

Efficient Information Management as Organisational Performance Drivers in South Africa

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ABSTRACT The study evaluated how an efficient Information Management Practices (IMP) framework enhances organisational performance. The paper established a connection between improved services delivery, and the way information is processed, packaged, distributed, managed and consumed as a key driver of organisational success. The paper adopted a mixed method and a case study approach. The paper elicited data from a total of 108 respondents, and in-depth interviews and a survey were used to obtain data. The findings indicated that an information lifecycle model could be used to measure organisational services delivery and performances, based on the quality of services delivered. The adoption and use of the model are in its infancy, however, and requires more in-depth and practical applications in the South African organisational context. Findings showed that the existing Information Technology (IT) capabilities and functions had not been fully optimised or used to enhance performances. Investment in IT is not enough without information governance. The paper recommended that organisations must identify strategies to locate sources of information, including how information is collected/generated, processed, maintained, used and consumed, in order to increase performance. The IT must be aligned its IT with its business and management strategies to improve performance. External-internal and internal vertical and horizontal information sensing will enhance IMP. The institution must link student's application databases with selected departmental staff to improve their IMP performance. This will create access to updated and synchronised information for decision-making on applications processes.

INTRODUCTION

Institutions in this modern era thrive on information as sources of business intelligence, performance appraisal, process management, financial auditing and for corporate financial management purposes. Hence, it is important to identify sources of vital information and have proven strategies to process the information quickly in its raw form, packaged and disseminated for daily business intelligence and decision-making (Ajibade 2016b; Kang'ethe and Ajibade 2016). Due to the proliferation of Information Technology (IT), organisations are inundated with information overload. Hence, they must maintain sophisticated Information Management Practices (IMP) in order to keep up, satisfy their clients and increase their performance levels. To achieve service delivery that is sophisticated, it is important for the organisation, to adopt strategies or invest strategically in an organisation-wide information management based on the organisation business process orientation (Marchand et al. 2002). The information orientation

could be an official guideline, directing and co-ordinating employees and business units' information handlings in an acceptable manner, and with best practices.

This standard must include, processes of sourcing or sensing information, processing and organising techniques, and packaging and dissemination of vital information. The information orientation must cover information governance such as collection, use, packaging, distribution, channels, information request turnaround time, disclosure and disposal of information, as well as the quality of training and skills updating of information officers within the system. The findings by Kettinger and Marchand (2011) established that the business performance of an organisation might be higher when its Information Orientation (IO) scores are high. However, IO encompasses or requires three capabilities, "information behaviours and values (IBV), information management practices (IMP) and information technology practices (ITP)" (Marchand et al. 2002). The capabilities enable institutions to have formal information processes that pro-

mote uses of institutionalised information sources within a company or institutionalised network (Marchand et al. 2000; Choo et al. 2006).

Information behaviour encompasses organisational and intellectual behaviour in the entire information life cycle. This includes organisational and individual behaviour on information sensing, processing, sharing, searching, retrieving, storing, synchronising and use (Wilson 1997, 2000). However, Carmichael et al. (2010) posited that IMP and IO hinge on an organisation's skill and understanding of information as a resource to support institutional capabilities. This can increase performance through Information Management Capability (IMC) by enforcing timelines for all information requests within the organisation, and in a professional manner. However, information management capabilities may be subdivided into three categories, "customer management capability, process management capability and performance management capability" (Mithas et al. 2011: 237). Thus, the quality of services hinges on the quality of information that is delivered promptly to meet the need of the client and to improve customer experience and satisfaction. The quality of daily decision-making to satisfy the often-embryonic demand of the clientele depends on the quality and timeliness of the information. Thus, to stay competitive, the quality of information management must be at par with other competitors or must surpass other competing companies IMP competence. Performance in this context is defined as information and services, delivered on time, with enhanced service quality and customer satisfaction. The study uses performance throughout to measure the ability of staff to provide the information required and with levels of accuracy, timeliness, and satisfaction.

