

# ESTABLISHING A MULTIMEDIA-RICH ENVIRONMENT TO SUPPORT EXPERIENTIAL E-LEARNING IN BUSINESS EDUCATION

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## ABSTRACT

*Engaging students in experiential e-learning is challenging. This article discusses how to establish a multimedia-rich e-learning environment to enhance experiential learning and engage students in applying course content in real-world situations. Consultants from golf, manufacturing, and food industries were invited to offer professional advice and evaluate student group projects. At the end of the course, surveys were sent to gather feedback from the students and the industry consultants to understand their perceived helpfulness of the multimedia content to support experiential e-learning. Twenty-two students and 13 consultants completed the surveys. The results showed that most students were satisfied with the multimedia content and perceived it as helpful to their experiential e-learning and the development of authentic group projects. The industry consultants had similar thoughts on multimedia content and recognized the quality of student group projects.*

*Keywords: multimedia-rich environment, experiential e-learning, business education*

## INTRODUCTION

Requests for e-learning opportunities in business have increased dramatically (Estelami, 2017; Gold, 2001). Due to the applied nature of various business disciplines and the constantly changing business environment, experiential learning is essential to business education for preparing graduates to meet the expectations of their future employers as they begin their careers. Experiential learning creates the critical connection between classroom and business, and it can be easily integrated into traditional face-to-face classroom environments by 1) providing lab activities, examples, or films to engage students in concrete experiences; 2) having students to do journals, discussions, or brainstorming activities to help them reflect on the learned experiences; 3) offering lectures, papers, or model-building activities to help students conceptualize abstract concepts learned; and 4) asking students to complete

case studies, simulations, fieldwork activities, and projects to give them a chance to examine the constructed model (AACSB International, 2002; Santonino, 2017; Svinickl & Dixon, 1987). However, it is challenging to provide students such experiences in e-learning environments. Therefore, when teaching in an e-learning environment, instructors have to rethink their strategies to engage students in experiential learning activities.

## LITERATURE REVIEW

Experiential learning theorists believed that experience plays a critical role in the learning process. Kolb (2014) defined learning as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (p. 41). He expanded on the earlier learning theories of John Dewey, Jean Piaget, Kurt Lewin, Carl Jung, Erik Erikson, Carl Rogers, Fritz

Peris, Abraham Maslow, and Paulo Freire, and formulated a cycle of knowledge transformation based on his observations of adult learners (Hickcox, 1990; Kemp, 2007; Kolb, Boyatzis, & Mainemelis, 2000). The cycle has four stages. In Stage I: concrete experience, learners are actively engaged in fieldwork related activities. In Stage II: reflective observation, learners consciously examine and reflect on their learned or observed experience. In Stage III: abstract conceptualization, learners attempt to conceptualize the learned experience. In Stage IV: active experimentation, learners try to plan and test the constructed model. Kolb believed that learners are capable of applying what they learn to real-world settings through the cycle of knowledge transformation. His ideas have been widely used in business education, such as statistics (Hakeem, 2001), finance (Gold, 2001), marketing (Amar, Johnson, & McLaughlin, 2018; Burton & Rutherford, 2007; Gremler, Hoffman, Keaveney, & Wright, 2000), management (Makani & Rajan, 2016; Remidez & Fodness, 2015), and macroeconomics (Truscott, Rustogi, & Young, 2000).

Although experiential learning is important to business education, it is not an easy task for instructors to provide students such experiences in an e-learning environment. Carver, King, Hannum, and Fowler (2007) proposed a taxonomy of experiential e-learning activities: 1) Level 1—focusing on content distribution and sharing; 2) Level 2—engaging students in an online conversation; 3) Level 3—using multiple mediums to engage students in meaningful online conversations; 4) Level 4—involving students in “identifying the course objectives, developing course content, and deciding on appropriate instructional methodology” (p. 250); 5) Level 5—involving students in the problem-solving process or service-learning process; and 6) Level 6—involving students in actual situations for direct experience or action learning. This taxonomy reminds instructors that, when designing experiential learning activities for e-learning environments, the content delivery method and communication medium need to be taken into consideration.

Researchers proposed various techniques to provide experiential learning in e-learning environments such as “free” internet applications (Gold, 2001), simulations (Beckem & Watkins, 2012; Gold, 2001; Kenworthy & Wong, 2005), and videos

(Beard, Wilson, & McCarter, 2007; Daalhuizen & Schoormans, 2018; Keller & Li, 2007). In particular, Beard et al. (2007) claimed that videos could be used to simulate real-world experiences and engage learners in meaningful learning. They used videos with supported text to create real-world experiences for distance learning students at Sheffield Hallam University and received positive student learning outcomes. They also suggested that videos must be chunked into small segments due to the limited capacity of human short-term memory. According to Miller (1956), a person can hold five to nine chunks (units of information) at one time. Video is also the type of multimedia that can combine more than one medium, such as text, pictures, and audio, to present actual objects and realistic scenes for learners (Beard et al., 2007).

