BUSINESS IMPROVEMENT PROCESS IN THE LIBRARY TRANSFORMATION AGENDA : THE EXPERIENCES OF INFORMATION RESOURCE CENTER (IRC), UNIVERSITI TEKNOLOGI PETRONAS

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ABSTRACTS

This paper focusing on the methodology used in establishing change in information services trend and the implementation of business improvement process (BIP) in routine technical and non technical environment. The blended of skills, experiences and state of the art technology in managing resources (human capital, knowledge and surrounding) are the ingredients for successful changes in many organization. Challenges on identifying management aspiration, user’s needs, and future library “look and feel” are the content of information services upgrades plan in our five years strategic plan. BIP in materializing transformation are mandatory elements to ensure the changes are taking place at every level in the road map. Information Resource Center, Universiti Teknologi PETRONAS found the impact of transformation in the business processes as well as putting value added into the end user services.

Keywords: transformation, change, business improvement process, knowledge management, human capital
Overview

The library and information service need to change the way they offer their services because the way people use libraries has changed. We must make sure the services offered are relevant and attractive, both now and in the future. Use of online services has doubled in recent years. Many people use the internet to get fast answers and information nowadays. Managing changes in user’s information seeking behavior are the significance challenges for the information professionals. This factor determined the changes required by the library and information organization in developing their transformation agenda. Transformation is all about the change. To transform means to change in form, appearance or structure. Standing and accepting the fact that the changes are mandatory, we put it as the main agenda in our five years plan so called IRC Transformation Plan 2010-2015.

The human capital is the major focus in the entire road map, in view of manpower shortage until year 2014. IRC are really looking on the methodology on developing and transforming peoples to face the unpredictable challenges in managing information and knowledge services excellence. Processes are the element that we put as the key success factor in the transformation agenda, and technology is the tools to accelerate the entire process. The business improvement process (BIP), are closely related to the operational aspects in managing library resources. We determined the key challenges in these three elements for us to focus on in materializing our transformation plan into action.

We were using the total knowledge management approach and techniques for the entire transformation journey, and until now we are still practicing the methodology, in sustaining the change momentum. IRC had achieved the six folds result in productivity with 40% operational cost and manpower reduction at the end of 2010 (FY2009/2010). The establishment of Reference Consultant Unit (RCU) in IRC is the result from the eliciting and transferring expertise process.
Why we changed?

The university’s aspiration through *UTP Transformation Plan*, drawn the road map for knowledge and information services excellences in library. As management highlighted the requirement for library to play their roles to support research activities through the efficient resource development and services, the changes is extremely crucial.

At the end of year 2008, we realized some major challenges in providing efficient information and knowledge services to the library clients; the reference librarian competency is one of the contributing factors. IRC have enough information professionals to serve the clients with their man-years experiences in managing oil and gas content and resources.

How it should relocate to cater the comprehensive reference works? Client’s needs are the major pushing factor for IRC to change. Competency is the keyword to change and restructure the professional roles in the organization.

Technology is the elements that had already in place for more than five years. The integrated library systems (ILMS) implemented in year 2007 with total solutions (10 core modules, and 300 sub modules) to cater all the backend process for all units. The functional study on integrated library management systems (ILMS) conducted to analyze the potential modules and sub modules that can support the manual process for efficient operation.

IRC Transformation Plan: the stages

The IRC Transformation Plan 2010-2015, is the five years strategic plan to support university’s aspiration along the journey to achieve and sustain the Research University status in year 2013. Peoples, technology and process are the elements involved in the transformation agenda. The SWOP analysis and management aspiration survey on the needs of excellence services were conducted to determine the actual areas to focus, mission, vision and the objectives.
**STAGE 1**

Resources strategic planning

*Resource Optimization Strategy* is the leading focus in the matured organization like IRC in UTP. 50% from the support staff and executives have 10 man-years experiences in library and information services business, 30% obtaining knowledge and experiences from their peers when they joining library and another 20% are the junior staff from various academic backgrounds. IRC Strategic Plan emphasizing on locating peoples with expertise in the front end for better services, rather than putting them in operational section. In resource optimization strategic plan, all the knowledge they have will be categorized according to the library clients needs. For example, the staffs those have knowledge in managing shelves will taking care on users reference questions on materials location at the reference desk. The professional staffs that have expertise in cataloging and classification; subject specialist and academic who’s who will liaise with academic department as the research consultant. The development of Subject Matter Experts (SME) is the short term result from Stage 1, that anticipates the establishment of Reference Consultation Unit (RCU) by end of FY2010.
ILMS and business operation review is the study on the functionality and potential of existing integrated library management systems to support routine business operation. Elements of technology are “manipulated” to support the people’s roles and functions in doing their works. Result from the functionality study being used in developing solutions for IRC business.

