

User Requirements of Network Integrated Legal Affairs Management System using Focus Group Discussion

Haswira Nor Mohamad Hashim¹, Shuzlina Abdul Rahman², Nor Shahida Mohamad Yusop², Nor Shahniza Kamal Bashah², Suriyati Razali², Haidar Dziaudin¹

¹Faculty of Law, Universiti Teknologi MARA, ²School of Computing Sciences, College of Computing, Informatics and Media, Universiti Teknologi MARA
Corresponding Author's Email: nor_shahida@uitm.edu.my

Abstract

Increase of legal matters handled by Universiti Teknologi MARA Legal Advisor Office (UiTM LAO) requires development of a web-based system to enhance its efficacy. The conventional method of legal affairs management using papers, mail and email is non-optimal as UiTM LAO is unable to coordinate online drafting, vetting, editing, endorsement, and approval of legal documents received from various departments. The existing legal affairs management web-system developed for private law firms and in-house legal departments are unable to fulfil the requirements of UiTM LAO due to differences in work system and approval process. In this paper, we present the development of network integrated legal affairs management system (NILAMs) for UiTM LAO and its stakeholders. The user requirements of NILAMs were elicited through a focus group discussion (FGD) involving 30 participants representing UiTM branch campuses, faculties, academic centers, center of excellence and offices. Through FGD, 35 issues and 57 suggestions were identified, and finally 16 main functions of NILAMs were constructed. NILAMs enables collaborative workspace and real-time interactions to support drafting, vetting, tracking and monitoring legal documents for LAO of public universities and public sector organizations, which compliance with Ministry of Higher Education (MOHE) and UiTM policies.

Keywords: Focus Group Discussion, Legal Affair Management System, Requirement Engineering, User Requirement

Introduction

Network Integrated Legal Affairs Management System (NILAMs) is a web-based system that supports Universiti Teknologi MARA (UiTM) Digital Campus implementation initiative for 2020-2022. The first phase of NILAMs covers the main component of legal services provided by Legal Advisor Office (LAO) i.e., drafting Memorandum of Understanding /Memorandum of Agreement (MoU/MoA), vetting legal documents, writing legal opinion, and supply written answer to parliamentary questions. Legal affairs management involves many categories of user whose different perspectives and requirements need to be elicited and prioritized.

Before NILAMs can be developed it is important to determine its core functions and how it can fulfil the requirements of the target user group. Hence, it is pertinent for NILAMs development to include user requirements activity so as the system developer could understand the users' process or internal activities that can be supported by the system.

User requirements activity is conducted by gathering the target users from every category to discuss their current activities or ideas on legal affairs management. Focus group discussion or interview sessions are considered as the most effective methods to explore user requirements. System developers identify and collect information about user needs, and requirements of the system (Reyes-Flores et al., 2019). User requirements provides avenue for the users to articulate their needs and expectations from the system so that the domain properties or business process that are needed by users in the new system can be specified in the proposed web-system (Maiden, 2008). It is posited that by understanding user requirements, the level of user acceptance of the web-system could be enhanced. By engaging target users in the early stages of system development can indirectly increase productivity, enhanced quality of work, reductions in support and training costs, and improved user satisfaction (Maguire & Bevan, 2002).

The FGD was conducted with the aim of identifying the user requirements of NILAMs and provides suggestions to improve the efficiency of the legal affairs management process handled by UiTM LAO. To achieve this aim, the FGD participants who were the prospective end-users of NILAMs were asked to identify various issues arising from the legal affairs management process, and the challenges faced by them in dealing with UiTM LAO. In addition, the FGD participants were also asked to identify their needs as the stakeholders in the development of NILAMs that aims to improve the legal affairs management process through an integrated web-based system.

Research Motivation

Conventional method of drafting and vetting legal documents is non-optimal as it is unable to coordinate online drafting, vetting, editing, endorsement, and approval of legal documents received by LAO from various stakeholders within UiTM. Absence of online system hinders the LAO clients from monitoring and tracking the work progress of the legal documents. Reliance on non-automated method of communications via email and mail correspondences have resulted delayed notifications between LAO and its stakeholders. Missing, unread or accidentally deleted e-mail either received or sent by LAO staff occasionally led to communication breakdowns with LAO clients. Manual drafting, vetting, filing, storing, and archiving of legal documents have exhausted the file storage space and resulted increase annual expenses for stationeries, printing and photocopying of legal documents. Absence of auto generated file reference requires the registration of files to be conducted manually by the administrative assistants. Offline database, repository and archive have resulted inefficient data retrieval for analytical and reporting purposes and subject to the availability and traceability of data. These dire situations require an innovative and efficient management system to be adopted by LAO. While many web-based electronic files management systems have been developed commercially, none of the systems fulfils the requirements of the LAO of public universities in Malaysia such as UiTM. Hence, NILAMs has been proposed to fill in the gap of existing systems in addressing the above problem.

Related Work

Review of patents has identified eight patents that share one or more objectives with NILAMs. The invention of the patterns are focused on three legal affair areas – legal risk and evaluation, legal information management, and legal case management.

Legal risk and evaluation: Yong et al (2016) has developed a web-based system comprises five main modules, namely review basic work, contract online management, risk prompting, performing monitoring, and approval. The system provides a paperless approval and management of various legal documents including contracts, and responsible for monitoring possible legal risks when signing and performing the legal contracts. In addition, the system also provides real-time contracts performing condition reports. Xiansheng (Xiansheng, 2019) has invented a cloud data processing system to support one-stop intelligent law affair platform and use lawyer evaluation method to analyze lawyer service credit evaluation. The system is also capable to support legal service, administrative, and judicial services. Ju et al. (Jun et al., 2020) invention focuses on two aspects: (1) legal risk management for identifying legal risk, evaluating legal risk information and obtaining an evaluation results if legal risk information has a risk, grading the risk, and formulating a corresponding prevention strategy; (2) comprehensive affair management for calculating expense required by the strategy estimated by the fund management personnel and generating a statistical analysis report after collecting the evaluation result and the corresponding strategy.

