



Blending with Purpose

Follow Up of the

Workshop On Blended Learning

April 2008

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Special Edition of JALN:

Theme: Blending with Purpose

Anthony G. Picciano

Blending with Purpose: The Multimodal Model

Mary Niemiec and George Otte

An Administrator's Guide to the Whys and Hows of Blended Learning

David Larson and Chung-Hsien Sung

Comparing Student Performance: Online versus Blended versus Face-to-Face

Bob Fulkerth

A Case Study from Golden Gate University: Using Course Objectives to Facilitate Blended Learning in Shortened Courses

Kathryn Lowell and Karen Vignare

MSU Medical Colleges Blended Learning for First Year Science Courses: Uniting Pedagogy to Maximize Experience and Real World Limitations

Patsy Moskal

Dancing with a Bear: One University's Experience with Evaluating Blended Learning

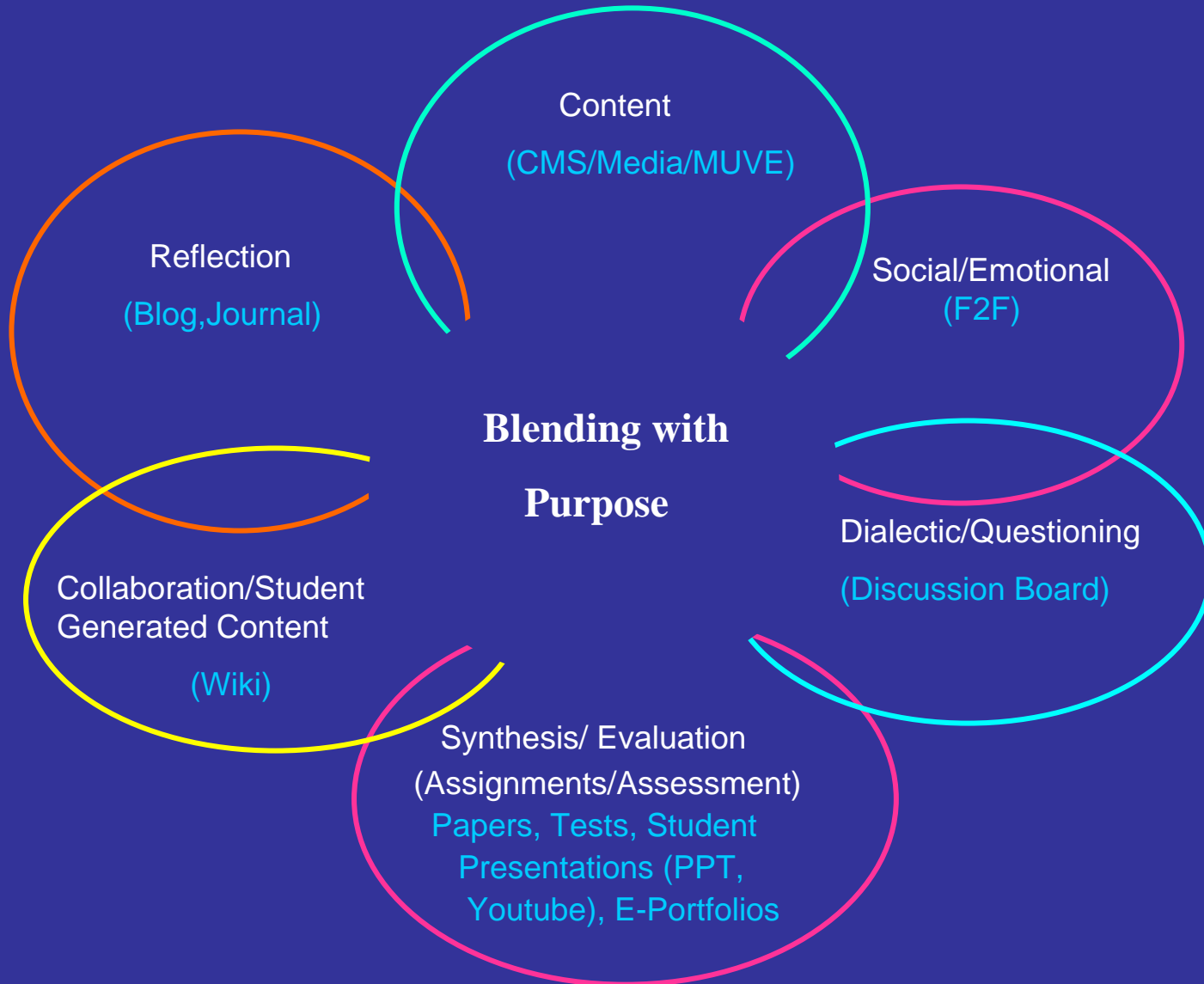
Mark Laumakis, Charles Graham, and Chuck Dziuban

