Innovative use of information technologies to enhance KM practices at the Marist International University College (MIUC)

By

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Outline

- Introduction and background
- Study focus
- Research questions
- Methodology
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- Conclusion and recommendation

Introduction and background

Previous full Master's dissertation "Developing a knowledge management strategy for the Marist International University College, Nairobi-Kenya" - http://hdl.handle.net/10500/18310

The study revealed a variety of informal knowledge management structures and resources but critical to the current study was the discovery of lack of sufficient information technologies to enhance KM practices entwined in teaching, learning and research.

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http://hdl.handle.net/2263/62101

Study focus

- According to Gold, Malhotra and Segars (2001:188), "collaboration and distributed learning technologies allow individuals within the organisation to collaborate. Knowledge discovery technologies allow the firm to find new knowledge that is either internal or external to the firm. Knowledge mapping technologies allow the firm to effectively track sources of knowledge, creating a catalog of internal organisational knowledge. Knowledge application technologies enable a firm to use its existing knowledge".

Source: *Gold, A.H., Malhotra, A. and Segars, A.H. 2001. Knowledge management: an organizational capabilities perspective. Journal of Management Information Systems, 18(1).*

…study focus

- Particularly, this research paper focuses on presenting the findings of the technologies that were established to support collaborative and distributive learning at the MIUC.

Characteristics of collaborative and distributive learning

- Allows students and instructors to participate in learning activities anytime and anywhere with emphasis on interactions and cooperation.
- Collaborative learning (CL) puts more emphasis on providing a shared workplace for students to interact and learn through cooperation.
- Involves the provision of an appropriate environment to allow discovery, creation, innovation and problem-solving through social interactions.
- Distributed learning (DL) provides an environment where resources can be shared and dispersed to learners to enable participation in learning.

Sources: Long, *et al*. (2012:606); Economides (2008:244); Li *et al. (2008:2);* Crawford (2001:68-69)

Research questions

- What KM practices are at the MIUC in relation to collaborative and distributive learning?
- Which information technologies can enhance collaborative and distributive learning?
- What are the technological needs of the MIUC academic staff with regard to collaborative and distributive learning?
- How can information technologies be used innovatively to support the KM practices at the MIUC?

Methodology

- **Qualitative research design** was selected to understand KM practices at the MIUC and, respondents' technological needs (Leedy & Ormrod, 2014:141; Gorman & Clayton, 2005:47;Tewksbury, 2009:50).
- A **case study** approach was adopted to in order to have an in-depth investigation of a distinct entity (Gorman & Clayton, 2005:47), in this case, the MIUC.
- Nine members of the MIUC management and 33 full-time academic staff were **purposively** selected, as the study was based on a previous study (Anduvare, 2015) that applied the same target audience and, the need to derive rich and useful information based on active participation in KM practices (Patton, 2015).

…methodology

- **Primary data** was collected using Google forms (**online survey**) which aided the creation of open-ended questions that sought to determine KM practices and technological needs to support the practices.
- **Secondary data** was sought from literature to establish ITs relevant for collaborative and distributive learning.
- **Content analysis** was used to identify patterns and themes (Leedy & Ormrod, 2013; Neuman, 2011:361).

Findings

Research question 1: *What KM practices are at the MIUC in relation to collaborative and distributive learning?*

- The findings indicated that the following KM practices were in existence at the MIUC:
  - Training and knowledge sharing through academic workshops.
  - Knowledge creation through research and contribution of ideas.
  - Knowledge transfer of tacit knowledge among employees through consultations and collaborations.
  - Knowledge sharing through teaching and learning activities.

…findings

Research question 2: *Which information technologies can enhance collaborative and distributive learning at the MIUC?*

- A literature review established the following technologies that enhance collaborative and distributive learning
  - Multimedia Technologies: Podcasts; clickers; Game-based learning.
  - Social media technologies: Wikis; blogs and microblogs; social bookmarking tools.
  - Media sharing tools: Flickr; Instagram; Pics4learning; Openclipart; Wikimedia Commons.
  - Brainstorming tools: Wikis; Google Docs

Sources: Mallon and Bernsten (2015); Zheng, Niiya and Warschauer (2015); Lau, Yen, Li and Wah (2014); Popescu (2014); Msonde (2013); Blasco-Arcas *et al*., 2012); Li *et al*. (2008).

Research question 3: *What are the technological needs of the MIUC academic staff with regard to collaborative and distributive learning?*

Technologies in support of workshops at the MIUC:

- Limited adoption of technology to facilitate collaborations during workshops at the MIUC with the majority of the respondents highlighting PowerPoint presentations as the key technology that has been adopted.
- Wi-Fi, emails and social media technologies were also mentioned to have facilitated workshop content sharing at the MIUC but their adoption is very limited.