Legal information management: Haolin and Zihao (Haolin & Zihao, 2018) developed an information system to manage legal contract, enterprise credit investigation, and intellectual property. The developed system is helpful to solve problems related to unclear enterprise credit information. Jie (2020) invention provides a legal affair system cloud box. The cloud box is connected to external intelligent management cloud management to allow data communication and data sharing between users, and subsequently users can obtain professional legal services from the cloud end.

Legal case management: Dan (2016) invention discloses a law case task management system. The system comprises a case task allocation, case task prompt, and case task counting. Chengyi and Hongqi (Chengyi & Hongqi, 2020) discloses a case filing and pre-filing auxiliary management system. The system is open for the public to apply for filing in self-service, thus, can reduce the workload of case filing and improve case filing efficiency and accuracy. Yi (2021) invention discloses contract and intellectual property legal dispute management system. Similar to other system, the system cooperate several legal affair aspects such as contract management, legal affair management, certificate management, seal management, intellectual property management, and legal dispute processing.

Apart from patent review, there are some researchers who have published works related to legal affair. For example, Wang and Qin (2012) has developed legal information retrieval system using Chinese word segmentation algorithm. Boella et al (2016) developed a legal document and knowledge management system for the Web to provide relevant, reliable and up-to-date information on the law. Munoz (Analiza, 2019) developed integrated legal case management system of a public office.

Patent review confirms that while invention on legal affairs management system picking up from since the past two decades, there is no system developed specifically for LAO of higher learning to manage the legal affairs of the institutions. Hence, development of NILAMs has closed the gaps and contribute to current body of knowledge in legal affairs management system for LAO at higher learning institutions, particularly in Malaysia.

User Requirement Study

The user requirement study for NILAMs was conducted using focus group discussion (FGD). FGD was chosen as it is a fast-response and cost-effective requirement elicitation method for assessing user requirements of a web system (Maguire & Bevan, 2002). The FGD was conducted in two-days from 14 September to 15 September 2020. The objectives of FGD are three-folds, (1) to identify issues in legal affairs management process; (2) to present suggestions to improve the legal affairs management process; and (3) to identify user requirements for the development of NILAMs.

Participants

The 30 participants representing UiTM LAO stakeholders from branch campuses, faculties, academic centres, centre of excellence and administrative offices participated in the FGD. Table 1 lists the number of participants from each stakeholder group.

Table 1

The number of participants of the user requirement study

No	Stakeholder	Number of Participants
1	UiTM branch campuses	10
2	Faculties	10
3	Research management & commercialization centres (RMC, BITCOM)	2
4	Centre of excellence (MITRANS, iPROMISE, IIESM)	3
5	Administrative offices (ICAN, OIA, PPII, PTAR, ICEPS)	5

Procedures

An email invitation was sent to all branch campuses, faculties, academic centers, Centre of excellence and administrative offices two weeks before the FGD. The participants returned their confirmation of attendance one week before the FGD. Each participant was then given a packet of materials containing (1) flowchart of MoU/MoA/legal documents management process; and (2) user requirements template that describes the legal management process (i.e., application, drafting, vetting and endorsement, draft amendment, endorsement, submission for approval, approval, execution, and archiving the legal documents), stakeholders and the documents involved at each stage of the process

The FGD was conducted in two sessions, with each session took approximately two hours. The composition of the group is different in both sessions. Figure 1 (a) and (b), shows the FGD sitting arrangement of the FGD sessions in Smart Classroom, Menara Sultan Abdul Aziz Shah, Universiti Teknologi MARA (UiTM), Shah Alam. In the first session, the participants were divided into six groups according to stakeholders – two groups from branch campuses, two groups from faculties, one group from a mix of academic center and Centre of excellence, and one group from administrative offices. Each group consisted of five participants, led by a facilitator, and assisted by a note-taker. During the discussion, the participants are required to (1) explain the process of preparing MoU/ MoA draft, vetting, endorsement, and signing the MoU/MoA, (2) check and provide feedback on the given flowchart of LAO management process, (3) identify issues arising from the process, and (4) present suggestions to improve the process efficiency. At the end of the first session, each group was given 20 minutes to present their issues and suggestions, followed by 10 minutes question and answer session.

In the second session, the user requirements of NILAMs were identified. Participants were combined into three groups, and each group has 10 participants comprising two or three representatives from each stakeholder category. Each group discussion was led by a facilitator who is the LAO officers and assisted by two note-takers. During the discussion, a total of 27 questions were asked by the facilitators to elicit the needs of the stakeholders in the development of NILAMs. The questions were constructed using Create, Read or report, Update, Delete (CRUD) technique that focused on data elements to be processed by the system. Table 2 shows the sample of questions asked to participants during the discussion. The FGD was conducted informally in a mixture of both Malay and English language. All the discussions from both sessions were recorded in Excel spreadsheet for further analysis.

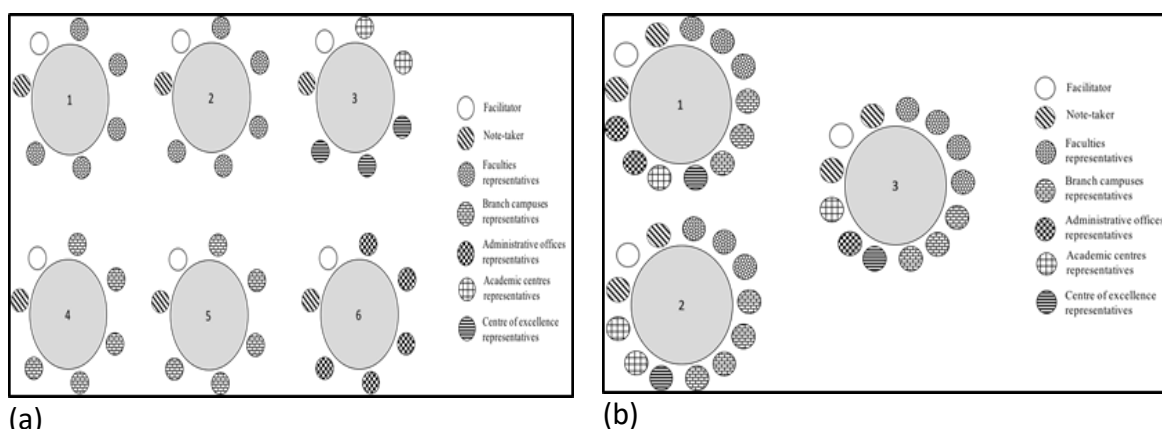


Figure 1: Focus group discussion sitting arrangement in (a) session 1, (b) session 2