The Sloan-C Pillars and Boundary Objects as a Framework for Evaluating Blended Learning

Blending with Purpose: The Multimodal Model

Anthony G. Picciano – Graduate Center City University of New York

Version available at : <http://www.youtube.com/watch?v=jAj5uBKyqv8>



Engaging our Students



Learning Styles/Teaching Styles/Discipline Styles

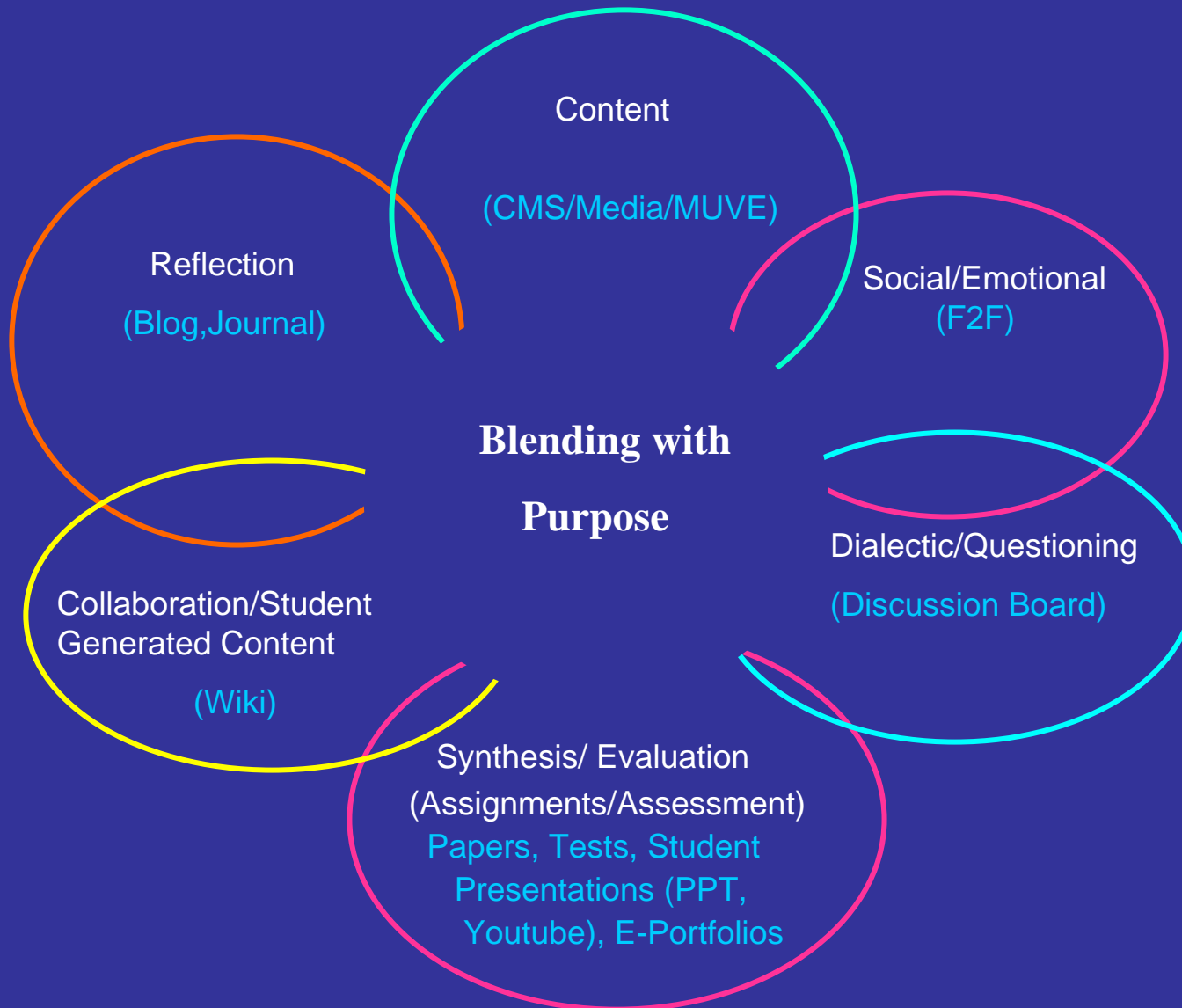
- .We Learn Differently
 - Brain Function (Left-Right)
 - Environmental Influences
- .We Teach Differently
- .Content/Subject Matter is Different



