Knowledge Management Project

Fall I, 2012 Report

This report defines Knowledge Management at the college, outlines the creation of and presents an information protocol, discusses a knowledge management software program called RightAnswers and suggests next steps.

Overview

In July 2012, Library Faculty members Jane Devine, Department Chair, Scott White, Deputy Chair, Steven Ovadia, Web Services Librarian, and Francine Egger-Sider, Coordinator of Technical Services, wrote an initial report detailing the LaGuardia Knowledge Management Project. The goal of the report was to identify broad issues concerning the development and implementation of a taxonomy that would be used across campus to help categorize and organize information. Interviews were conducted with President Mellow, Provost Arcario, Vice Presidents Baston and Saltiel, the Director of Student Information Services, Loretta Capuano, and the Director for Student Engagement, Danielle Insalaco-Egan.

The following issues were identified during interviews:

1. While LaGuardia is a vibrant place, there is a challenge with information sharing.

2. The challenges of information sharing are partially responsible for the lack of a standard language across divisions. As noted in the Annotated Final Alignment Report, May 21 edition:

   …aligning systems of information can improve learning during professional development activities Each division must embrace a common mandate to collect, synthesize, and disseminate information in support of a mission to align training and development.
3. The challenge of information sharing results in students receiving incorrect, outdated and confusing information from a variety of academic and student service functions.

4. Solutions to information sharing challenges include the creation of standardized language to help categorize information across the college for both dissemination and retrieval. A more consistent information sharing process will help with training and development for LaGuardia personnel tasked with providing accurate information to students utilizing a variety of contact methods, including by phone, in person and in virtual environments.

5. Various constituencies have been identified in various interviews as receiving the most benefit from whatever resource is developed to help support information sharing across the college. However, access for students was identified as primary in most interviews, supporting various college goals, including a 24/7 resource that students could access to help in their march towards their degree.

The Library’s initial report was accepted by the College’s Executive Council in August 2012, and the Library team was asked to complete the following during the Fall I semester by President Mellow, in an August 30, 2012 e-mail:

1. Hire metadata librarians - The Executive Council endorsed your proposal to hire 2 twenty-hour adjunct librarians to begin this process. Provost Arcario's office will provide the additional funding needed.

2. Investigate Software - Dr. Saltiel's folks have completed this task, and have identified a productive platform. His office can forward their analysis and suggestion of a platform which is affordable and will integrate well with CUNYfirst.
3. Devise a college-wide information management protocol - This is a process that I would like headed by the library, with input from all other constituencies across the campus. I ask that you establish a team of librarians (and others as you require) to pull together a proposal for an information management protocol for the Executive Council to review by the end of the Fall semester.

4. In order to effectively accomplish all of the above tasks, we ask that you connect this project with two others - namely, the ongoing effort to improve communications to students from Student Affairs and the incorporation of Hobson’s retain. Both Marketing and Communication and Student Affairs are involved in these activities. Therefore, I am going to ask Brad Orcutt to use the expertise of the project management office to coordinate the overall actions of the LaGuardia Knowledge Management Project. Brad will contact Institutional Advancement and Student Affairs and the library to determine who should be a part of the first meeting and responsible for outlining the scale and scope of the project.

**Knowledge Management**

Knowledge Management is a broad concept, and difficult to define. In the initial report concerning the Knowledge Management project, According to the *Gale Encyclopedia of Education* (2002), Knowledge Management:

…basically encompasses the deliberate and systematic handling of knowledge and the precise use of knowledge in organizations (companies, schools, universities, etc.) However, if knowledge management is to be established as a long-term strategy, it must address the following factors simultaneously; individual, organization, and technology. (Mandl & Winkler, 2002, p. 1373)
Ultimately, it is up to the organization to define its own Knowledge Management principles, focusing on organizational objectives that require the consistent sharing of knowledge.

We suggest the following definition of Knowledge Management at the college. The definition is adapted from the A&C Black *Dictionary of Business*:

The task of coordinating the specialist knowledge possessed by employees so that it can be exploited to create benefits and effectiveness for the organization and its constituents. This definition captures ideas that were discussed in our interviews across the college, and outlines the activities required to effectively manage the organization’s intellectual assets. As we are at the initial stages of our Knowledge Management project, we suggest that the definition be simple. As information is added to the database and procedures concerning Knowledge Management are solidified, the definition of Knowledge Management will be re-examined and changed, if necessary.

