sharing in organizations. They bring learned behaviours from experiences that promote or inhibit effective knowledge sharing (Ives, 2000). In addition, most of organizations, sharing insights and best practices are a human behaviour that crucial to the success of knowledge management system **(**Martinsson, 2009). Facilitating the useful business knowledge represents a major change in employee behaviour and becomes cultural issue that seen by many experts.

Knowledge Application Systems: Systems that Utilize Knowledge

Individuals utilizing knowledge possessed by other individuals without actually acquiring or learning the knowledge is called knowledge application system (Irma Becerra-Fernandez, 2004). In addition, the knowledge applications mechanism facilitates direction and routines that includes organizational policies, work practices, and standards. It includes the following technologies:

- Expert Systems
- Decision Support
- Advisor System
- Fault Diagnosis (or trouble shooting systems)
- Help Desk Systems

Projection in the number of appeal cases to whom the students expected to apply is a great potential and helpful to the college or university for the decision making. If the students are eligible for re-sit or make-up exam, it is very easy for the Appeal Committee to count the number of ratio of receiving and monitoring the appeal that soon they will prepare and analyse.

Knowledge Management Systems Methodology Implementation

Below is the fig.4 that shows the KM-IRIS Methodology that is used for Knowledge Management in an organization. It includes the phases, activities applicable to each phases, techniques, expected results and computer support tools. The phases are Identification, Extraction, Representation, Processing and Utilization. (Chalmeta Rosaleñ, R., & Grangel Seguer, R. (2008).

PHASES	ACTIVITIES	TECHNIQUES	EXPECTED RESULTS	COMPUTER SUPPORT TOOLS
PHASE I. Identification	• Identify the conceptual blocks of knowledge • Classify into ontological categories • Define the target knowledge (knowledge requirements)	• Templates and questionnaires to identify blocks of knowledge • Reference models concerning the target knowledge	• Conceptual blocks of knowledge • Target knowledge • Categories	• Office automation tools • Modelling tools
PHASE II. Extraction	• Extract knowledge from sources in order to define the input variables and categorise it • Define the extraction and calculation procedures	• Templates to define the input variables • Reference models for extracting and calculating target knowledge	• Set of input variables • Extraction and calculation procedures	• Office automation tools • Modelling tools
PHASE III. Representation	• Establish the relations within the target knowledge • Draw up the knowledge map	• Metamodelling (UML) • Ontologies • Conceptual maps	• Model of the Knowledge map	• Modelling tools • Ontology engineering tools
PHASE IV. Processing	• Develop the technological infrastructure supporting the knowledge map by following an object-oriented methodology for the development of computer systems	• BPM techniques • ETL techniques •Document/DBMS • Data warehouse • OLAP • Data mining	• Knowledge portal (Executable knowledge map)	• BPM tools • ETL tools • Document/DBMS • Data warehouse • OLAP • Data mining
PHASE V. Utilisation	• Establish training and continuous improvement mechanisms among the members of the organisation • Carry out maintenance and the feedback process on the knowledge management system	• e-Learning • Groupware • TQM • ISO standard of quality	• Efficient use of knowledge within the organisation	• Office automation tools • Modelling tools • Learning tools

Fig. 4 - KM-IRIS Methodology for KM in an Organization

VII. RESEARCH METHODOLOGY

The methodology presented in this study is the quantitative and case research methods. The methodology employed includes literature review and document analysis followed by surveys, interviews, observation and questionnaires. Quantitative Research is a process of quantifying the problem by means of numerical data and useable statistics. This research tends to analyze the opinions, attitudes, overview principle and behavior from a larger population