List of ITs that have facilitated knowledge creation and/or contributions of ideas

Technology	Respondent	Explanation on usage
Powerpoint	R1	- Teaching
Email list	R3	- Supports collaborations to a small extent.
Handheld calculators	R4	- Facilitates integration of teaching to enhance student understanding of concepts.
E-books and E-journals E-Resources	R5 R7	- No explanation provided. - Used to upgrade teaching materials.
Internet	R6	- Supports research and explorations, and, sharing of knowledge via modern technologies.
LCD projectors and laptops Computers	R8 R9	- Delivery and research work - Research.

…what are the technological needs of the MIUC academic staff with regard to collaborative and distributive learning?

Knowledge sharing technologies

Technologies	Respondent	Application
E-mail	R1, R5, R7 & R8	- No explanations provided.
Moodle (e-learning platforms)	R3 R4	- No explanation. - Interacting with students.
Smart board	R4	- Teaching and creating notes.
Facebook	R5	- No explanation.
Wi-fi	R5	- No explanation.
E-journals	R5	- No explanation.
Mobile phones	R9	- Facilitates constant communication and knowledge sharing

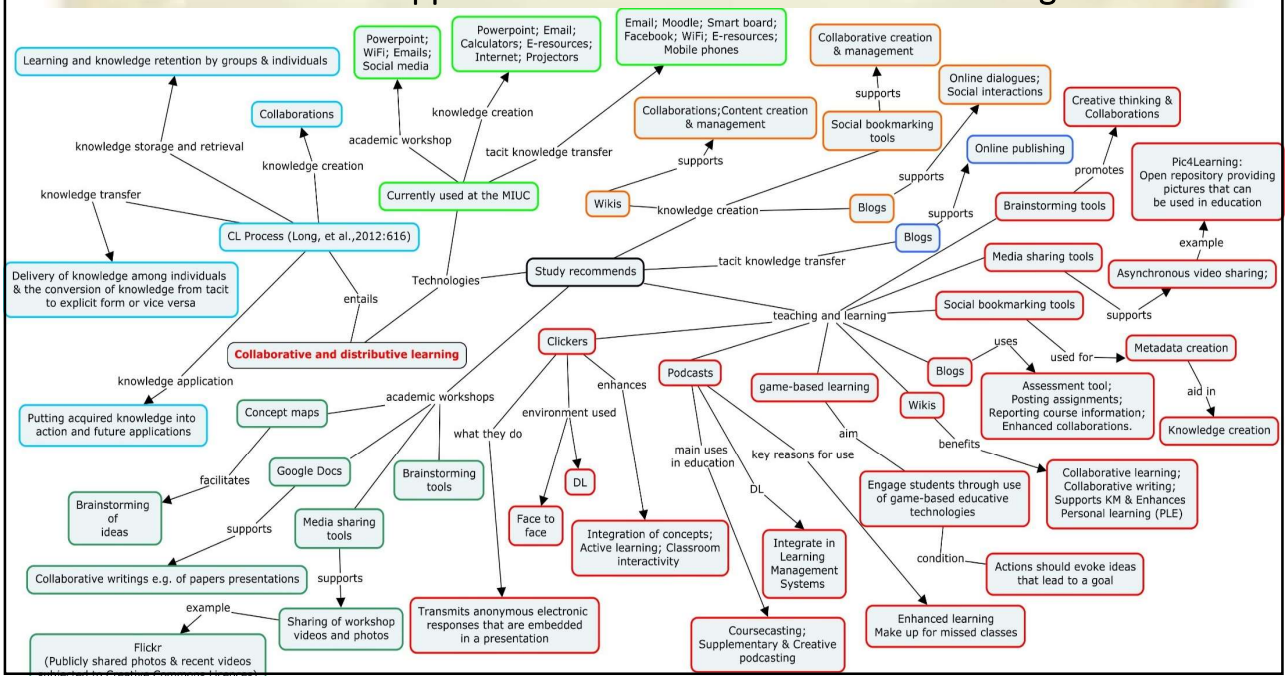
Teaching, learning and research using ITs

Activities using IT	Respondent	Application area
Discussion chats	R1	Teaching & learning
Downloading useful materials and uploading notes	R1, R7	Teaching & learning
Access to e-resources	R1, R4, R5	Teaching, learning & research
Access to academic sites	R2	Research
Online surveys	R3	Research
Academic writing	R6	Research
Research activities	R8	Research
Data analysis	R9	Research

Conclusion and recommendations

- The study established limited adoption of current and emerging technologies at the MIUC to enhance CL and DL.
- The study also established that the majority of the technologies presented from literature are freely available for use and, thus, the MIUC needs to make effort to adopt some or all of the technologies to facilitate teaching, learning and research activities.
- The proposals given in this study in terms of the technologies are not fixed but serve as a guideline to enthuse innovative thinking in terms of IT adoption in the academic setting.

Recommendation: ITs to support collaborative and distributive learning at the MIUC?



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