In the initial report, Lee and Roth’s (2009) discussion of four domains of Knowledge Management in higher education settings were included. These domains were identified as:

*Leadership*. The leadership role is pivotal to implementing Knowledge Management processes in the organization because leaders convey the messages of organizational change necessary to adopt knowledge management protocols, which can be cumbersome and time-consuming.

*Culture*. Refers to the organizational climate or pattern of sharing knowledge across the organization as related to individual members’ duties, behaviors, perception of place in the organization, openness and incentive to sharing information. According to the authors, shaping an adequate culture is the most significant and challenging obstacle to overcome for successful knowledge management in an organization.

*Technology*. Technology plays a significant role in knowledge management systems, making it easier to share and access knowledge, organize information and create new knowledge.

*Measurement*. As with most of our endeavors on campus, and as mandated by accrediting agencies, a continued assessment of knowledge management practices and the impact on organizational performance is important in order to benchmark progress and allocate resources.
The concepts described immediately above are important to the success of the Knowledge Management Project. As we move into actual implementation of the proposed information protocol, it will be important that our organization is capable of making decisions surrounding the management of knowledge, its capture, dissemination and storage.

**Information Protocol**

Attached to this document is a proposed information protocol (Attachment A). The flowchart is designed to capture the flow of information at the college, and introduces the Knowledge Management component. It is important for us to acknowledge that the creation of a Knowledge Management process should not impede the creation of new knowledge at the college, or stifle the entrepreneurialism at the college. We do not want to create a process that is so bureaucratic that it becomes cumbersome to participate and contribute.

All college information emanates from some point, and while all information has worth, all the information created at the college may not be appropriate for inclusion in a Knowledge Management database. In the chart, the Pre-defined Process box represents the creation of new policies, procedures and information items across the College. Information is generated in every department, which can be influenced by many factors. Each division and department has protocols that are followed when new policies and procedures are introduced. These protocols are shared in the Division/Department and help support the decision making process. It will be up to College leadership if local protocols should be described and formalized. It may make sense for the college to formalize decision-making processes at each division level, but allow departments more flexibility creating information protocols.
Sharing information is the first key decision making process in the proposed information protocol. Much of the information generated at the College is ephemeral and does not need to be shared at large. However, identifying what needs to be shared is difficult, as is the actual sharing of information. Some protocols should be established to help personnel decide what needs to be shared outside the Division/Department. Some suggestions:

1. Any information item that affects students should be shared.
2. Any information item that includes other departments, whether personnel or procedure based, should be shared.
3. Any information item tied to a college initiative should be shared.

Once the decision is made to share an information item, there are protocols that are in place to help display and distribute the information item. Whether a document is distributed on the web, e-mailed or printed, each of those distribution methods already have procedures in place to accomplish those tasks. We suggest an automatic inclusion of the Knowledge Management team on existing distribution lists. For example:

1. A web document created and reviewed will be forwarded to the Knowledge Management team by division/departmental web developers.
2. An e-mail sent for distribution by a team from the Student Information Center will be cc’ed to the Knowledge Management team.
3. An electronic version of a print document will be e-mailed to the Knowledge management team. If no electronic version exists, a print version will be sent.
Having the information distributors include the Knowledge Management team on their distribution lists streamlines information delivery. Once submitted to the Knowledge Management team, information items will be:

1. Reviewed by a Metadata Librarian
2. Categorized according to ERIC Subject Headings.
3. Assigned additional metadata capturing the subject of the document/information item.
4. Loaded into the Knowledge Management database.
5. Pushed to college personnel and students who share metadata profiles.
6. Made accessible to those searching the Knowledge Database for the subject or related subjects.
7. Forwarded to Institutional Archives and prepared for archiving.

This part of the protocol is important because this is where the information item is assigned words and subject headings from a taxonomy. An explanation of controlled language was included in the initial report, and is repeated here.

An important element to managing information is assigning a controlled language, or taxonomy. Taxonomies usually consist of hierarchical lists of terms that are assigned to information objects under review. A well constructed taxonomy can have many access points to data contained within, and could allow for flexibility in use of language used across departments and divisions (Dalkir, 2011). An additional challenge faced at LaGuardia is that a large percentage of students are non-native English speakers. Taxonomies can help standardize language and make connections between alternative words to help users access important information.
While several taxonomies would be appropriate, the thesaurus of the Educational Research Information Clearinghouse (ERIC) (http://www.eric.ed.gov/ERICWebPortal/resources/html/thesaurus/about_thesaurus.html) is recommended because its taxonomy is appropriate for use in a higher education institution.