Table 2

Sample questions asked to participant in identifying user requirement for drafting process

Process	Participants	Questions
Submit an application	Branch campuses, faculties, academic centres, centre of excellence and administrative offices	<p>PIC/ Stakeholders: Who is responsible for submitting the application?</p> <p>Business Scenarios (CRUD Technique):</p> <ol style="list-style-type: none"> 1. How do you apply for the preparation of MoU/ MoA documents from the LAO? Example – by official email, telephone, paperwork etc. (C) 2. What information should be informed to LAO if you request to the LAO to prepare the MoU/ MoA documents? Example – can ask the respondent to provide an example of the form / template used to submit the application. (C) 3. If you wish to check the status/ progress of your application (follow up), how do you refer to your application? Example – provide applicant name, date of application submitted, application ID etc. (R) 4. After the application has been submitted, have you ever updated / changed the information provided? (U)

		5. Have you ever cancelled your application after the application has been submitted? How do you refer to the application (provide the applicant's name, date of submission, application ID etc.) (D)
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Data Analysis

The inputs from the FGD sessions were consolidated and used in the preparation of the user requirements for NILAMs. A deductive analysis was used to map the transcribed data to specific categories. Data was codified and data with similar attributes were listed under the same network group. The Atlas.ti v8 software was used to construct attribute categories and analyze the importance of user requirements extracted from the FGD. Based on this analysis, the system developer prepares a user requirements specification, and this specification is later validated by the LAO as the process owner of legal affairs management.

The Issues of Current Legal Office Process At Uitm

The FGD identified 35 issues across eight stages of legal affairs management process. The highest number of issues were identified at application stage that records nine categories of issues. The lowest number of issues were identified at endorsement stage. The number of issues identified at six other stages (drafting, vetting, amendment, submission for approval, and approval) ranged between three to six issues. Figure 2 shows the eight stages in the legal office process. As shown, the issues identified for each stage are presented as node and these issues may be encountered at different stages. The following paragraph summarizes the issues identified at each stage.

(FG7).

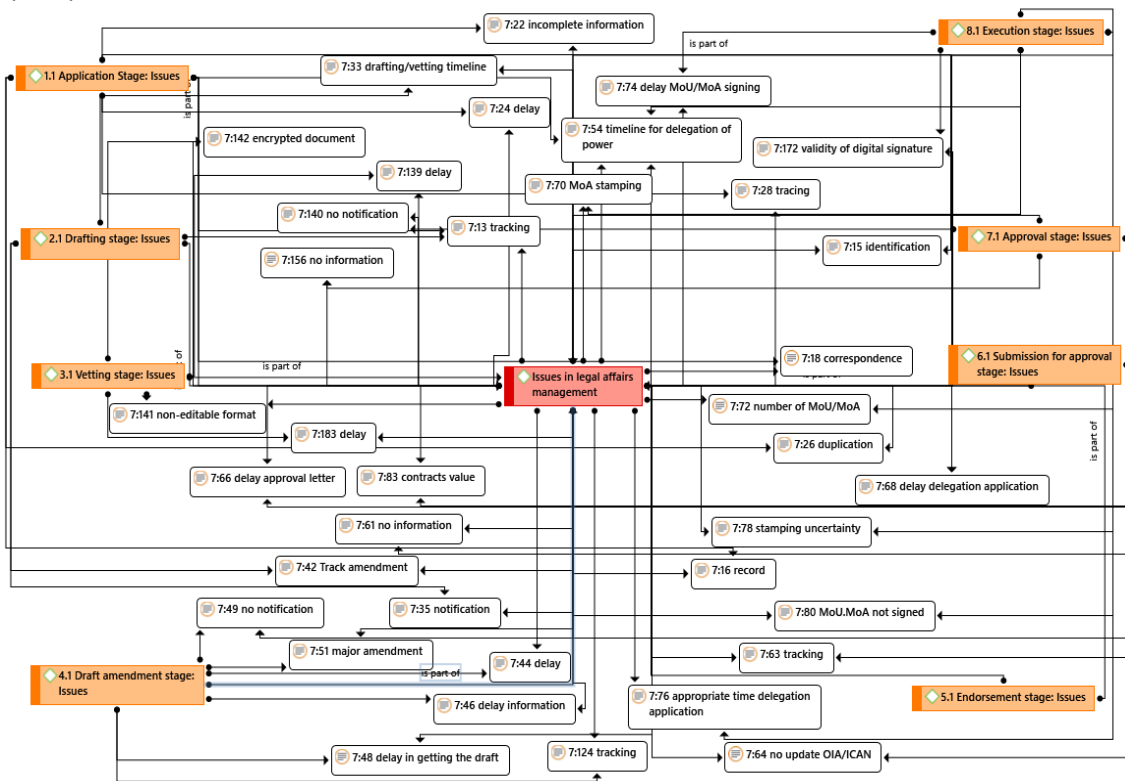


Figure 2: Issues in legal affairs management across all stages

At *application stage*, FGD identified nine issues. First, tracking documents sent to LAO (FG1). Second, identification of the staff who initiated an MoU (FG2). Currently, all MoUs were recorded as initiated by the Deputy Dean. Third, difficulty to trace the department/branch campuses that owned the MoU/MoA (FG2). Fourth, correspondence from LAO was only sent to the person in charge and was not sent to the dean or deputy dean. (FG2). Fifth, incomplete information given by the applicant to LAO (G2). Sixth, discrepancies between the flowchart and the guideline for application of MoU/MoA (FG3). Seventh, duplication of applications where the collaboration partner signed the MoU with other branch campuses (FG6). Eighth, the timeline for application of delegation of power to sign the MoU/MoA (FG6). Ninth, question as who will be in charge of completing the particulars of application for legal services