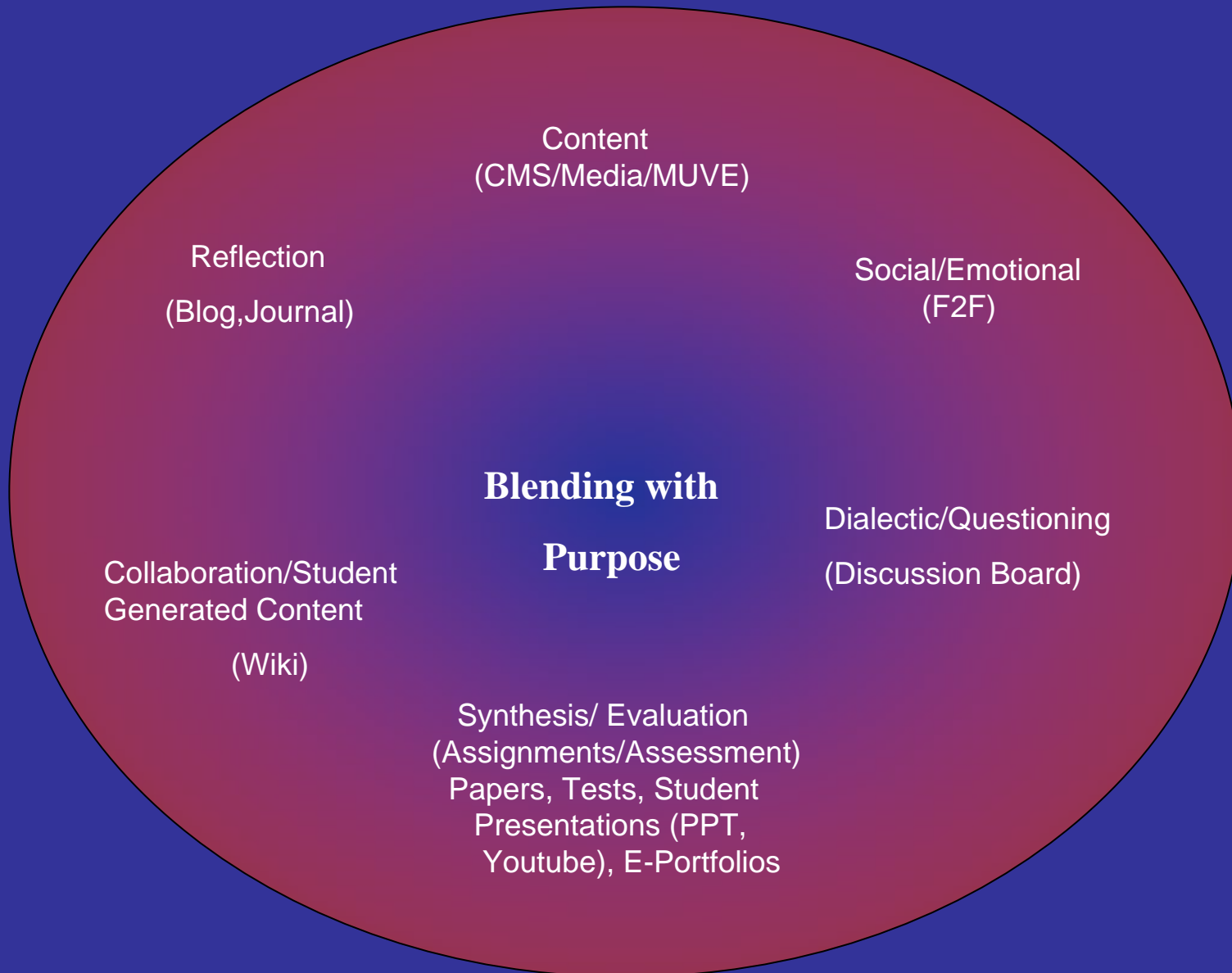
Organize instruction using multiple modalities that allow learners to engage in learning in a way they prefer/have interest/have ability in while also challenging them to learn in other ways where they have less preference, interest or ability.