A controlled language, like the ERIC Thesaurus, allows synonymous terms to be united under a single record. Within the world of cataloging, this is referred to as authority control. In order to offer access to the variants of a particular name, an initiative, or a program, an authority record must be established. Through this mechanism, all the various spellings or iterations of an entity a user might use in his/her search will bring up a result. This would usually be whatever has been established as the ‘main entry.’ If this is not done correctly and comprehensively, a search for a program, known to students by a particular acronym, would not bring up any results. However, if that acronym is linked to the main entry, the student will automatically pull up all the entries linked to that main entry.

Once the information item is cataloged in the system, it is now available for use. It is hoped that whatever software package we choose, we will be able to push newly added items to those users who share metadata profiles. This is an important piece of knowledge management, because by sharing information, new ideas are developed, or existing ideas are improved.

Additionally, there will be projects that are initiated at the college that will begin with research activities in order to determine best practices or to capture information about current practices. This activity can be completed by college personnel using the self-service features of the chosen software package. However, there may be a need for librarians on the Knowledge Management team to mediate the search, helping users to identify relevant information using the taxonomy of the database. Initially, the focus will be training users to access information and
query the database. As the database ages, it will be important for searches concerning new initiatives to be comprehensive and exhaustive. This could require more expertise to search effectively. The self-service aspect of searching is important, but we believe that the service of Knowledge Management librarians will also be important and something college personnel will quickly come to rely on.

We have included a feedback loop linking the creation of new knowledge to the initial step in the information protocol.

The Platform

RightAnswers has been suggested as a software package to support the Knowledge Management project. An August 29, 2012 memo from Vice President Saltiel to Teresa Saljanin details why this choice was made. That memo is included in this report (Attachment B). We reviewed the software with representatives from the company Monday, November 19, 2012, and were given access to the software Tuesday, November 27, 2012. While we have not had much time to review the software, we have attended training sessions and worked with different modules.

The tool has a public-facing self-service portal and a more specialized interface called the agent portal. Access to content can be controlled by user group, but LaGuardia will probably want to use the self-service portal for students, as well as faculty and staff looking for quick answers, without requiring any kind of authentication.

The agent portal will probably be used for more in-depth work by faculty and staff, connecting them to more detailed information and more internal documents. This access, which will require authentication, probably will not need to be segmented by user type. Instead, everyone will have access to the same content via the agent portal.
RightAnswers has robust subject management capabilities for organizing content, although the search relies more on keywords than the subjects. That will allow us to better accommodate different searching techniques (subject browsing vs. keyword searching). The tool also allows users to create synonyms, which will be important for our “see also” and recommended suggestions to users as they search.

RightAnswers recommends content based upon what the user is viewing and the keyword searches used. This is helpful, but much will depend upon the quality of the recommendations. Related content can also be manually linked within RightAnswers. This manual linking would be handled by Knowledge Management Librarians.

When considering Knowledge Management, there are two methods for sharing information from the knowledge base: user-initiated searching and pushed content. In the user-initiated scenario, a user searches the knowledge base for information on a topic. In LaGuardia’s case, this would probably be the LaGuardia web site, or a special area of the site. Representatives from the company indicated that search boxes can be placed on individual web pages, helping users to find specific information from the Knowledge Base. We could clearly mark these search boxes with language such as “Search for more information about “whatever subject” and students would be taken in to a specific part of the Knowledge Base. This could be helpful because students would be searching in the database that contains our taxonomy, helping to expose them to that language as they search and become more familiar with topics.

In the push model, information is pushed to a user based on their need for the information. The need is established by the user’s profile. So users with an advising profile might need to have all Knowledge Base content related to advising pushed to them as the information enters the system. The push could come in one of two ways: either via email or with
the information displayed in a customized portal or intranet. The challenge of the portal/intranet is that users must regularly access those areas to see the customized content. If users do not access those areas, they will not receive the information. This can be especially challenging in terms of reaching students. In the pushed portal/intranet model, the College must determine a method to be sure students are logging in to see pushed content. Students might be more receptive to content pushed to their email and/or mobile devices, where they wouldn’t need to go anywhere to see the content.