At *drafting stage*, FGD identified four issues. First, tracking documents sent to LAO (FG1). In relation to this issue, FG3 raised their concern that they were unable to track the amendment made by LAO on the MOU/MoA. Second, MoU/MoA drafting/vetting took more than two weeks to complete (FG5). Third, notification on the work progress did not reach their knowledge (FG5). Fourth, there is no drafting/vetting timeline. However, the fourth issues is not valid since UiTM MoU/MoA Guideline provides the timeline for drafting/vetting.

At *vetting stage*, FGD identified three issues. First, delay in getting the draft MoU/MoA to be assigned to the vettor (FG4). Second, softcopy of document in non-editable format and/or encrypted provided by the MoU/MoA partner (FG4). Third, users have to make follow-ups with the LAO on the drafting and vetting progress (FG5)

At *draft amendment stage*, FGD identified four issues. First, users unable to track the amendment made by LAO on the MOU/MoA (FG3). Second, the head of department was delayed in signing application letter for re-vetting after the amendment was made (FG4). Third, delay in obtaining information on correction and amendment following feedbacks from the MoU/MoA partners (FG4). Fourth, insufficient time for major amendment (FG6).

At *endorsement stage*, FGD identified two issues. First, the checklist for MoU/MoA endorsement is not clear (FG6). Second, there is no timeline for application of delegation of power to sign the MoU/MoA (FG6).

At *submission for approval stage*, FGD raised one issue i.e. LAO/OIA/ICAN unable to track whether the stakeholder has submitted the duly endorsed MoU/MoA for approval (FG4).

At *approval stage*, FGD identified six issues. First, delayed approval to sign the MoU/MoA (FG4). Second, delay in getting approval letter (FG1). Third, ceiling contracts value for UiTM Executive Council approval is not clear (FG1). However, this issue is not valid since the MoU/MoA Guideline has stated the ceiling contracts value for approval by the Council. Fourth, departments/branch campuses was not informed about the approval (FG3). Fifth, stakeholder did not update OIA/ICAN about the approval (FG5). Sixth, users did not get notification and update on the MoU/MoA approval (FG5).

At *execution stage*, FGD identified six issues. First, issue of delay in signing MoU/MoA due to delay of courier service (FG4). Second, confusion as to the appropriate time to submit application for delegation of power to sign the MoU/MoA (FG5). FG6 also raised the issued about the timeline for application of delegation of power to sign the MoU/MoA. In relation to this, FG2 raised concern about the head of department/rector/dean did not apply for delegation of power to sign the MoU/MoA until very close to the signing date. Third, users did not sign the approved MoU/MoA despite so much efforts had been put to draft and vet the same (FG5). Fourth, validity of digital signature (FG5). Fifth, non-uniformity of the number of MoU/MoA hardcopies that need to be prepared by the MoU/MoA owner (FG3). The group observed that the number of hardcopies ranged between two to four copies. However, the

non-uniformity is understandable since the number of copies depends on the number of parties in the MoU/MoA. Sixth, Similarly, uncertainty about MoU/MoA stamping requirement (FG4). Concurring this issue, FG2 pointed out that the Inland Revenue Board did not recognize digital signature for the purpose of stamping.

Suggestions for Improvement

The FGD presented 57 suggestions spread across all stages of legal affairs management process. The highest number of issues were identified at draft amendment stage with 12 suggestions. This is followed by application stage (10 suggestions). The lowest number of suggestions is vetting stage with two suggestions. The suggestions for other stages ranged between five to nine suggestions. The following paragraphs summarize the suggestions for improvement for the identified issues.

At *application stage*, FGD presented 10 suggestions. First, Liaison Officer to be appointed for each users (FG1). Second, users to be able to search, view and download for information on existing MoU/MoA from the system (FG2, FG4). The group also suggested for the system to store information on the MoU/MoA partners for the search function. There was also suggestion for the stakeholders to be able to search for the MoUs that were signed by all departments and branch campuses (FG4). To facilitate the search, FG4 suggested each category of MoU/MoA to be assigned a special code. Third, the renewal and extension process to be included in the system (FG3). Fourth, application for delegation of power to the rector/dean to sign the MoU/MoA through the system (FG4). Fifth, the need for notification to person in charge and information about LAO staff in charged of drafting or vetting to be included in the system (FG4). Sixth, provide access to the Liaison Officer and the person in charge to key in the data into NILAMs (FG5). Seven, the drafter and vetter should be able to upload the document into the system. The system should also allow supporting documents to be uploaded by the applicant Tenth, there was suggestion for the lecturers to be recognised as the initiator of MoU. Eight, priority button to be included for the system to enable urgent application to be assigned without having to go through the queue system (FG3). FG5 suggested MoU/MoA extension and renewal was also suggested to be placed in the fast lane. Ninth, MoU/MoA to be categorised into several groups i.e. local and international; government agencies and private sectors (FG5). The MoU/MoA should also be classified into document categories i.e. MoU, MoA, LOI, NDA, etc (FG5). There was also suggestion for the MoU/MoA to be classified according to type of activities e.g. research, consultation (FG6). Tenth, provide checklist according to types of application (drafting, vetting, extension, renewal of MoU/MoA (FG5). Similarly, FG6 suggested for an application checklist and glossary feature to be included in the system.