Research Problem

Many organisation have invested heavily in IT, but without coordinated efforts to formalise information management practices, so there may still be a lack of improvement in how information is delivered. Findings suggested that inefficient information management has hindered Small and Medium Enterprises in South Africa from securing loans from Banks (Ajibade and Khayundi 2017). Information technology on its own cannot deliver the required information without personnel and IM policy to guide the con-

duct of employees to adhere to standards. There must also be a culture of checking to see if (information) requests are delivered timely, and if the packaged information is accurate, efficiently delivered and based on the organisation's information management capability. However, Kettinger and Marchand (2011) reiterated the need to study IMP in depth. For this reason, this paper examined IMP in a Higher Institution in South Africa through an in-depth study to evaluate if the ways information is packaged and disseminated are efficient. Also, to assess their information lifecycle and if their IT capability is aligned with their IMP in order to increase productivity, customer satisfaction, and quality services. The benefits of IMP in companies, and organisations in the advanced economy, are documented (Marchand et al. 2000; Marchand et al. 2002; Marchand and Peppard 2008; Kettinger and Marchand 2011). Unfortunately, little is known on the IMP integration within institutions in Africa, as limited empirical studies have been done on this topic. Organisations must understand that IMP is a useful tool to measure performance, and this understanding appears to be limited. There is limited literature that contextualises IMP in South Africa, and because the study on this topic is in its infancy, this requires more in-depth and practical applications. The challenge is, if the existing Information Technology (IT) infrastructure available at the institution is not aligned with their business process, it will negatively impact their IMP. Hence, fully optimised IT with IMP strategies must be implemented to improve and enhance performance. Based on various databases consulted, IMP model and theory have not been investigated in South Africa, either from an academic institution or business environments' context, to show the links between IMP and organisational performances.

Theoretical Underpinnings

Information Life Cycle

Information life cycle is a systematic process of information management in its entire lifecycle, which includes information sensing, collecting, organising, processing and maintaining (Kettinger and Marchand 2011; Ke 2011). Various authors have operationalized the theory in different disciplines. Nevertheless, its nucleus

principle and applications are the same (Hernon 1994; Moki et al. 1995; Hodge 2000; Bhandar et al. 2003; Runardotter et al. 2006; Su et al. 2006; Tallon and Scannell 2007; Yochai 2007). Figure 1 showed the student administration information lifecycle link to the information management lifecycle depicting the quintessential of information lifecycle in any organisation context and adaptation suitability.

According to Marchand and Peppard (2008), making sure that information management practices are up to standard requirements will give organisations the capability to manage information life cycle in order to facilitate its efficient use for any decision-making. This includes information sensing, collection, organisation, synchronising, processing, sharing, using and maintaining. The quality of information technology (IT) practice and the organisation's ability to coordinate the information management process through institutionalised IMC, will enhance the firm's success and performance (Marchand et al. 2000; Mithas et al. 2011). Institutional IMC must reflect the company's ability to make data and information available to its users with appropriate levels of accuracy, timeliness, and reliability, through secure channels. Organisations must possess the capacity to custom-make their IMP in response to changing business needs and directions, to satisfying the embryonic and often versatile clientele needs (Mithas et al. 2011). This theory is relevant to study the processes of sensing, collecting, organising, and

maintaining institutional information in order to deliver agile services to the client/student with accurate and useful information. The information life cycle covers all organisational business process management capabilities that require information process and processing capability.

Research Question

The central question to this study is: how do information management practices improve organisational performances?

Research Objective

The aim of this study was to assess how information management practices (IMP) framework is applied in practice to enhance organisational performance.