STAGE 2
Business process integration
The integration of modules, peoples and their knowledge are the main focus in Year 2011, using the outcome from previous year which are the human resource optimization and business operation review. The impartial development of transformation components (peoples, process and technology) in year 2010 then incorporated strategically using the **Total Knowledge Management Practice (TKMP).** Digitization of library resources, such as VHS, cassettes, examination questions, thesis and dissertation, newspaper clippings and UTP corporate memory are the part of major transformation agenda. This is what we called as content development which will contribute to the total innovation for new services in year 2012.

The interconnections between three transformation stages are significant by looking to this integration practice.

STAGE 3
Innovation and creation of new services
The development of enterprise knowledge portal (EKP) as the platform for integrated services in IRC as well as UTP will be the product of innovation and transformation in IRC, UTP. The portal is the total knowledge management solutions for the front end knowledge services to all UTP community. The creativity and innovations on traditional library services such as counter transactions, reference works, facilities booking and reservation, information literacy programs, community information services and etc. will be accessible through one stop center.

We believe on the investment of human and knowledge capital into information services will give the benefits to all the users.
Methodology

Total Knowledge Management Practice (TKMP) has been adopted and adapted as the business improvement process (BIP) method, in IRC. The entire business process reengineering looked at the knowledge as the commodity and peoples as the enabler. There are place for collaboration and expertise management to sit and move the process towards the end product. There are few approaches and tools practiced because of their usefulness in supporting three common areas of work where knowledge transferring, capturing and learning are important;

1. Learning through sub project in individual unit, or sub unit, activity cycle and case based work
   Project team members have been assigned for a small project, for them to conduct within the unit in IRC. They will share the result, getting ideas and comments for improvement. For example a group of operators who are doing receiving process, assigned to study the effective ways to speed up the receiving process from 14 days to 10 days. They came out with some solutions, process to cut and suggestion on how to perform the similar process by one operator, instead of three operators at that time. They were encouraged to perform their own testing, simulation and improvise the steps on their own way.

2. Promoting peer collaboration, networking and communities across workgroup boundaries
   Result from the above exercise used to create a networking with other unit. The different process owner will share and collaborating process with each other and again they will give recommendation to their peers. Other units’ members who were not involved in the process are also allowed to give their recommendations and constructive feedbacks, forecasting the impact and also resolving the current problems. For example, the team which performing the copy cataloging, will collaborate and develop the knowledge networking with team who are doing spine
labeling. They will get feedback from Collection Management team which involves in doing shelving for new arrivals items. From the collaboration, they found difficulties to determine the Call No., how to identify the invalid Call No. and etc. For the business improvement process, this technique will encourage the formulation of shortcuts on copy cataloging verification process.

3. Identifying, eliciting, representing and transferring expertise
The experts sharing session are the platform to verbally transfer the skills and knowledge to other people, but the process and operational “know how” which are not able to elicited, are still resides in the expert’s brain as an explicit knowledge. For example, the subject specialist will not able to brief other team on how to identify the appropriate subject for library content, nor to produce guidelines for it. In business improvement process, the subject specialist no longer sit on cataloger’s chair doing usual subject identification business. They will transfer their expertise into reference desk, directly liaise with the end users, answering the reference questions, marking and selecting appropriate daily news for newspaper clippings bank, and the most important roles is to provide consultation on the relevant resources for their study. The Total Knowledge Management Practice (TKMP) applies the techniques of sharing, collaborating, creating and reusing knowledge which are the pillars in knowledge management practice.

Process

1. Awareness creation

The clear views of the entire transformation been articulated among all the team members, through a workshops and brainstorming sessions. The awareness session slot on transformation and changes been conducted during workshops, where all the fears and anxiety, misunderstanding uncertainty were clarified by all the team members. In a pre-implementation stage, the awareness on the how changes should be conducted in the organization are very important, as well as their roles in materializing transformation plan into their action. In this stage, they need to clearly brief on the project details (Gantt chart, expected outcomes, project constraint end etc)
2. Functional and operational study (ILMS vs. Manual process)

Most of the project time spent on the functional and operational study with existing process, formulating solutions for manual process and enhancing features available in ILMS. At the initial project, we found only 28% of features available in ILMS being implemented by the entire unit in IRC. Another 72% are not used, due to the irrelevant business process, uncertainty on the available features, and not properly trained by the vendors during the contractual training period.

DIAGRAM 2: The below tables shows result of functional and operational study on ILMS vs. manual process conducted in IRC.