Blending with Purpose – The Multimodal Model

Pedagogical Objectives/Activities -> Technology



Blending with Purpose – The Multimodal Model



An Administrator's Guide to the Whys & Hows of Blended Learning (Reaping the Institutional Benefits of BL)

Mary Niemiec - University of Illinois at Chicago
George Otte - The City University of New York



Blended Learning:
The Sleeping Giant

Some Whys

- Economic Motivations
 - Reaping what is already sown
 - Justifying new investment
- Less quantifiable reasons
 - Getting up-to-speed technologically
 - Giving impetus, visibility to faculty development

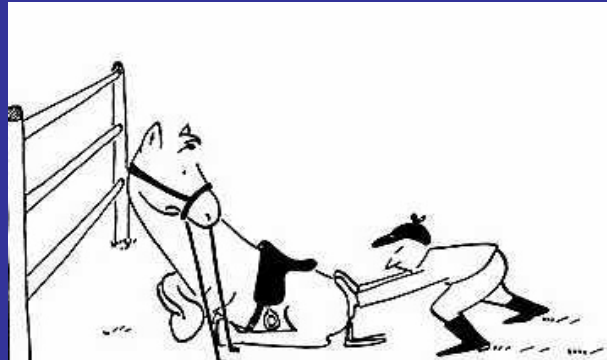
Do the research:
Figure out where you and
your students are at



The Challenges Of Blended Learning

- Developing a Plan
 - Achieving Clarity on Institutional Mission and Goals
 - Foreseeing Barriers
 - Identifying Strengths and Weaknesses
- Thinking through Implementation
 - Ensuring Adequate Resources
 - Clarifying Policies and Principles
 - Providing Effective Information
 - Having an Effective Assessment Plan in Place

Overcoming Resistance:
It's easier if you look for the
hurdles and plan for them



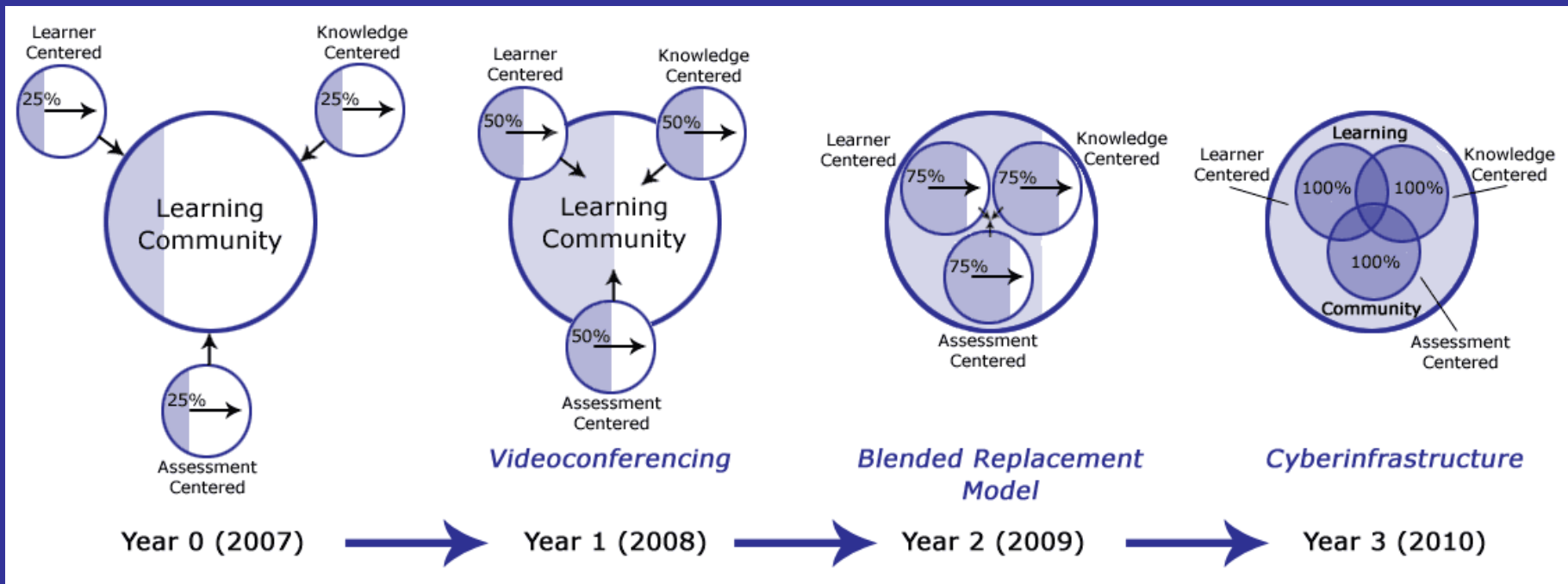
*MSU Medical Colleges Blended Learning for First Year Science Courses:
Uniting Pedagogy to Maximize Experience and Real World Limitations*