RESEARCH METHODOLOGY

The research design presents the architectural overview of the scientific study and its' methods (see Fig. 2). A case study was adopted, and it was tested in a real-life context by choice of methods used (survey and interview) in this case, with purposive sampling techniques, analysis and presentation of results (Creswell and Clark 2007; Babbie 2010; Leedy and Ormrod 2010; Robson 2011; Creswell 2012; 2013; Lee-Abbott and McKinney 2013; Ajibade and Khayundi 2017). The paper developed variables based on the

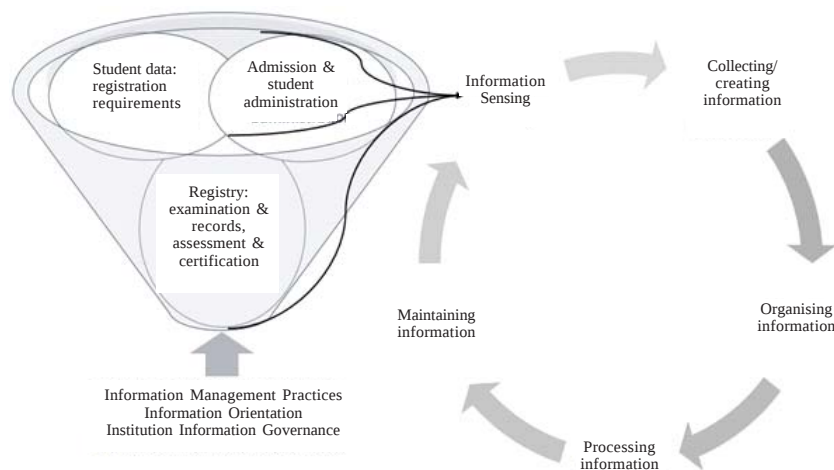


Fig. 1. Information governance and information lifecycle

Source: Ajibade 2016 updated

IMP framework and the researcher's practical knowledge of the institution academic environment (Marshall 1996; Ritchie et al. 2003; Teddlie and Yu 2007). Earlier studies such as Marchand et al. (2000), Marchand et al. (2002), Marchand and Peppard (2008) and Kettinger and Marchand (2011) used a quantitative approach as underpinnings of the IMP in a practical setting. Ke (2011) reiterated, however, that the Marchand model and theory requires practical application in more companies through in-depth analysis. This paper used a purposive sampling technique to select eight administrative officers that could give vital information during an in-depth interview, and 100 students were surveyed using questionnaires at the University of Fort Hare. Authors have used this technique in other studies (Topp et al. 2004; Tongco 2007; Welman et al. 2010; Ajibade 2015; Raykar et al. 2015; Tarus et al. 2015; Ajibade and Khayundi 2017). The pilot phase sampled three staff members for interviews and ten students. The main data collection, however, sampled eight staff members for in-depth interviews, and one hundred students for the survey. Interviews were coded into themes and presented based on the IMP constructs, and the transcribed data. The students' survey was analysed using Microsoft (Excel) Analytics and embedded table presentation. The reliability of the data was ensured by conducting pilot studies with three staff members and ten students,

and challenging questions were eliminated by rephrasing puzzling questions.

RESULTS AND DISCUSSION

This section presents the findings based on an information management lifecycle which involved, sensing, collecting, organising, processing and maintaining. Aytes and Beachboard (2007), Kang'ethe and Ajibade (2016) stated that, efficient information management and packaging lead organisations into effective service delivery and improved performance. The institutions IMP in this context, however, refers to its capability to manage the information life cycle such as information sensing, collecting/capturing, organising, processing and maintaining (Choo et al. 2008). This often requires collaboration amongst stakeholders, to implement policies, processes, practices and institutional IT alignment to realise the business value of information in an agile and cost-effective way (Turczyk et al. 2007; Bernard 2007). The capabilities may be facilitated by effective and efficient information creation and classification. This may require quasi-centralized IM of applications, which may include process automation and information policy integration, and this view insight was substantiated by Reiner et al. (2004).