At *drafting stage*, FGD presented six suggestions. First, the system to set out the duration of drafting process. On this note, FG1 suggested for the drafting process to be undertaken within 14 days from date of application (FG1). On the same note, Group 2 suggested for the legal officer to complete the drafting process within 14 days commencing from the date the Legal Advisor assigned the task to the legal officer concerns. In addition, FG4 suggested for 14-21 working days deadline to be set for the drafting/vetting process. In contrast, FG6 also suggested for the MoU to be drafted/vetted within 4 days, while the MoA to be drafted/vetted between 14 to 21 days.. Second, drafting and vetting process to be transparent by enabling the stakeholders to monitor the process (FG1). Third, reminder/notification functions to be included in the system (FG2). Fourth, LAO to assign the MoU/MoA drafting task to the legal officer in charge through the system (FG3). Fifth, there

was also suggestion for tracking function to be included in the system (FG4). Sixth, drafting and vetting works that take more than 14 weeks to be listed under “Dispute list” and extra time to be given to complete the drafting or vetting process. Seventh, LAO to charge administrative fee for drafting new MoU/MoA (FG5). However, this suggestion has been dismissed as LAO is providing legal services to internal stakeholders within UiTM.

At *vetting stage*, FGD presented six suggestions. First, the stakeholder to be given seven working days for minor amendment and 14 working days for major amendment (FG2). The LOA will assess whether the MoU/MoA requires minor or major amendment. Second, the head of department and person in charge for the stakeholder to receive notification by email and from the system (FG3). Similarly, FG4 suggested notification on the correction status to be included in the system (FG4). Third, the system to alert the stakeholder if LAO did not give any feedback after one month (FG4). Fourth, real time comment can be given on the vetted document (FG3). Fifth, document for vetting to be submitted in MsWord since it is editable (FG5). Sixth, person in charge should be able to edit the document (FG5).

At *draft amendment stage*, FGD presented 12 suggestions. First, the same legal officer to vet the amendment made to the MoU/MoA (FG1). Second, reminder and notification function for amendment that passed the due date (FG4). Third, an auto generate letter function to be included in the system (FG3). Fourth, MoU/MoA should be endorsed within 7 days after the amended draft was submitted to LAO (FG2). Fifth, audit trail function to track the amendment history to be included in the system (FG2). Sixth, the group suggested for the MoU/MoA that has been returned to the applicant for amendment to be taken out from the queue and its resubmission to be placed in the fast lane (FG3). Seventh, a comment box to be included in the system (FG3). Eighth, the person in charge for the stakeholder can make the necessary correction and forward it to the MoU/MoA partner (FG3). Ninth, reminder and notification on the due date to be included (FG3). The group suggested for the stakeholder to be given 7 working days to make the amendment. FG6 suggested the users to make correction to the MoU within 7 days, while the MoA to be corrected within 14 to 21 days. In contrast, FG5 suggested for 14-21 working days deadline to be set for the drafting/vetting process. Tenth, reminder and notification function for amendment that passed the due date (FG4). Eleventh, notification on status of correction to be included in the system (FG4). On the same note, FG5 suggested for the person in charge for the stakeholder to be informed by automatic notification from the system. FG5 also suggested for users to be informed if there is any amendment to the MoU/MoA. Twelve, amendment to be made in the system not from an attachment. However, due to the budget and time constraint, this suggestion has been dismissed.

At *endorsement stage*, FGD presented four suggestions. First, MoU/MoA should be endorsed within 7 days after the amended draft was submitted to LAO (FG2). Second, MoU/MoA endorsement letter to be issued in the system (FG2). Third, user to be notified within 7 days MoU/MoA endorsement is given by LAO. (FG4) Further, FG4 suggested for notification on endorsement to be sent to OIA/ICAN coordinator at departments/branch campuses. The group also suggested for the notification to be carbon copied to their head of department and LAO. Fourth, research and consultancy under BITCOM and RMC to be exempted from the need for endorsement by LAO (FG3). This suggestion has been dismissed since it is against UiTM policy.

At *submission for approval stage*, FGD presented three suggestions. First, submission for approval to be updated in the system (FG3). Second, LAO/OIA/ICAN able to track whether the

stakeholder has submitted the duly endorsed MoU/MoA for approval (FG4). Third, UiTM Executive Council (MEU) meeting calendar to be published in the system.

At *approval stage*, FGD presented six suggestions. First, notification function to the MoU/MoA owner of the approval (FG6). Second, approval letter to be autogenerated and sent to the head of department and coordinator (FG2). Third, the head of department/coordinator able to download or print the approval letter (FG2). Fourth, MoU/MoA approval to be notified to the OIA and ICAN for monitoring and reporting purposes (FG4). Fifth, approval to be updated in the system (FG6). The group also suggested for approved and not-approved button to be added in the system. Sixth the approved draft to be prepared in PDF format (FG4).

At *execution stage*, FGD presented six suggestions. First, MoU/MoA to be signed within three months if it involves signing ceremony (FG2). Second, users to have an option to sign using digital signature (FG2). Similarly, FG4 also suggested for the stakeholders to be given an option to sign the MoU/MoA using encrypted digital signature. FG4 further suggested for a protocol on digital signature to be clarified to the users. Third, guideline to be established on the number of MoU/MoA hardcopies that need to be prepared (FG3). Fourth, LAO/OIA/ICAN to be notified of the MoU/MoA signing (FG4). Fifth, notification function to include signing of MoU/MoA and expiry of the MoU/MoA (FG5). Sixth, LAO to provide a guideline on MoU/MoA stamping requirement (FG6). This suggestion will be adapted through a manual guideline. Sixth, delegation of power to sign MoU/MoA to be recommended based on the contract's value (FG3). This suggestion has been adopted through an existing guideline.