Kathryn Lowell - Michigan State University

Karen Vignare - Michigan State University

Basis of MSU COM Model

- The *Community of Inquiry* model by Garrison, Anderson and Archer (2000) and the *How People Learn* model by Bransford, Cocking and Brown (2000) propose that all the separate parts become integrated. The integrated model is representative of the CyberInfrastructure model proposed by the NSF.



Blended Learning Strategies for First Year Medical Student Basic Science

K.L. Lovell, R.B. Stephenson, F.A. Kennedy, C.A. Wilkins, C.G. Arvidson, A.Y. Yang, D.L. Kreulen, P. Lovell

Michigan State University, East Lansing, MI 48824 U.S.A.

INTRODUCTION

At Michigan State University, the allopathic (College of Human Medicine; CHM; MD degree) and osteopathic (College of Osteopathic Medicine; COM; DO degree) medical schools teach the first year basic science courses jointly, with 356 students currently enrolled. The colleges are expanding.

- COM: increased from 125 to 200 students per year; will accept 100 more students and create two new campuses in southeast Michigan (fall 2009)
- CHM: 50 additional Year 1 students in fall 2007; those 50 will attend Year 2 classes at a new Grand Rapids campus in fall 2008. In fall 2010 there will be 100 students in East Lansing & 100 students in Grand Rapids at sister campuses

With the expansions, each Year 1 basic science course will be delivering content to 500 students at four sites. A process has been initiated to plan for curricular delivery and consideration of online materials in selected courses, in addition to plans for videoconferencing of classroom lectures.

As part of this process, faculty discussed general principles of online learning, blended learning, and the NSF CyberInfrastructure Model (more information at right). Principles defined to guide consideration of learning options for multiple locations included the preservation and enhancement of:

- course and content quality
- student learning options to accommodate lifestyles and learning styles
- student learning efficiency and effectiveness

Student surveys and focus groups were conducted to determine which strategies are important for students, and assess effectiveness from the student point of view.

METHODS

A coordinated effort began in spring 2007 with involvement of multiple campus units, including administrators in both medical schools, MSU Global, Virtual University Design and Technology, Blended Curricular Learning Resources (CHM), Health Information Technology, MSU Libraries, and teaching faculty. Regular planning sessions were held (usually twice per month). Besides lecture delivery, strategies were discussed for development of interactive digital materials that can be shared. These would include multimedia objects for use without copyright fees (e.g. from Health Education Assets Library). Requirements for faculty support and features needed in a local searchable repository of re-usable learning objects were discussed.

To determine student preferences and perceptions, input was obtained from Year 1 students about the most effective use of online options. An online survey was sent to students at the beginning of the second year, asking for input related to the first year of medical school. Following compilation of results from the online survey, two focus group interviews were conducted. In each college, the Year 2 student curriculum liaison recruited other students. Questions were posed to obtain more in-depth information about lecture interactivity and presentation options, difficult concepts, communication methods, and approaches to online learning resources.