In Higher Institutions, business units are classified as departments under schools/facul-

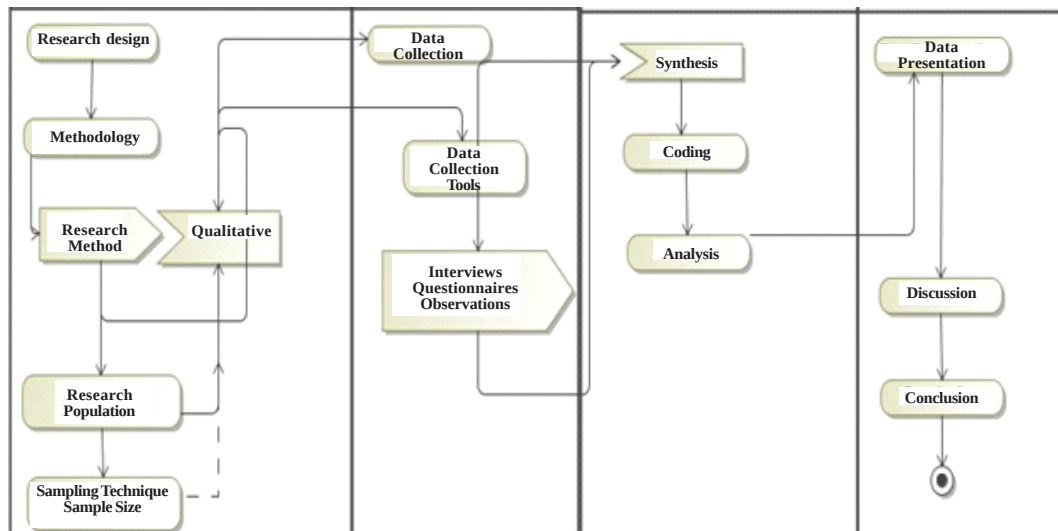


Fig. 2. Research design and method

Source: Author; Ajibade 2017

ties, they are often stand-alone units with quasi-centralized information governance. The IMP theory is applied to students' enrollment and applications processes, to measure its IMP capabilities and maturity as tools to evaluate performance. Regarding application processes, participants substantiated that, prospective applicant's need to either collect hard copy or download the application online. After that, they either fill it in manually and scan by emails, or, submit to the registry/student administration to initiate capture of this data. Subsequently, the applications are classified and transferred to the respective departments where the selections process is initiated. It was gathered from the respondents that most of the application processes are manually handled. To answer the first question, the participants were asked if they thought the way information is managed might influence the institution's performance. Six responses indicated that,

"It will definitely improve performance. For example, if we consider the computer-aided process. I would say, it improves but the current process now, there is more to be desired". "I believe the way information is capture, store and managed can affect application process". If someone applied, it would be better if the respective department and faculties know immediately and this can only be done when an automated system is used. "But right now, your application may be at the administration for a month without knowing at the department, because most of the processes have to be manually handled". It will be better if the emails of each department responsible for selections could be integrated with the applications process, they may be alerted when an application is submitted." *"I believe how information is managed affects and influences organisations' performance."* *"In particular, if the captured information tallies with what is originally provided by the user and the retrieved information."*

To achieve efficient processing of applications, the ICT infrastructure must be aligned with the institutional business requirements. This, because every system design enables scalability, meaning that the system must have the capacity to expand its functions to accommodate future business requirements. The student application process may be improved, if the online application is fully adopted where the student

captures their information online, and submits all relevant documents. This might save valuable time for the administrative personnel in recapturing the data from the manual forms. It may also eliminate the challenges of capturing incomplete or inaccurate data from the manual form due to the illegible handwriting of the applicants, or low dpi (dot per inch) scanning resolutions. Above all, if the institution could break down the students' application process, services oriented architecture modelling language (SOAML) may be used to design effective services that respond to every embryonic need of the institution. This may allow agile application platforms by simplifying the processes. Once the application is submitted, the relevant stakeholders should receive the information. As a result, start the selection process based on the criteria specified in the system.

This level of information accuracy is necessary for various decision-making and essential for improved performance. The respondents were asked if the way information is captured and processed may influence performances. Two of the respondents said:

"The problem is that the situation is far from the ideal. Because when students arrive, their data should be capture into a centralised system that is accessible by relevant stakeholders". "For registration, you must be physically present to capture your data. There is an exception with the postgraduate students who are enabled to register online on their own."