At *archiving stage*, FGD presented seven suggestions. First, Group 1 suggested for MoU/MoA data to be integrated with the University Transformation Division (BTU) system (FG1). Second, users to be able to request for a copy of the original document of the MoA under certain circumstances (FG2). Third, department/branch campuses to upload the MoU/MoA in the PTAR repository (FG5). Fourth, PTAR to have access to the MoU/MoA in the system (FG2). This suggestion is to be adapted strictly for the purpose of archiving MoU/MoA. Fifth, the original copy to be kept by the department/branch campuses who initiated the MoU/MoA (FG5). Sixth, duplicate copy to be kept by the Deputy Vice Chancellor and LAO. This suggestion is dismissed since neither Deputy Vice Chancellor nor LAO has sufficient office space to store all legal documents executed by UiTM. Seventh, enable authorized users to download the MoU/MoA (FG6).

NILAMs User Requirements

This section reports the recommended functions for NILAMs. The recommended functions aim to solve prevailing issues underpinning legal affairs management and simultaneously fulfil the needs of the prospective users of NILAMs. The recommended functions are assigned to 16 groups based on the issues and suggestions from FGD.

Function 1. MoU/MoA owner and initiator identification - First, the MoU/MoA owner and initiator identification function solves the issue pertaining to the identification of the staff who initiated an MoU. Currently, the Deputy Dean records all initiated MoUs manually. Second, this function fulfils the need for the lecturers to be recognised as the initiator of MoU. Third, this function will solve the issue in finding the initiator and owner for the MoU/MoA that was initiated through top-down arrangement. Under such situation, there was a confusion which department should submit the application. Fourth, this function will solve issue of duplication of MoU ownership faced by the users.

Function 2. Archive and repository - First, this function fulfils the need for department/branch campuses to upload the MoU/MoA in the PTAR repository. Second, this function fulfils the

need for MoU/MoA data to be integrated with the existing system. Third, this function fulfils the need of the authorised users to request for a copy of the original document of the MoU/MoA.

Function 3. Auto generate letter and files reference - First, this function fulfils the need for an auto-generate letter function to be included in the system. Second, this function fulfils the need for the approval letter to be autogenerated and sent to the head of department and coordinator.

Function 4. Checklist and glossary - First, this function will solve the issue as to the appropriate time to submit application for delegation of power to sign the MoU/MoA. Second, this function fulfils the need for delegation of power to sign MoU/MoA to take into consideration the contracts value. Third, this function fulfils the need for the submission to be verified by the coordinator and approved by the head of department/rector/dean through the system. Fourth, this function will solve the issue of uncertainty about MoU/MoA stamping requirement and the need for the LAO to provide a guide on MoU/MoA stamping requirement. Fifth, this function fulfils the need to ensure the final draft for approval to be uploaded in PDF format. Sixth, this function fulfils the need to guide the users according to types of application (drafting, vetting, extension, renewal of MoU/MoA). Seventh, this function will solve any discrepancy between the flowchart and the guideline for MoU/MoA and concerns about MoU/MoA endorsement checklist which is not clear. Eight, this function fulfils the need for a guide on the number of hardcopies for MoU/MoA.

Function 5. Data retrieval, analytical and reporting - First, this function fulfils the need for the authorised users to be able to request for a copy of the legal document for their reference or further action. Second, this function fulfils the need for the users to be able to search for information on existing MoU/MoA from the system. Third, this function fulfils the need for the users to be able to view and download the document. Fourth, this function will resolve the issue pertaining to the Malaysia Research Assessment (MyRA) reporting that requires evidence of activities undertaken pursuant to the MoU/MoA. Fifth, this function fulfils the need to retrieve and print documents for filing purpose. Sixth, this function fulfils the need for an audit trail of the history of drafting and amendment.

Function 6. Digital signing option - First, this function will solve the issue of delay in signing MoU/MoA arising from inefficient courier service. Second, this function fulfils the need of the users to be given an option to sign the MoU/MoA digitally. However, this function does not resolve users concern about the authenticity of digital signature. Therefore, a protocol on the used of encrypted digital signature will be introduced for the users.

Function 7. Document Classification and Category - First, this function fulfils the need to assign MoU/MoA under a special code for file reference. Second, this function fulfils the need to identify MoU/MoA under general categories i.e. local and international; government agencies and private sectors. Third, this function fulfils the need to classify MoU/MoA according to type of activities e.g. academic, research, income generation, community service); document category (MoU, MoA, LOI, NDA, etc); or contracts value (below or above RM500,00). Fourth, this function enables Non-Disclosure Agreement (NDA) to be included in the application process.

Function 8. Document draft, vet, edit, comment - First, this function fulfils the need of the users to give real time comment on the drafted/vetted document. Second, this function fulfils the need for the person in charge to edit the document. Third, this function will solve the issue softcopy of document in non-editable format provided by the MoU/MoA partner. Third,

this function fulfils the need for a comment box to clarify impending issues arising from the legal document.

Function 9. Document search and view - First, this section fulfils the need of the users to view the status of their application. Second, this function fulfils the need for the system to store information on the MoU/MoA partners. Third, this section fulfils the need to search for MoU/MoA in the system. Fourth, this section will solve the issue of duplication of MoU partners. Fifth, this function will solve the issue on the difficulty to trace the department/branch campuses that initiated the MoU/MoA.

Function 10. Endorsement and approval - First, this function fulfils the need for endorsement and submission for approval to be made through the system. Second, this function fulfils the need for approval to be done online with approve and not-approve button to be added in the system. Third, this function will solve the issue about the ceiling contracts value for approval.

Function 11. Files queuing system with overwrite functions for priority files - First, this function fulfils the need for a priority button to be included for the system to enable urgent application to be assigned without having to go through the queue system. Second, this function fulfils the need for the MoU/MoA that is returned to the applicant for amendment to be taken out from the queue and its resubmission to be placed in the fast lane. Third, this function fulfils the need for MoU/MoA extension and renewal to be placed in the fast lane.