RightAnswers does not have the ability to push content out to users via email, and this is a shortcoming in the software. Users can opt to subscribe to certain questions using email, but there is no way to push out content by topic to users via email. However, users can subscribe to forums and be notified when content is published in the forum. RightAnswers said they might be able to let us manually add email subscriptions to forums, but to push content out, the forums would need to be updated in addition to the knowledge base content, making for a two-step process when entering information in the database. The RightAnswers people mentioned that their tool can interact with help desk software. That might be a way to get content out of RightAnswers and pushed to users who need the information, although it is a workaround we will need to solve locally.

Having gone through the brief training overview, RightAnswers can certainly organize LaGuardia’s information. The challenge will be developing a way to push content out to users via email or text message. Another option might be developing a portal that pushes messages out via the RightAnswers announcement area. For instance, faculty logging into Web Attendance might first be directed to the RightAnswers announcement area if an item of information was entered into the Knowledge database concerning attendance. IT would need to work with
RightAnswers to see if this is feasible. The College would also need to establish a method to reach staff and students via text message/email, or to create a portal those populations would need to regularly visit.

RightAnswers was chosen because it is currently licensed by CUNY and is already integrated into CUNYfirst. However, we would most likely have to authenticate users by querying a system outside of RightAnswers and CUNYfirst. This means that we are adding another sign-on to people’s day-to-day work at the college. Some groups, such as advisors, might normally access information from RightAnswers if they deem it reliable and up-to-date. However, other users at the college might not rely on or use RightAnswers. This is why push technology capability in the software is important.

With these challenges in mind, the College might consider exploring customer relationship management (CRM) software, most commonly used by sales teams to send targeted messages to potential sales leads. The College might consider using CRM software as a way to communicate with students. Many CRM tools also have a service platform, which is a knowledge base/help desk area. While these tools are not designed for educational institutions, they represent an interesting way to consider reaching students, faculty, and staff.

SalesForce.com is a popular, web-based CRM which includes a service desk component. Oracle also offers some CRM products. Their marketing product, Oracle CRM On Demand Marketing could be an interesting communication tool to explore:

The private sector has become adept at using targeted messaging to reach the right customers at the right moment. While LaGuardia is not trying to sell anything, the College is trying to reach the right populations with the right message at the right moment, making these CRM tools worth exploring as part of the Knowledge Management project.

While the team believes that we can get RightAnswers to work and support the Knowledge Management project, we suggest that a thorough review of other Knowledge Management and CRM software packages be scheduled and completed during the Fall II semester. This is detailed in our recommendations

**Recommendations/Action items**

1. An immediate review of the proposed information protocol should be scheduled. The review team should be made up of representatives from each division, chosen by the Provost and Vice Presidents. This team should also be responsible for addressing President Mellow’s charge as detailed in item #4 connecting the Knowledge Management project to “the ongoing effort to improve communications to students from Student Affairs and the incorporation of Hobson’s retain (see page 3). Both Marketing and Communication and Student Affairs are involved in these activities.” Current members of the team are:

   a. Brad Orcutt, Information Technology

   b. Scott White, Library

   c. Steven Ovadia, Library

   d. Ann Matsuuchi, Library.

   e. Tarik Tidwell, Student Affairs (due to work with Hobson’s Connect/Retain)
2. A simultaneous review of other Knowledge Management software packages should also take place. This is a system that will be relied on more and more heavily as it becomes populated. It’s important we are using a robust platform that can grow and be easily updated and edited. A software package we choose should contain the following:

   a. A self-service web based component, supported by a more fully-featured faculty staff interface with more functionality in terms of access, search, and distribution.

   b. The ability to automatically push new information items to constituents based on profiles.

   c. The ability to provide “see-also” or alternative vocabulary based on public search queries.

   d. A robust reporting structure that allows the Knowledge Management team to view content that is used, see reports of self-service queries, retrieval and other analytics to help maintain the system, making easier to update and keep relevant.

3. RightAnswers needs to be upgraded if we choose it as our software package. A review of the company’s proposal should be scheduled.

4. A job description for a part-time metadata librarian is near completion and recruitment for this position will occur in the Fall II semester. This step was delayed as we assessed what type of software/cataloging skills we needed in this position. Initially we will search for one librarian, and as the project gets underway, we will add the second. However, this is a massive project, and will need more support. The Library is currently reviewing personnel, space and other operational needs and will share its recommendations with President Mellow in January, 2013.
References

Retrieved from ebrary database.


Proposed Information Protocol

Much of the information created at the college is ephemeral. It is important for information creators/decision makers to evaluate information and decide where it needs to be shared.

Predefined Process

New policies and procedures undergo a pre-defined approval process, usually dictated by the originating department. These processes should be described and finalized.