Another respondent indicated that *"there are still communication challenges among us staff members about what information is received or captured by a particular department at a particular time during the application processes."*

This might encourage the duplication of tasks, and it may lead to information retrieval challenges. It does not promote agile information access and business 'savoir-faire'. It was observed that the administration staff at the registry division are privy to the data capturing information system, as their platform is standalone. However, any relevant information by other stakeholders may be accessed telephonically or through physical presence. It may save time and energy if departmental staff who are responsible for student applications and selections are given priority access to the system to improve the decision-making and process agility. This

may include efforts to link the application platform through an integrated system, but without authorization to alter captured data, thereby preventing abuse of the systems.

The respondents were asked if the way information is captured can influence performances, and their responses are captured as follows:

"It depends on what is being captured and what was used to capture the information. If you have software that could capture, for example, generic information such as gender, age, what grade and other relevant information. If you have properly captured applicants' information when the user inquires, it may be easy to disseminate such information, and that can improve performance and make you work better."

The other respondent said, *"in terms of application, there are integrated system (ITS) for capturing student data to avoid repetition, however, there is no ITS system for student administrative purposes at the moment."*

Another respondent indicated that information capturing prowess is interrelated with how tasks are executed, and this can affect decision-making and final output. *"Because when the required information is inaccurately captured and processed, it automatically renders the information as a bad product."*

Another respondent said, *"Information capturing and processing influence task completion and turn-around time. Moreover, processing of the application is critical for the outcome based on how the information is captured."*

One of the determining factors for information collection is the ability to eliminate the unnecessary data captured by information filtering. The respondents were asked to explain (taking into consideration students application processes) whether filtering to prevent information overload may enhance competency and performances. The respondents indicated that,

"Filtering improves efficiency because there are too many data to be captured this day and filtering make it possible to avoid information overload." "It does also reduce traffic on the servers." "Information filtering increases the response rate and task completion is faster especially in responding to queries in an effective and efficient manner."

Another respondent, however, had a contrary view showing that *"efficiency and competence will depend on the overall management."*

It is therefore justified here to posit that overall management and business processes hinge on the quality of available and accessible information for decision-making. These have a positive effect on overall output and institutional performances. *"Filtering may improve performance if you can update information in the system and you can filter and synchronise them. It will increase performance outlook, and it will make your job easier, and there is no need to be running around for information when you need it."*

It may be time-consuming going through a large quantity of information without appraisal and filtering techniques. Without data analytic techniques and information retrieval prowess, performance may be negatively affected and reduced. This seemed to be a lack of conceptual approach to ensure agile information processing technique through IT alignment using an agile platform. One respondent said, *"filtering can increase competence and output, but you are not given permission to change any data, i.e., I have access to view students' marks and course information, DP, but you cannot change anything in the records."* As part of information maintaining, an institution with three campuses such as the University of Fort Hare needs to have a system/platform that links students' applications and students administration information governance in a centrally controlled system, but, with interactive access to the departmental heads, or, other relevant faculty officers. The respondents were asked if they think that linking all the student application information databases together would increase service delivery and performances. See the excerpt from the interviews.

"Absolutely yes! However, the problem now is that we are not even linked to the IT systems, and we do not get access to the database and access to admission platform". "When our students are registered, we are not aware how many of them are registered at a particular time before we meet them or until their application is forwarded from the admission office. Other students, we get in contact with them during the registration process". "We do not have access to the information and the total number of all admitted students." Sometimes this is important for planning purposes, but the only way to get that information is to ask for the figure, as we are not given access to the database, and

we are not linked to this platform. "On the ability to have the databases linked, currently, that is not done, but linking the databases and given access to the database will make our work much easier and at the same time, it will improve service delivery and performance. For example, the application process could take a month." "If there is a system where a student can fill in the application form and the student get confirmation of receipt of the application upon submission and a notification will be sent to the registry or student administration, the faculty and departments. It will be better, and this can improve the potential of doing things efficiently."

Nevertheless, a respondent objected that *"if you have a linked system, it will increase the workload and you may be doing the job of other people". "But we do not have access to change anything in the database, but you can only view the information."*

Another respondent said, *"it can be too risky in case of server failure, and another respondent said, linking too many things on the system could cause overload, and this can crash the system."*

It was earlier argued that when useful and relevant information is delivered with a certain level of accuracy, it reflects the organisations high IMP capabilities which might lead to improved performance. The responses from the students' survey indicated, however, that the staff handling these application processes need more training to deliver quality services.