Function 12. Legal Officers assigned and pending works - First, this function will solve the issue of delay in getting the draft MoU/MoA to be assigned to the drafter/vetor. Second, this function fulfils the need for the system to set out the duration of drafting process. Third, this function fulfils the need for a deadline to be set for the drafting/vetting process. Fourth, this function fulfils the need to ensure the legal officer completes the drafting process within the stipulated timeframe e.g. within 7 days to vet/draft MoU, 14 days to vet MoA, 21 days for drafting MOA. Fifth, this function fulfils the need for the same legal officer to vet the amendment made to the draft MoU/MoA. Sixth, this function fulfils the need to endorse the MoU/MoA within 7 days after the amended draft was submitted to LAO. Seventh, this function fulfils the need for LAO to endorse the MoU/MoA within 7 days after the amended draft was submitted to LAO.

Function 13. Notification, Alert, Reminders - First, at application stage, this function fulfils the need for reminder and notification on the due date of legal affairs management process. This function fulfils the need for the head of department and person in charge for the stakeholder to receive notification/reminder by email and from the system. This function also fulfils the need to alert the applicant if LAO did not give any feedback after one month. Second, at drafting/vettig stage, this function solves the issue of the applicant did not get the update on the progress of drafting/vetting legal documents. Third, at draft amendment stage, this function fulfils the need for users to resolve any issue raised by the LOA within 7 days. This function fulfils the need for the stakeholders to be informed if there is any amendment to the MoU/MoA. This function fulfils the need for reminder/notification functions to be included to inform the stakeholder of the correction/amendment required for the MoU/MoA draft. This function fulfils the need for the users to be given 7 working days for minor amendment and 14 working days for major amendment. This function fulfils the need for notification on status of correction to be included in the system. This function fulfils the need for the stakeholder to make correction to the MoU within 7 days, while the MoA to be corrected within 14 to 21 days.

Fourth, at endorsement stage, this function fulfils the need for the applicants to be notified by the system for the duly endorsed MoU/MoA. This function fulfils the need for online

endorsement letter to be issued after the MoU/MoA has been endorsed by LAO. This function fulfils the need for the stakeholder to be notified by the system and email for the duly endorsed MoU/MoA. This function fulfils the need for ICAN/OIA at the department/branch campus level to be notified within 7 days of endorsement given by LAO. This function fulfils the need to alert the stakeholder if LAO did not give any feedback after one month. This function fulfils the need for coordinator of ICAN/OIA at the department/branch campus level to be notified within 7 days of endorsement given by LAO. This function fulfils the need for notification on endorsement to be carbon copied to their head of department and LAO.

Fifth, at submission for approval stage. This function fulfils the need for MEU meeting calendar to be included in the system. This function fulfils the need for LAO/OIA/ICAN to be informed of the submission for approval through automatic notification in email. This function fulfils the need for the LAO/OIA/ICAN to be notified about submission for approval. This function solves the issue about delay in getting approval letter.

Sixth, at approval stage, this function will solve the issue the departments/branch campuses was not informed about the approval. This function fulfils the need for the approval to be updated in the system. This function will solve the issue about the departments/branch campuses was not informed about the approval. This function fulfils the need for the approval to be updated in the system. This function will solve the issue about not getting notification on the MoU/MoA approval from the secretariat. This function fulfils the need for the MoU/MoA approval to be notified to the OIA and ICAN for monitoring and reporting purposes. This function fulfils the need for notification function to the MoU/MoA owner and LAO of the approval to be included in the system.

Seventh, at execution stage, this function fulfils the need for the notification function to include signing of MoU/MoA and expiry of the MoU/MoA. This function will resolve the issue of the stakeholders did not sign the approved MoU/MoA. This function fulfils the need for LAO/OIA/ICAN to be notified of the MoU/MoA signing.

Function 14. Progress Update, Tracking, Monitoring - First, this function fulfils the need for LAO to endorse the MoU/MoA within 7 days after the amended draft was submitted by users. Second, this function will solve the issue of difficulty to track documents sent to LAO. Third, this function will solve the issue of no acknowledgement of receipt of the application submitted to LAO. Fourth, this function fulfils the need for transparent drafting and vetting process. Fifth, this functions will solve the issue of users unable to track the MoU/MoA amendment made by LAO. Sixth, this function fulfils the need for an audit trail function to audit the drafting/vetting history. Seventh, this function will solve the issue on delay in obtaining information on correction and amendment following feedbacks from the MoU/MoA partners. Eighth, this function will solve the issue about LAO/OIA/ICAN unable to track whether the stakeholder has submitted the duly endorsed MoU/MoA for approval. Ninth, this function will solve the issue of users did not update OIA/ICAN about the approval. Tenth, this function fulfils the need for the users to update OIA/ICAN about submission for approval within 1 to 3 working days.

Function 15. Renewal, Extension Application - First, this function fulfils the need for the renewal and extension process to be included in the system. Second, this function fulfils the need for the application for extension and renewal to be put in the fast lane instead of placed in the queue tray.

Function 16. Upload, Download, Save, Print - First, this function fulfils the need of the users to obtain a copy of the legal document of the MoA under certain circumstances. Second, this function fulfils the need for the final draft for approval to be uploaded and saved in PDF

format. Third, this function fulfils the need of the head of department/coordinator to download or print the approval letter. The drafter and vetter should be able to upload the document into the system. Fourth, this function fulfils the need for supporting documents to be uploaded by the applicant. Fifth, this function fulfils the need for the users to upload the MoU/MoA which has been updated/amended/endorsed into the system. Sixth, this function fulfils the need of users to upload the executive summary of the MoU/MoA that has been submitted for approval.

Discussion

The FGD was deemed successful as it managed to identify 35 prevailing issues across all stages of legal affairs management process, as well as we received 57 suggestions to improve the legal affairs management process. Below we describe how our FGD has successfully identified the user requirements.