Development of online modules & faculty feedback

Development of online interactive educational materials has been planned and/or implemented for disciplines of biochemistry, physiology, histology, bacteriology, immunology, and neuroscience, with attention given to effective modalities for specific course objectives, focusing initially on difficult concepts. Faculty agreed it was important to make decisions on design and priorities according to pedagogical principles. (Some of the development was initiated prior to the Basic Science Distance Learning Initiative.)

Biochemistry

- Innovation: Replaced 3 lectures with online modules (see examples at right) and 2-hour interactive case conference with clickers
- Feedback: Faculty thought new methodology achieved all goals

Cell Biology & Physiology

- Innovation: Pre-lab online quizzes (for histology, with Virtual Microscopy)
- Feedback: Faculty thought lab sessions were more productive and efficient and students were better prepared

Neuroscience

- Innovation: Pre-recorded lectures (using Camtasia Studio) for selected topics with self-assessment; case presentations in classroom to reinforce concepts in recorded lectures
- Feedback: Faculty thought content delivery was effective and cases were valuable.

Microbiology and Immunology

- Innovation: Virtual Interactive Bacteriology Laboratory (VIBL) simulated activities in lab and demonstrated methodology for performing clinical lab tests for identification of organisms (see examples at right)
- Feedback: Faculty thought the simulations(pilot versions) were effective, but should not replace live lab sessions. Students agreed.

- Innovation: Animations to illustrate immunology concepts (in progress)

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Online survey results from students

Selected survey results from students after completing Year 1 are listed below. Out of 356 students, there were 159 responses (45% response rate).

For the lecture material, which learning materials do you use most often? (select all that apply) coursepack (92%)

- attending lecture (60%)
- lecture recordings (audio & screen) posted online (45%)
- scribe notes (43%)
- reviewing powerpoint slides posted online (16%)
- textbook (11%)

What parts of classroom lectures do you find most helpful? (select all that apply)

- live presentation by faculty (64%)
- live or video patient presentations (35%)
- note taking (34%)
- case studies (33%)
- filling in blanks in the coursepack (31%)
- questions from instructors to students (18%)
- small group activities (9%)
- hearing other people's questions (3%)
- opportunity to ask my own questions (3%)

Of the online resources that you've used in your courses, which do you find most helpful? (select all that apply)

- lecture recordings – audio/screen video (90%)
- practice exam questions and past exams (84%)
- Other options were less than 14%----

Of the following online resources, which would you use if available?

- practice exam questions and past exams (87%)
- lecture recordings – audio/screen video (84%)
- online activities to practice with content and improve recall (41%)
- online case studies (34%)
- web-based tutorials on specific topics (28%)

Focus group results from students

The following items/comments with consensus are related to planning for effective transition to content delivery at multiple campuses.

Lectures:

- Presentation ideas to make lectures more effective: clickers used effectively; animations

Communication methods:

- Email is effective for asking questions, but communication with a faculty member is the last resort after trying to figure it out with peers.
- No students wanted to use a scheduled chat room for communication with faculty; chat rooms are inefficient and confusing – too long to get the response to your question.

- No students wanted to use a **d**iscussion thread/forum.

Case studies:

- Would like to see clinically oriented case studies; put together things that the students have already learned, rather than having to search for new information; time for the case study needs to be allotted and needs to be worth points.

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CONCLUSIONS

Challenges of transition to blended learning model

- Faculty time and technology skills
- Understanding of types of online resources most likely to enhance curriculum and individual student learning with or without expansion
- Institutional resources for technology support
- Copyright restrictions
- Systematic plans for implementation, technical maintenance, updating content materials

Benefits of blended learning model

- Enhanced learning by all students in varied environments & from varied backgrounds
- More effective, efficient use of faculty time

Outcomes of process:

- Faculty became more involved in discussions of best practices, sharing ideas, developing intentional strategies for enhancing pedagogy, and working with instructional designers.
- Faculty agreed that a searchable multimedia repository of images, re-usable learning objects (animations, online modules, etc.), and lecture recordings would be very valuable in curriculum delivery with online resources.