It was argued earlier that one way to measure IMP is to gather insight from the client to see if they are satisfied with the information services. One of the questions asked was, if they are satisfied with the information services, or do they think that the staff handling information need more training, their responses are presented in (Table 1). Most of the respondents indicated dissatisfaction with the current practices and called for more training of those responsible for the IMP processes. This substantiated the views from the interviews and student's perceptions on the need for more training. It could be said

that their responses may be based on their perception of services, and not necessarily from taking into consideration the available infrastructure, or how the process is designed. However, a well-established information governance, which promote effective IMP through an integrated IT infrastructure alignment will improve the institution customers' experiences. However, the response pattern showed that the present IMP requires revisiting to improve process management.

Analysis of Findings

The profiling information needs of employees were categorised under collections in theory, but this paper observed a contrary scenario in the practical setting. Information profiling happens during information sensing, whether sensing the source of information outside the institution, or within, which is an internal information sensing. Identifying key knowledge sources, in the view of this researcher, should have been classified under information sensing rather than an information collecting construct. This, because, identifying key knowledge sources would determine what information to collect and thus, this process takes place before the actual information is collected, and might as well be categorised as internal information sensing. According to the field observations, it could be argued that the needs of profiling staff information would lead to identifying the key source of knowledge. The implication for the institution is that, without a clear understanding of the Marchand IMP model, it might be difficult for practical application, such as not knowing whether, or not, to retain a profiling variable as part of information sensing.

The implication of the current system is that application processes are centralized without direct access from faculties or departmental personnel to the database. This creates artificial administrative bottlenecks in facilitating speedy service delivery. As a result, efficiency is not optimized, and the performance ratio might have been drastically reduced. Customer satisfaction

Table 1: Student's perception on staff IMP training needs

Degree of responses	1=Strongly disagree	2=Disagree	3=Partially disagree	4=Not sure	5=Partially agree	6=Agree	7=Strongly agree	Missing data
%	7 %	3 %	4 %	8 %	7 %	15 %	54 %	2 %

is sacrificed because many of the students must send hard copy forms, or, be present to register. Although the majority of the undergraduate students indicated that they prefer the convenience of online processing, just as it was introduced at post-graduate level. The implication of recapturing an already completed form is rather laborious, time-consuming and a lot of manpower will be required. Instead, the information processing should adopt system-enabled platforms where the prospective applicants input all the information on the institution portal and designated application platforms. However, there are cost-saving open-source platforms to assist the institution in this regard. However, the online platform might require constant data 'migration' due to changes in technology and continuous synchronisation to ensure regular update of the applications. Hence, personnel recapturing the manual application could be assigned to other tasks, thus saving resources. The paperless idea might, on the other hand, reduce the carbon emission and increase the university 'green footprint.' In addition, a lot of delays that may be experienced now due to the manual processes could be resolved if the process is automated, and selected officers from faculties and department are linked to the application databases. Consequently, when a real-time update is conducted and the information refreshed, all staff that are linked to the system will be able to access the up-to-date information, and this will increase the turn-around time.

The current information processes seem to be inefficient, however, because the status of applicants could only be verified on request, or when the information was sent to the various departments. Performance would seem to be improved if the central administration database was linked with the various departments. This is yet to be implemented at the study institution. When the information is captured, the system ought to synchronise and refresh the information before transmitting it to various departments for further actions. This would increase efficiency, save time, increase turnaround time and improve performance which may be difficult with manual processes. One respondent indicated that: *"this system needs regular updates and should be mainly automated and not paper based."*

It was observed that only the central administration staff members could filter all collected

application information. Efficiency and improved performance might be achieved if data in the databases were linked and the department's given priority access to filter information. This would improve delivery turnaround and reduce traffic to the central administration. As a result, better performance might be achieved. The implication is that, because the databases are not linked, when information is required about the students' status, a call or email request or physical presence would be necessary. The implication of recognising the relationship between information filtering and improved performance by the respondents indicates that personnel are aware that efficiency would be improved by eliminating unnecessary information. Overload and traffic on the system might be reduced if the collected information is linked and synchronised with other users.