Provide guiding questions— Prior to the FGD, a set of questions were developed based on the legal affair processes. To facilitate system analyst to identify data that need to be processed by the system, the questions are built using CRUD (Create, Read or report, Update, Delete) technique. Using this technique, the questions produced are short and simple to maintain engagement and keep attention focused with uncomplicated questions. We also practice one-dimensional questions so that there is one clear answer. For example, we asked questions “Do you use any template when preparing MoU/ MoA? If yes, what template do you use?” Another practices that we find helpful is to provide sample answer to the questions. In cases where the entire group seems to be silent, we trigger some answers so that participants can continue discussion.

Involvement of experienced stakeholders - Majority of the participants were the persons in charge of the MoU/MoA applications at their respective departments and branch campuses who have sufficient experience and knowledge in the legal affairs management process. Their long time involvement with UiTM LAO enabled them to raise valid issues and provide beneficial inputs to the system developer. Some of the issues and suggestions were found to be common as they were recorded in all groups, indicating the importance of the issues and suggestions. However, some of the issues raised by the participants were not valid as they were due to misunderstanding or lack of information. Similarly, some of the suggestions were found to be outside the scope of NILAMs Phase 1 which is focused on legal affairs management system. Where suitable, the suggested features were later incorporated in NILAMs Phase 2 which focused on MoU/MoA activities monitoring and reporting.

Listen actively and express neutrality - Most of the FGD participants were opened and very direct in expressing their opinions about the prevailing issues in legal affairs management system. The openness and candidness indicate a high level of trust and respect between the LAO and its stakeholders. Some participants took the opportunity to vent their disappointment and express their dissatisfaction over the existing legal affairs management process. The facilitators who are the officers at UiTM LAO were already advised that they should anticipate and be prepared for critical comments from the participants. The facilitators were asked to remind the participants that the LAO appreciate constructive comments to improve the legal affairs management process. The FGD was also used by the facilitators who were the officers at LAO as a platform to clarify the issues, explain the misunderstanding and convey to the participants about the problems and constraints faced by them as drafter/vetter of the MoU/MoA.

Being an effective facilitator and note takers – Facilitator responsibilities play a significant role in encouraging stakeholders to feel comfortable speaking and giving ideas within the group. The appointment of facilitators among the UiTM LAO officers is considered useful as they have the knowledge on the subject matter, and they can trigger issues to be discussed, confirm the validity of certain processes, and identify the appropriate processes to be automated. Part of the success of the FGD also was attributed to the note takers who were the system analysts from the Faculty of Computer and Mathematical Sciences and Department of Infostructure of UiTM. The employment of the system analysts as note takers enable them to capture the issues and suggestions that were valuable in recommending the functions that fulfil NILAMs user requirements.

Conduct post-mortem - On the second day of FGD, a post-mortem was conducted to identify the effectiveness of the FGD. Some groups were found to be more active than the others measured from the number of issues, raised and suggestions provided by the groups. During post mortem meeting, the facilitators of the less active groups were consulted to determine the level of involvement of each participant within that group. It was found that some of the participants were either naturally introvert or newly appointed as the person in charge of the MoU/MoA, resulting them unable to identify the issues and provide suggestions expected from them. In the future it is suggested for the inclusion and exclusion criteria to be used in the selection of the FGD participants.

Provide refreshment to increase participation – To ensure participant actively participate in a focus group can be a challenge, especially when conducting FGD during the Covid-19 pandemic. Mandatory precautionary steps have been taken to ensure the participants comply with the protocol imposed by UiTM to prevent the spread of Covid-19. The participants' were sanitized and their body temperatures were taken before entering the FGD venue. The participants' seats were placed one metre apart from each other and they were also required to put on their face masks during the FGD session. The participants were also given 'pack food' to minimize the risks of infection.

Conclusion

The functions recommended for NILAMs cover four critical components of legal affairs management: i) operational component that deals with drafting, vetting, endorsement, approval and execution processes; ii) administrative component that deals with file management, minutes of instructions, record keeping, and quality audit reporting; iii) information management component that deals with data retrieval (that include, search, view, upload, download, print) and archiving of legal documents; and iv) regulatory compliance component that deals with delegation of power, authorised signatory, secrecy, and protection of private and confidential data and information. It is anticipated that through deployment of NILAMs, legal affairs management will be a synergetic virtual workspace that enables distal, asynchronous, and collaborative works on the legal documents. The legal affairs management will also be seamless since the entire legal process can be coordinated and streamlined through a web-based system. Next, legal affairs management will be agile since auto generated file reference and letter allow the legal officers to commence their work and communicate faster and easier. Further, legal affairs management will better utilised manpower since the automated notification, alert and reminder functions reduce the need for ministerial and clerical works. In addition, legal affairs management will be efficient as progress update, monitoring and tracking functions prevent unintentional delay and deferment on the part of legal officer or person in charge. Finally, legal affairs management

will be sustainable since migration to digital environment saves the need for paper documentation and physical files storage. Due to similarities in organisational structure, functions and responsibilities, NILAMs is suitable for adoption by the LAO of other public universities who encounter similar problems or plan to improve delivery of legal services to their stakeholders using a web-based system.

This research contributes towards a better understanding of user requirements in the development of a web-based legal affairs management for the Malaysian public universities. The FGD that was conducted for this research can be used as a reference point by other researchers who attempt to elicit user requirements for a web-based legal affairs management system. This research also provides an insight to the LAO of other public universities in Malaysia and elsewhere, who are planning to improve the delivery of their legal services through adoption of a web-based legal affairs management system. The findings of this research provide valuable information on critical areas in legal affairs management process that need to be addressed by the developer of a web-based legal affairs management system.

Acknowledgments

NILAMs project was fully funded by Universiti Teknologi MARA UiTM (600-RMC/DANA 5/3/BESTARI (TD) (004/2020).

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