<table>
<thead>
<tr>
<th>Process</th>
<th>ACQUISITION</th>
<th>CATALOGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of manual process</td>
<td>161</td>
<td>27</td>
</tr>
<tr>
<td>No of process (before integration)</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>No of process after integration</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Process workflow solving</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Manual process retained</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Recommended process/features by MILLENIUM</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>Other applicable potential features to implement</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Third party tools to implement</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

24 DAYS FINDINGS : PROCESS

<table>
<thead>
<tr>
<th></th>
<th>Duration</th>
<th>Date Start</th>
<th>Date Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(24 working days)</td>
<td>22nd July 2010</td>
<td>21st August 2010</td>
</tr>
<tr>
<td>2</td>
<td>Process (Total)</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td></td>
<td>208</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

* Differences between overall manual process with total integration process by features/function in MILLENIUM
The comparison table been developed, with solutions provided as per recommended by the systems consultant. Almost 30% from the current process has been discarded, due to the redundant and duplication of operation with features available in systems, for example the listing and correspondences e.g. Order List, Purchase Order, and Selection List.

3. Modules Integration Exercise

Modules Integration Exercise (MIE) gave the major impact to entire business process from the above practice. It has changed the overall routine for nineteen staff and four executives tremendously in less than six months (three months behind the expected schedule). As a result from the functional and operational study in ILMS vs. manual process, we expected the reduction of 83% process in both Cataloging and Acquisition modules, and 65% cut off manual process from their routine.

**DIAGRAM 3: The below diagram shows the Modules Integration Exercise roll out**

<table>
<thead>
<tr>
<th>24 DAYS FINDINGS : PEOPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>(24 working days)</td>
</tr>
<tr>
<td>2</td>
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<td></td>
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<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

Note: The staff salaries used in the above figure is based on estimated and NOT the actual salary
This exercise started with trial relocation of 9 support staff with 3 executives from procurement department known in IRC as Resource Development Unit (RDU), six of them been transferred to Cataloging Unit, carried with them the function of selecting, ordering and receiving monographs and serials items, while another three are supporting the counter services in full time basis. The 3 executives have been reassigned to the Reference Consultation Unit (RCU) as the Reference Consultants.

The procurement and serials unit was physically “dissolved” but their functions became more significant in a new leadership under the Cataloging Unit. After few months operation, the Cataloging and Procurement Unit changed their name to Resource Development Unit again with consideration of functions and roles that are more obvious on developing multiple types of resources such as periodicals, books, online journals, e-books and multimedia items for the university’s needs.

At the end of the exercise, library users can get current titles on the shelf six times (3 weeks) faster than the previous processing time.

This is area where business improvement process “changed” with the elements of people (competencies), process (product know how) and technology (tools) are contributing to be a pillar in transformation. They are the components which determined the successful of transformation in the organization.

4. Operational Impact Review
Operational Impact Review (OIR) implementing full theory of After Action Review (AAR) technique. AAR is a structured review or de-briefs process for analyzing what happened, why it happened, and how it can be done better, by the participants and those responsible for the project or event. The AAR been conducted in multiple frequency started with weekly, bi monthly and quarterly review session, according to operator’s feedbacks. The OIR is the continuous efforts taken by the Knowledge Management Unit in IRC to improvise a smaller segment from entire transformation plan.
The challenges

“Change efforts often start with just one or two people, and should grow continually to include more and more who believe the changes are necessary”.


Getting people involve in change initiative was the key challenges in IRC Transformation Plan. Talk of change typically begins with some people noticing vulnerability in the organization. The threats of losing ground in certain circumstances sparks them into action then try to communicate that sense of urgency to others. During the transformation stages, we learnt how hard it can be to drive people out of their comfort zone.

1. Their fear and anxiety to change became more and more obvious during the transformation and changes process. The buildings of self confidence to perform their routine works with new methods are the daily practice and be at their workplace to give support and motivation. Looking at all problems occurred in their workplace as the impact of changes, and we should resolve it in a phase basis. We need to continuously give space for dialogue and time for reflection to the entire team member.

2. The loss of confidence and the quick win result are the challenges in conducting changes in the organization. Most of the team members won’t take long way for a change unless they can see the short term impact. We need to proof the organization that the initiatives are fruitful which they can see and celebrate. The example of short term changes that gave us “instant” fruitful feedback is the six month Modules Integration Exercise that recognizes the team efforts with six folds results in materials processing.

3. Sustaining the productivity and maintaining the operator's momentum – We conducted the parallel processing to ensure the productivity level not affected for process progresses.
Conclusions

TKMP is the new methodology that we apply into our library management process flow. Since it was implemented in June 2010, we learnt a few lessons and we believe it will benefited our services in a near future. We currently manage to optimize manpower and technology and reduce non-related manual process up to 45%. We put the value added services to our end users through the implementation of Research Consultation Unit, which conducting the outreach program to our end users in their academic departments. The most valuable lesson that we learnt from the exercise is Knowledge Management are the core element in managing change and transformation agenda in the organization. We absorbing KM Culture and implementing KM Habits in our workplace and it truly benefited us.
References;


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