It is recommended that the information specification model in (Fig. 3) be adapted, as this would offer an efficient platform that would improve the application processing turnaround time and efficiency. Since the likely sources of most information are known in this case, adopting a dynamic online platform that allows applicants to capture their information may promote process efficiency. The platform would then use a predetermined criterion to organise the information. This would facilitate real-time responses and acknowledge receipt thereof to enable potential students to track their application online. The processing phases would rely on the replies from the various departments with the list of shortlisted candidates to be electronically captured and populated online. This would facilitate and enable potential candidates to check decisions reached, that is, acceptance or rejection of applications. These processes would require using the Information lifecycle to implement the entire process as this would provide some guideline. International students who might need study visas would be able to process their visas in time. The International Affairs' office would handle the logistics of pickup at the airport, and the residence office would identify the expected number of students to be accommodated by using an efficient IMP. Consequently, this would increase institutionalised IMP, business processes and performances.

The specification requirements in (Fig. 3) were modelled to enhance application IMP using service oriented architecture sequence dia-

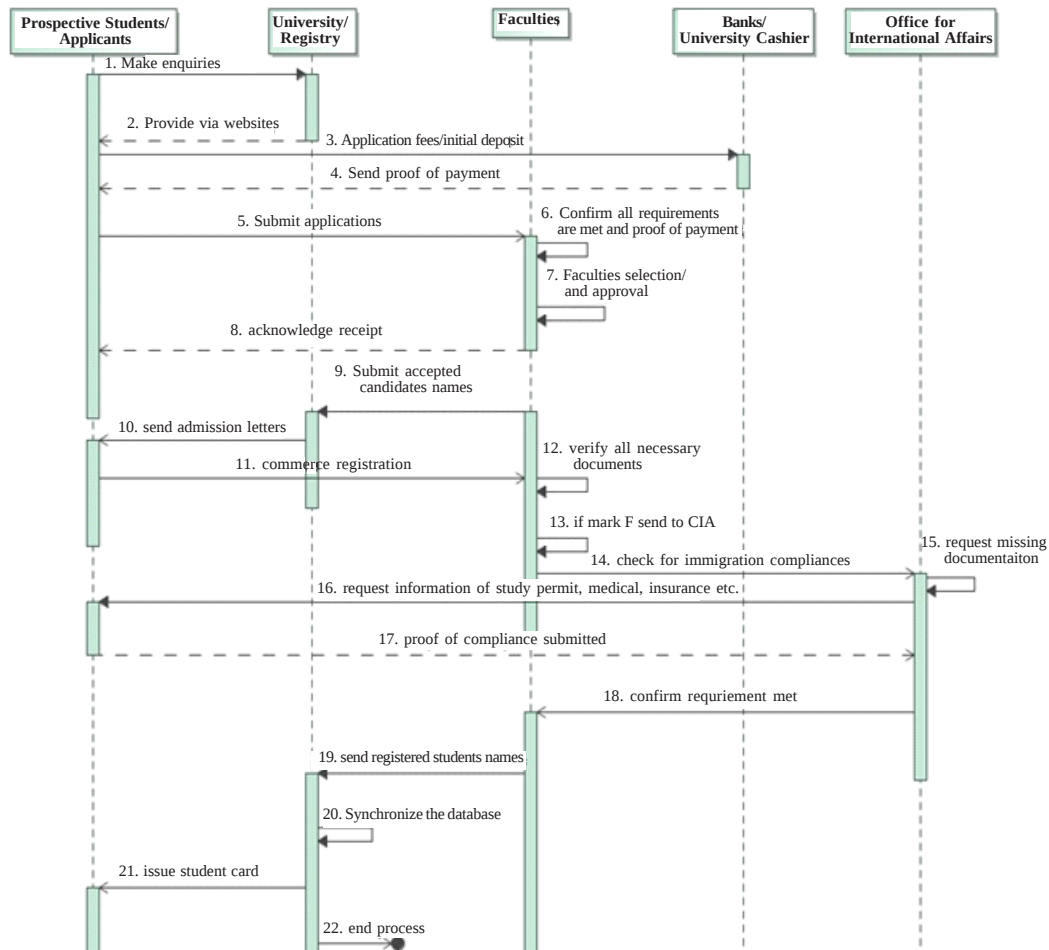


Fig. 3. Student application process requirement specification

Source: Author Ajibade 2017

gram tools. This presents the key stakeholders with the process requirements to make the application processes flexible and effective. It is envisaged that, if implemented, it would improve both the applicant's and the staff experiences, by simplifying the processes and increasing their satisfaction, because of the potential alignment of processes with IT infrastructure. The institution could cut cost and save considerable expenses if their current processes are redesigned, based on the specification. This would integrate the application platform and grant access to intended stakeholders to access the databases

and foster collaborative problem-solving. It is expected that the specification requirements would facilitate knowledge sharing, by providing access to current and usable information. This would avail the institution of a system that promotes improved decision-making, better business process management and improved customer experiences.

The system would sort the application according to predefined criteria such as department, field of studies or programs. After that, the system would alert the stakeholders, that is, students, the registry, the faculties and depart-

ments when an application is submitted, since the system would be programmed to update, synchronise and send a notification to these stakeholders. At this stage, the receipt of acknowledgement would be generated electronically and forwarded to the applicants at the finalisation stage. When modification, alteration or migration of information is implemented by authorised personnel, the system will enable synchronisation of the information for the stakeholders' access. This redesigned process would save cost, and make it easier for the stakeholders to collect, organising and maintain this vital information showing a business process that is responsive to the user's needs, and this would increase performance, and improve users' experience and satisfaction.

