

MOBTS 2018 at Coastal Carolina University
June 14th – 17th, 2017

Submission is for an “Activity/Exercise Format”

Title, Abstract & Keywords

Title: *Using Visual Mapping to Communicate How Learning Objectives Link to Student Tasks.*

Abstract: This workshop will highlight a process for communicating learning objectives, content, themes and processes through using knowledge visualization and visual perceptual learning. Participants will be asked to visually map out the learning outcomes, objectives, and tasks students must perform in a one-page visual. The participant-created visual can then be used to communicate learning objectives to students as well as discuss the connections that students should be making. Using visuals to communicate key learning concepts helps students see the main purposes of the class and assists professors by having visual references to reinforce why tasks need to be completed.

Keywords: knowledge visualization; visual mapping; learning outcome and objectives

Introduction

Provide a brief introduction that establishes a need for this type of exercise and identifies the target usage. Include potential course applications and explain for whom the exercise is designed: early undergraduate, late undergraduate, graduate, etc.; traditional, non-traditional, cross-cultural, etc.)..

Experiential learning (EL) is “the process through which knowledge is created through the transformation of experience (Kolb, 1984, p. 41).” This approach to teaching includes a range of community-engagement, service learning, simulations, model building, study abroad, and student research (GMCTE, 2015). The increasing expectation on business schools to ensure that students have appropriate skills for the job market has resulted in a call for more experiential/practical learning (David, David, & David, 2011). Many have advocated for experiential learning being a core component in all business school curriculums especially community engaged learning where students work with the surrounding community as part of their learning process (McCarthy & McCarthy, 2006). These courses are often more demanding requiring a higher workload from students combined with high ambiguity in terms of outcomes (Lenton et al., 2014). Communicating the learning objectives for such courses can be challenging especially since students often struggle to see how tasks lead to learning objectives (Eyler & Giles, 1999).

Given that experiential courses are complex, demanding, and often accompanied with intangible outcomes, it is helpful if instructors articulate why students are being asked to engage in tasks at the start and throughout the course. The purpose of this workshop will be to provide educators with a visual tool for explaining how activities link to learning outcomes and objectives. The workshop will also demonstrate how a visual tool can be

used throughout the term to create an ongoing dialogue with students about the learning process.

Previous application of visual mapping has taken place in the presenters' home institution. Mapping learning outcomes, objectives and processes has taken place in multiple sections of a senior undergraduate strategy course and an MBA strategy course. Both courses have a high experiential component. A visual mapping approach has also been used in a community engaged consulting class. The results have been very positive in all cases. Students have expressed that through the process they have a means to discuss the entire course and to make linkage between tasks and learning outcomes.

Theoretical Foundation/Teaching Implications.

Briefly specify the relevant background literature that the exercise is based upon and how your session contributes to effective teaching and learning in the field of management.

Research has shown that there are gaps between the needs required in the job market and the skills being taught in business schools (David, David, & David, 2011). In reality, ensuring proper skill development is often dependent on how course-based curriculum is designed and delivered. This development is especially important when teaching 3rd and 4th year courses that often have large experiential components that are meant to impart complex, intangible processes as seen in business strategy, human resources management, marketing strategy, and other courses.

Often the main challenges in upper year courses is how to explain to students why they must complete certain tasks. Students often struggle to integrate different components of

the course for themselves. In reality, all instructors face an ongoing challenge to align learning with what they intend to teach. Clearly defining and expressing learning outcomes and objectives enables professors to reflect on what they want to teach and compare this with what students actually learn (Allan, 1996). A challenge for instructors is to view learning through the eyes of students to ensure that learning outcomes and objectives not only align with tasks but are also clearly understood by students (Allan). What is most critical is that outcomes and objectives be clear, user-friendly in nature, highlight the key learnings while still offering a flexible framework, consider the appropriate knowledge, skills and attitudes needed in practice, articulate clearly what is achieved and assessed, and engage both teacher and student to give them some ownership in the process (Harden, 2002). To assist professors in demonstrating how learning outcomes and objectives are linked to tasks students must complete, we have designed a workshop that uniquely integrates principles from three relevant literatures (knowledge visualization, visual perceptual learning, and alternative tasks for learning).

Research has shown that *knowledge visualization* enhances innovation and creativity in team processes through the use of templates and sketches (Eppler, Hoffman, & Bresciani, 2011; Suthers, 2001). At the K-12 level “anchor charts” have been used to successfully create connections that will support learners in their understanding of key and complex concepts (Hendrix & Griffin, 2017). These graphic reminders help to reinforce what is learned by minimizing student cognitive loads (Kaufman, 2010). Knowledge visualization is particularly effective for connecting learning outcomes and objectives with tasks because it enhances the ability to assess information, facilitate knowledge

transfer, and share insights among individuals (Eppler & Burkhard, 2007). In our experience, students often state they feel overwhelmed in classes where the outcome requires learning a process without a clear right or wrong answer. Leveraging principles of knowledge visualization can therefore help learners to understand connections between ideas and encourage them to ask questions about why and how things are linked.

Using a visual picture to map out course objectives and tasks also draws upon a phenomenon called *task irrelevant visual perceptual learning* (Watanabe, 2001; Watanabe & Sasaki, 2015). The key idea is that the type of task used for visual perceptual learning does not need to be relevant to performing the actual subject or skill, but, instead enhances learning by simply increasing *exposure* to the subject matter or task. Using a visual map as part of the learning process does not, therefore, interrupt learning but instead enhances it by asking students to look at learning objectives and processes from a different (e.g. visual) perspective.