### **PURPOSE OF THE STUDY**

The purpose of this study was to explore the design of a multimedia-rich environment to support experiential e-learning in business education and understand both the students’ and invited industry consultants’ perceived helpfulness of the offered multimedia modules. The research questions for this study were listed below. The authors answered these research questions and provided suggestions for designing experiential e-learning activities.

- RQ1. Were students satisfied with the offered multimedia modules?
- RQ2. How did students perceive the helpfulness of multimedia modules to support experiential e-learning?
- RQ3. How did invited industry consultants perceive the quality of student group projects? Did they believe that students were able to carry the required tasks related to Commercial Liability, Commercial Property, and Employee Benefits based on their review of student group projects?
- RQ4. How did invited industry consultants perceive the helpfulness of multimedia modules to support experiential e-learning?

### **METHODS**

#### *Research Design and Participants*

This case study focused on the design of a multimedia-rich environment to support experiential e-learning in business education and understanding

both the students' and invited industry consultants' perceived helpfulness of the multimedia modules. According to Yin (2003), Starman (2013), and Boateng (2014), the data collected for a case study can be either quantitative, qualitative, or a combination of both. Two surveys were used for data collection, including a student perception survey and a consultant perception survey. The data were mainly quantitative (i.e., responses to Likert-scale questions) supplemented by a limited amount of qualitative data (e.g., responses to open-ended questions).

Sixty undergraduate students in two fully online business risk management courses at a medium-sized Midwestern university were invited to complete a student perception survey. The response rate was 36.67%, and in total, 22 students filled the survey. Besides, 13 consultants from different industries who were invited to assess student group projects also filled a consultant perception survey based on their involvement in the courses. Although the sample size was small, this study still could provide valuable insights into the application of experiential e-learning.

### Course Design

The context of this study was two fully online business risk management courses via Blackboard at a medium-sized Midwestern university. The goal of these two courses was to teach students how to handle business risks including property and liability risks, employee benefit planning, and international loss exposures. The courses also emphasized risk identification, risk evaluation and techniques of risk control, and risk financing. Students needed to learn the essential techniques to handle business risks encountered in actual organizations. Therefore, engaging them in experiential learning of risk management was an essential task to the instructor. To provide such experiences, the following design components were embodied in these courses:

1. **Student Group Project:** In these two courses, students were required to work in small groups to complete a semester-long project for solving real-world problems. They had to 1) select their project organization; 2) explore the existing problems within the chosen organization; 3) develop, evaluate and recommend possible solutions to the problems; 4) write up a plan

to solve the problems; and 5) complete an oral presentation.

2. **Multimedia Modules:** To support the development of the semester-long group project, the instructor worked with an instructional designer to build multimedia modules on four important topics, including Teamwork, Business Risk, Actuarial Learning, and Property Loss Control Initiatives. Those topics were core concepts of risk management. Each module contained instructional resources that were organized into three main categories (interview videos, academic articles, and business articles). The purpose of providing those resources was to help students learn from real-world scenarios/examples and construct their solutions for problem-solving. The instructor also recorded his narrations in podcast files to help students with resource utilization and module content understanding (see Figure 1).

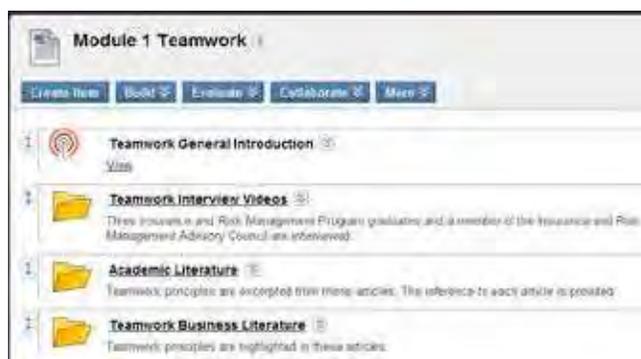


Figure 1. The Sample Layout for the Teamwork Module

3. **Multiple Communication Channels:** Multiple communication channels were provided in these two courses. Throughout the semester, the students, instructor, and invited industry consultants actively communicated and exchanged ideas via email, online discussion board, phone, and Adobe Connect.
4. **Multiple Assessments:** At the end of the semester, consultants from golf, manufacturing, and food industries were invited to assess student group project reports and evaluate the credibility of the proposed solutions. These industry consultants served as outside evaluators to

offer professional critiques for determining whether the students' recommendations and solutions can be used in real-world situations. Except for the evaluation from industry consultants, students were asked to self-assess their own projects, and the instructor also provided his evaluation on student project reports.