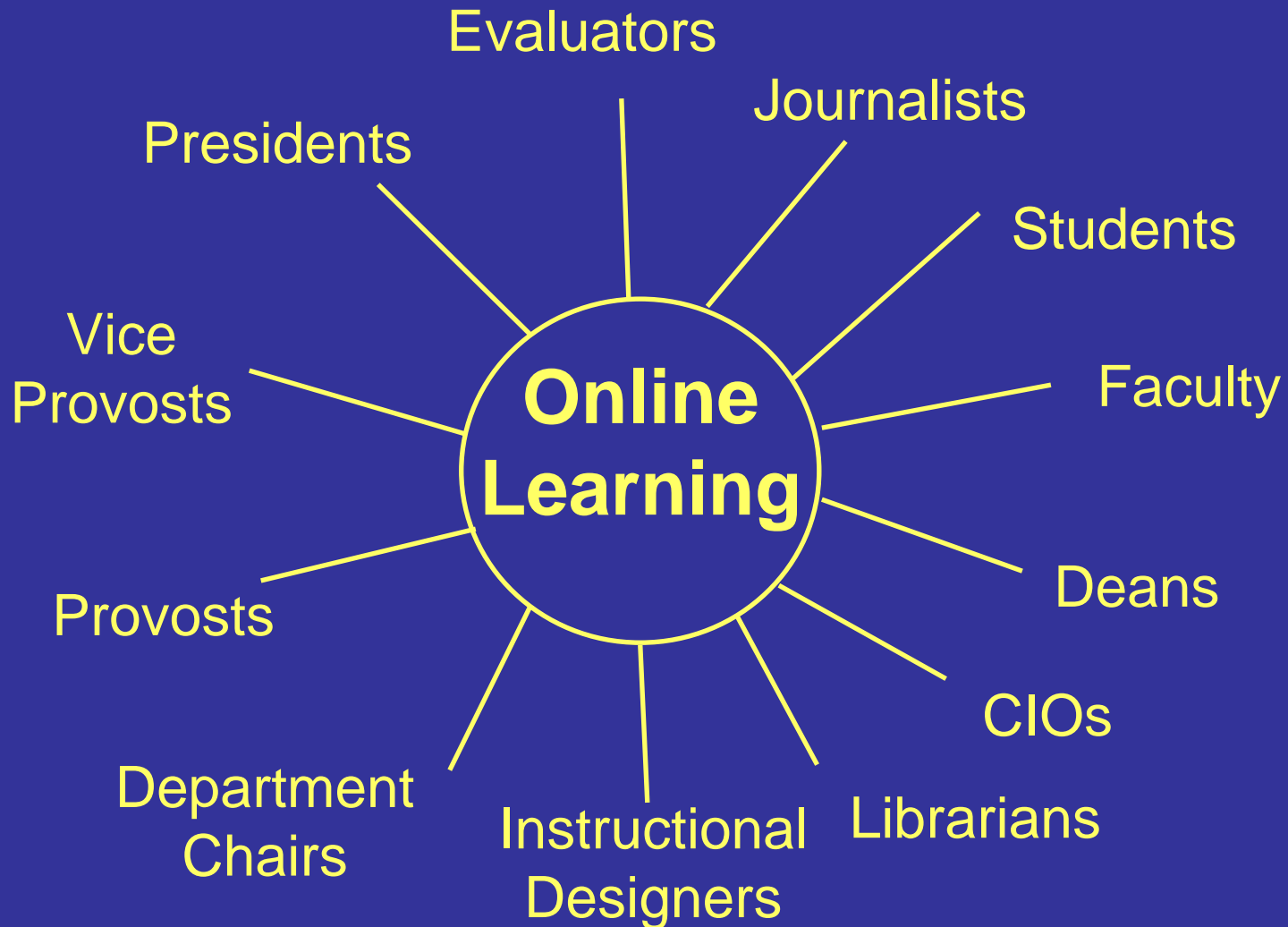
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Blended Learning as a Boundary Object



Taleb: The Black Swan

Monumental
Impact

Retrospective
Prediction

Unpredicted

9/11

Google

Back Filled
Narrative

Harry Potter

Undetectable
Outliers

Y2K



The Broad Street pump



A comparison of excellent ratings by course modality—2003 and 2009

Course Modality	2003		2009	
	Overall % Excellent	Rank	Overall % Excellent	Rank
Blended	40.6	4	48.9	1
Online	55.4	1	47.6	2
Enhanced	44.0	2	46.8	3
F2F	42.0	3	45.7	4
ITV	20.9	5	34.2	5
	N=709,285		N=1,145,868	

Questions?

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