Learning Objectives.

Specify the learning objectives for the exercise by articulating the expected changes in knowledge, attitude, or skill that are associated with participation in the activity. What teaching topics are relevant to your session?

This session will offer instructors a unique opportunity to develop a visual tool for their own course. Attendees will, therefore, be given the opportunity to experience the principles firsthand and understand it as both learner and teacher. After creating a visual depiction of the learning process for one of their own courses participants will be asked to explain the visual to the group. The workshop will also explain how discussing the

same visual map at various times in the term can increase student understanding and learning overall because it takes students through a process of alternating between the course tasks and exercises and looking and discussing learning objectives visually.

Part of this experience will help participants to think about their own course in a unique way that enhances their own understanding of linkages in content and tasks. Participants will also leave the session with sample materials, as well as hopefully new and innovative ideas on how to communicate the learning objectives of their courses.

Exercise Overview.

Provide an overview of the activity/exercise, including the logistics of running the exercise (e.g. timing, materials, class size), the flow of the exercise, variations or alternate applications, debriefing guidelines (e.g. questions to ask, how students generally respond). The goal is to give the reviewer enough information so that they understand what the activity is that you plan to present in your session.

Participants will receive a brief introduction on the basic principles of knowledge visualization and alternating tasks followed by examples of visual maps for various courses that demonstrate a linkage between learning outcomes and objectives with student tasks. Participants will then be asked to draw a one page visual picture of the learning outcomes and objectives and student tasks for a course of their choice.

Participants will then be asked to explain the course using only the visual they have created. The workshop will end with a discussion on how to use the visual map in the most effective way during at term.

At each stage in the process, we will stop and explain the logic of the process we are following, and answer any questions participants might have. The learning steps will also be explained. At the end of the session, participants will be asked to report back on their experience followed by a general debriefing discussion.

In terms of timing, the session will ideally be 1.5 hours long (although it could be somewhat modified if necessary, given time constraints). The full session would include:

- 20 minutes to explain the principles

- 50 minutes for participants to create the visual map of a course and explain it

- 20 minutes for feedback and discussion

Application to Conference theme:

The focus of this workshop (applying unique knowledge visualization and alternative task techniques for creating a visual map of learning outcomes and objectives with student tasks) aligns directly with the MOBTS theme of Reflective Reinvention:

Harnessing our Heritage to Reshape Management Education by “demonstrating tools that help educators navigate predicted future classroom challenges” and “generating dialogue around what learning is and how learning has changed over time.” Overall, this workshop is directly aligned with the theme of Reflective Reinvention because it taps into the demand for educators to be able to better explain why students have to complete task which increases understanding by students and accountability by educators.

Unique Contribution to MOBTS

We have not presented this before and it is not under review anywhere else.

References

- Allan, J. (1996). Learning outcomes in higher education. *Studies in Higher Education*, 21(1), 93-108.
- David, F. R., David, M. E., & David, F. R. (2011). What are business schools doing for business today? *Business Horizons*, 54, 51-62.
- Eyler, J., & Giles Jr, D. E. (1999). *Where's the Learning in Service-Learning?* Jossey-Bass Higher and Adult Education Series. San Francisco, CA: Jossey-Bass, Inc.
- Eppler, M. J., Hoffmann, F., & Bresciani, S. (2011). New business models through collaborative idea generation. *International Journal of Innovation Management*, 15, 1323-1341.
- Eppler, M. J., & Burkhard, R. A. (2007). Visual representations in knowledge management: Framework and cases. *Journal of Knowledge Management*, 11, 112-122.
- GMCTE (2015). *Experiential learning*. Gwenna Moss Centre for Teaching Effectiveness. Available at: <http://www.usask.ca/gmcte/experiential-learning>
- Harden, R. M. (2002). Learning outcomes and instructional objectives: is there a difference?. *Medical teacher*, 24(2), 151-155.
- Hendrix, R.A., & Griffin, R.A. (2017). Developing Enhanced Morphological Awareness in Adolescent Learners. *Journal of Adolescent & Adult Literacy*, 61(1), 55-63. doi: [10.1002/jaal.642](https://doi.org/10.1002/jaal.642)
- Kaufman, C. (2010). *Executive function in the classroom: Practical strategies for improving performance and enhancing skills for all students*. Baltimore, MD: Brookes
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Newark, NJ: Prentice Hall.
- Lenton, R., Sidhu, R., Kaur, S., Conrad, M., Kennedy, B., Munro, Y., & Smith, R. (2014). *Community service learning and community-based learning as approaches to enhancing University service learning*. Higher Education Quality Council of Ontario: Toronto.
- Lieber, R. (2011). In college, learning about money. *The New York Times: Business News*, January 8, 2011.

- McCarthy, P. R., & McCarthy, H. M. (2006). When case studies are not enough: Integrating experiential learning into business curricula. *Journal of Education for Business*, 81(4), 201-204.
- Suthers, D. D. (2001). Towards a systematic study of representational guidance for collaborative learning discourse. *Journal of Universal Computer Science*, 7, 254-277.
- Watanabe, T. (2001). Perceptual learning without perception. *Nature*, 413, 844–848.
- Watanabe, T., & Sasaki, Y. (2015). Perceptual learning: Toward a comprehensive theory. *Annual Review of Psychology*, 66, 197-221.