College Information

Protocols for policy and procedure creation to be followed.

Preparation

Documents will need to be prepared for distribution. Decisions about medium (web display, electronic communication, print, etc.) will affect how documents are collected/submitted and archived.

Share at higher level

No

Yes

Shared in department

Web Documents

Electronic communications

Printed Documents

Submitted to Knowledge Management team

Document reviewed by Metadata Librarian

Category as per ERIC subject headings

Assigned Metadata

Entered into knowledge management database

Information Pushed via metadata driven profiles.

Database will have to be configured for this

College Personnel and students can initiate their own search, or work with a librarian to retrieve item.

Document archived

Need for Information about college

College personnel

Self-search of database, Various applications.

Librarian Assisted search

Web Based Document Retrieved, along with related documents

Optional: New document based upon existing documents.
To: Henry Saltiel  
From: Teresa Saljanin  
Date: August 29th, 2012  
Subject: LaGuardia Knowledge Management Project – Platform Suggestions

As per your request, and as part of the “LaGuardia Knowledge Management Project,” the web services team evaluated several knowledge management systems. The goals for a comprehensive knowledge management solution include:

- Create a taxonomy based platform to address the lack of a standard language across divisions.
- Organize knowledge and processes to increase shared knowledge and support continuous improvement of college operations.
- Make existing off-the-shelf knowledgebase content more usable and aligned with the college’s technology.
- Establish environment for distributed administrative support functions for maintaining knowledgebase across the divisions.
- Empower faculty/staff and students to acquire information and solutions on their own at their convenience (24x7).
- Help students navigate the college’s divisional areas and solve most common technology related problems on demand.
- Provide standard online Help platform for enterprise applications used at the college.

**Evaluation**

We evaluated 3 systems and based on our research and an assessment of our current needs, the Web Services team recommends using Right Answers. Right Answers was selected as the preferred vendor because of their excellent reputation. It is the most powerful, open, and flexible of all the solutions reviewed. Below is a list of products reviewed and how we came to this conclusion.

**Knowledge Management Product List**

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<th>Company</th>
<th>Product</th>
<th>URL</th>
<th>Notes</th>
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<td>Hobsons</td>
<td>Answers</td>
<td><a href="http://www.hobsons.com/asiapacific/emt/emtanswer/">http://www.hobsons.com/asiapacific/emt/emtanswer/</a></td>
<td>Solutions for Education</td>
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**RightAnswers Portal:** Right Answers has been in the knowledge management business for over 10 years. Whether delivered on-premise or via the cloud, the RA platform provides technology to build, access and manage knowledge with openness and the interoperability of bi-directional ties to most ticketing and CRM systems. Some features include:

- A consolidated view of the support channels with a real-time view of user self-service activity
- Enables real-time solution feedback from service agents by providing a direct link to the authoring environment
- Allows you to post and manage real-time FAQs and Announcements targeting service agents
- Supports subscription to content areas and features such as My Favorites, My Top Solutions and My Recent Searches
- Provides analytics to optimize support center effectiveness and productivity

Several colleges are using Right Answers as their knowledge management tool. Most have private and public facing environments. Here are some examples:

- https://www.askit.ttu.edu/portal/public/
- https://answers.ssc.usg.edu/portal/ss/index.jsp
- https://faq.utttyler.edu/portal/ss/
- https://wiki.utttyler.edu/display/UT/UT+TYLER+WIKI

Right Answers is CUNY Central’s knowledge management solution for CUNYfirst. Knowledge management requires tight integration of software, content and services to ensure success. Acquiring the Right Answers platform can provide LaGuardia with an integrated College / Central holistic solution - thereby eliminating the need to recreate content. Piggybacking off Central’s license agreement and linking our home grown content to the CUNYfirst knowledge platform is an avenue we need to financially and technically explore.

**Hobsons Answers** – Hobsons demonstrated a very clear understanding of higher education’s needs in general, which is to be expected because their primary target market is higher education. Their product offers good ease of use, but lacks programmability to support other college areas, such as: Continuing Education, Academic and Administrative areas. It is tightly coupled to students through Connect and will require purchasing an additional licensing agreement to be used in Retain for continuing students.

**Ektron CMS400.net Wiki Directory** - Ektron’s CMS400.net has a Wiki feature that is designed for communication, collaboration and sharing information. Users can share information through an online encyclopedia, a site for frequently asked questions, a knowledge base or a simple message board where visitors contribute to articles and content. We tested this feature and ranked it below average.