by means of giving questionnaires or surveys. It uses the formula and measurement for the facts and patterns in research. This includes online surveys, paper surveys, mobile surveys and kiosks survey, face-to-face interviews and systematic observation (Susan, 2011). Quantitative research method were undertaken to study natural processes using many techniques such as surveys, face-to-face interview and methods that uses numbers as data collected from the point of view of the objectives and the basis assumption of the study. The main goal is to describe the data and characteristics about what is being studied in terms of frequencies, averages, and other statistical calculations. Case Study Research Method enables a researcher to closely examine the data within a specific context by means of conducting interviews. According to Yin, it defines as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 2008). The study used the case study research method because it really deals with real situation to explore more in-depth methods in answering exploratory questions of Academic Appeal Committee in HCT-IT. Questionnaires and Surveys are useful in gathering information from key organization members about attitudes, beliefs, behaviors and characteristics (Kendall KE, 2008). In this study giving questionnaires is the essential idea on collecting information from the Academic Appeal Committee and since the interviewing is targeting only the few or small number of participants the issues cannot be generalized. Questionnaires are useful tool in collecting data specifically in a large number of participants to address the target study sample. In order to achieve the interpretative outcomes of KM practices in Academic Appeal domain, the study has different themes of questionnaires to each stakeholder. The questionnaire's content consists of 3 parts: Part one, two and three are quantitative type of questions and Part four consists of open-ended where the respondents have to either describe or give their opinions. Part one is concerned with demographic information about the different positions in Academic Appeal Committee Members. The survey asked them to provide information about their position, number of employees and number of years that they held at HCT-IT of the academic appeal they work in. They are further asked to comment to give the current status of their academic appeal domains in terms of knowledge management. Part Two questions are designed as closed question type's where all the options are listed and are mutually exclusive by using the likert's scale, each respondent is asked to rate each item on some response scale such as shown on fig.5.

Numerical Rating	Equivalent
5	Strongly Agree
4	Agree
3	Neutral
2	Disagree
1	Strongly Disagree

Fig. 5 - Lickert Scale Used in Survey Questionnaires

The aim of the questions in Part one and two is to find out the needs and requirements of KM in order to design the proposed Web Academic Portal. In addition, the proponents designed the questionnaires to test the role of each academic appeal to hope bring to the appeal committee and perceptions on the problem that appeal cases faces nowadays integrating KM. Part Four questions are open-ended question type's that are trying to anticipate the response in getting opinions. It consists of the questions that asking about the different process of academic appeal, asking the knowledge experiences and problems of academic appeal, kind of information or knowledge outcomes or changes that appeal committee are hoping for and knowledge sharing environment that uses documents and forms of academic appeal domain.

VIII. RESULTS AND OUTCOMES

The study is to find the encountered problems of the respondents on the existing appeal. The total respondents during the pre-survey are 15 respondents as shown on Table 1 – Respondents of Existing System as shown below. It consists of Appeal Head, Appeal Members, Faculty/Course Coordinator/Advisor, Head of Section and Head of Department.

Table 1 - Respondents of Existing System

Respondents	**f**	**%**
Appeal Head	2	13.5%
Appeal Members	5	33%
Faculty/Course Coordinator/Advisor	5	33%
Head of Section	2	13.5%
Head of Department	1	7%
Total	**15**	**100%**

In this Table 1, most of the respondents are Appeal Members and Faculty/Staff/Course Coordinator with a total of **33%**, followed by Appeal Head and Head of Section that got **13.5 %,** while the Head of Department got 7**%**. The total count is 100 percent respectively.

Table 2 - Pre-Survey Results on Existing Appeal Process

	Weighted Mean	**Description**
Lack of time/too busy	3.5	Agree
Inefficient technology	2.8	Neutral
Poor information systems	4.6	Strongly Agree
Organizational policy/directives	4.75	Strongly Agree
Average Weighted Mean	**3.9**	**Agree**

The finding on the existing appeal system status problems encountered of the respondents on the existing appeal system was address during the pre-survey data gathering. On the item "Poor information systems" most of the respondents give an interpretation of "Strongly Agree" with a weighted mean of 4.6 which truly proves that they have a problem on their existing system that consumes a lot of time processing an appeal. In addition, item number 1 on "lack of time/too busy" responses got a weighted mean of 3.50 with an interpretation of "Agree"**.** On the "Inefficient technology**",** the stakeholder responses got a weighted mean of 2.8 with an interpretation of "Neutral", while items of "Poor information systems" got weighted mean responses of 4.6 with an interpretation of "Strongly Agree" and lastly, on the item "Organizational policy/directives" got a weighted mean of 4.75 with an interpretation of "Strongly Agree".