CONCLUSION

The paper established that information life cycle and integration of information technology is a valuable tool that is useful for increasing institutional effectiveness, agility and performances. However, investment in IT is not enough to raise performance without information governance, IMP and capabilities to use the IT infrastructure to improve information life-cycle. The paper concludes that the management of information must be designed to reflect efficient information governance. The paper concluded that IT alignment with business processes would improve the university information management capabilities. However, the IT must be integrated in such a way that drives the five phases of the information life cycle which would lead to an increase in information maturity. This includes information retrieval and processing skills, information classification and appraisal. The institution should avoid manual capturing, processing, organising and maintaining application information as this encourages the duplication of tasks. An automated, synchronised system might influence performance, thus eliminating physical movement of applications across campuses as currently practised. This could ensure quick responses to queries, reduce costs and improve performances. It was concluded that departments and faculties should be linked to the same database, or, institutional interfaces to promote seamless interaction of the application processes, thus increasing efficiency. This would support online real-time accu-

rate information access for better and improved decision-making. Although the current way that information is being managed in the institution is operational, it does not take advantage of its IT infrastructure to promote effectiveness, efficiency and robust customer satisfaction, due to the partial implementation of application information management automation.

RECOMMENDATIONS

The paper recommends that open-source applications and software should be embedded in their IT infrastructure for application purposes. Such strategies could integrate cloud computing services, such as software as a service (SaaS), or platform as a service (PaaS) to improve the application processes. The Marchlands' IMP model, if understood by personnel, would provide an effective way to package and disseminate information to increase the institutional information governance and agility. Consequently, it would improve the university application process turnaround time, accuracy and timely distribution of required data through mandatory synchronised databases. For the institution to improve performance, the entire application process exercise should consider a single platform to manage applications. Users must be allowed to input their information on the systems, and this would potentially save time; eliminate the possibility of erroneous data entry/collection either due to human errors, illegible handwriting or capturing of incomplete information, thereby increasing the turnaround time.

Future work may look at assessing the institutional information policy and governance vis-à-vis IMP; staff capacity to handle accurate information processing; and further in-depth analysis using qualitative data is needed to understand each IMP construct, especially in South Africa context.

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