Meanwhile, after studying the KM concepts, processes and model, the study came up to develop the KM framework that will show the KM infrastructure on how the web portal will evolve with the integration of KM. Fig. 6 – Develop KM Infrastructure of Student's Appeal for Web Portal as shown below are consists of the following: Students, KM Model used, Proposed Web Academic Portal and lastly decision-maker.

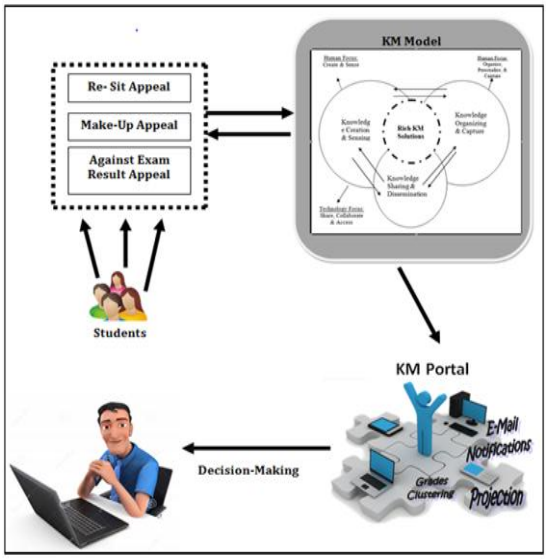

Fig. 6 – Develop KM Infrastructure of Student's Appeal for Web Portal

- **Students**

  Based on the historical dataset, the students can file an appeal online. The system automatically determined the eligible students in accordance of applying an appeal for the following: re-sit make-up and appeal against exam result form. The students' grade last semester will be the supplied information in order to satisfy the eligibility of each student's appeal.
- **KM Model**

  The KM Model that the study used is KM Model from Botha. The model has shown KM Process such as Knowledge Creation & Sensing, Knowledge Organizing & Capture and Knowledge Sharing & Dissemination. The KM process needs to work one another in the proposed system by identifying the knowledge creation and organized it an orderly manner. It needs to share it to other stakeholder in order to provide better and fast service. The model shows overlapping in interacting with one another to illustrate each variable to formulate the KM solutions - Web Academic Appeal Portal.
- **Web Academic Appeal Portal**

  It represents the system or software for the Appeal Committee in addressing the problem and serves as a KM solution. It includes the features such as: clustering, automatic projection, e-mail notification, audit trail for approval of appeal and printing of reports.
- **Decision-Maker**

  It represents people who will decide for the student's whom to be allowed to file the re-sit, makeup and against exam result.

IX. CONCLUSION

The study drawn that the distribution of the respondents in determining problems encountered on the existing appeal process in Academic Appeal as described "Strongly Disagree" on "Poor Information Systems" and

"Organizational Directives." On these items, it shows that there is really a need to have a computerized appeal process system because of their current manual system. In addition, there is an existing appeal policy document but they have a problem in implementation. On the item "lack of time/too busy" responses got an interpretation of "Agree" because due to the fact that the current appeal process has no proper way of processing that tends to consumes a lot of time for the Appeal Head, Appeal Members, and Faculty/Advisor and Course Coordinator. Lastly, "Inefficient technology" got an interpretation of "Neutral", because the current college has an access to the other latest innovation, even though the appeal process is still in manual system, for such, they believed that this KM Solution- Web Academic Portal provides better service and will fasten they appeal transaction. The developed framework proves the integration of KM activities by indentifying the needs and problems as to discover, capture, share and apply knowledge in the appeal process. Forecasting and Projection is a way of discovering knowledge in this study. The study also reveals that the implementation of web academic portal to appeal committee shows the strongly agree in terms of acceptance amongst stakeholder in improving current manual process, fasten the appeal transaction, providing good decision-making and avoid the favorable response of higher authority amongst Students and Faculty Staff.

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