The entire knowledge transformation cycle in these two courses started with having students watch the interview videos, followed by engaging students in continuous online conversations and encouraging students to read academic and business articles. Students also listened to podcast files offered by the instructor and were asked to complete a semester-long group project to solve real-world problems (see Figure 2). Besides, according to the taxonomy of experiential e-learning activities (Carver et al., 2007), the activities included in this study were located at Level 5: involving students in the problem-solving process or service-learning process. The knowledge transformation cycle adopted in this study was described as follows:

1. **Stage I—Concrete Experience (Interview Videos):** Videos could be used to simulate real-world experiences (Beard et al., 2007; Daalhuizen & Schoormans, 2018; Keller & Li, 2007). Consultants from golf, manufacturing, and food industries were invited for face-to-face interviews to share their experiences with handling problems that happened in their own industries. The interviews were recorded, chunked into smaller segments, and organized with visual cues. Three or four interview videos were provided in each multimedia module. The content of each interview video presented the instructor's narration about the interviewee's background, relevant industrial information, and the scenarios/problems involved, and the interviewee's real-world experiences with handling problems in his or her own industry. For example, in the Teamwork Module, Interviewee 1 covered the following topics related to his or her own teamwork experiences, including 1) risk manager team experiences, 2) broker team experiences, 3) an example of teamwork activity in

his company, 4) suggestions for student teamwork project, and 5) student team experiences at college. In another example, the Business Risk Module, Interviewee 2 presented business risk issues at his or her company, for example a peanut butter recall, and how to manage reputation risk. The real-world scenarios and examples within the interview videos were used to support the students' conceptualization process.

2. **Stage II—Reflective Observation (Continuous Online Conversations):** After watching interview videos, the students, instructor, and invited industry consultants actively communicated and exchanged ideas related to the video content and relevant concepts with each other via email, online discussion board, phone calls, and Adobe Connect within Blackboard throughout the semester. Students were asked to actively reflect on what they observed and learned from the interview videos and to exchange their thoughts through online conversations.
3. **Stage III—Abstract Conceptualization (Academic/Business Articles and Podcast Files):** Two types of articles were offered in each module to help learners conceptualize a model of their own from the interview videos. The academic articles were selected to help students establish theoretical foundations of each module topic (e.g., Teamwork Module—"Team Principles"; Business Risk Module—"ERM: An Analytic Approach" ... ). The business articles provided relevant examples that happened in the field (e.g., Teamwork Module—"Fostering teamwork in tough times"; Business Risk Module—"Financial impact for golf felt all around with Tiger Woods gone" ... ). The instructor also recorded short podcast files to specifically discuss the concepts covered in selected academic and business articles.
4. **Stage IV—Active Experimentation (Group Project for Solving Real-World Problems):** Students were asked to work in groups to solve real-world problems for businesses or nonprofit organizations. Each group was asked to 1) select their

project organization; 2) explore the existing problems within the chosen organization; 3) develop, evaluate, and recommend possible solutions to the problems; 4) write up a plan to solve the problems; 5) complete an oral presentation. At the end of the semester, consultants from golf, manufacturing, and food industries were invited to assess and critique the student project reports. They had to evaluate the credibility of the proposed solutions in order to validate the content knowledge currency of the curriculum content and determine whether the reports were at the professional level of a prospective employee in the industry. The student's self-assessment, instructor's assessment, and industry consultant's assessment were required for the final project evaluation to ensure that each project was properly assessed from multiple perspectives.

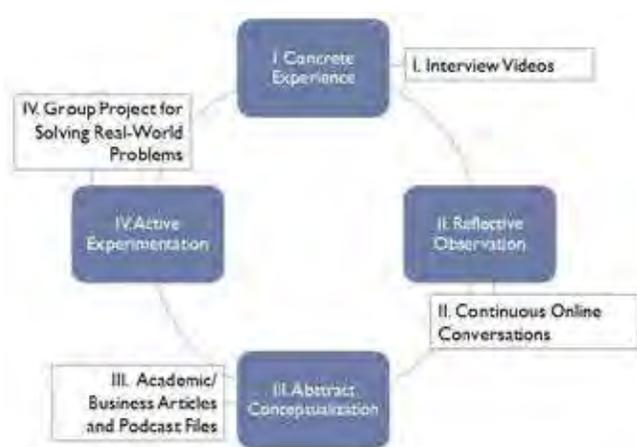


Figure 2. The Adopted Knowledge Transformation Cycle and Relevant Course Activities

### Instruments

Two surveys were used as instruments for data collection: the student perception survey and the consultant perception survey. The student perception survey included 23 items and was distributed to all students at the end of each course. The reliability of the survey was high, with Cronbach's alpha at .87 and .97 for Section 2 and Section 3, respectively. Table 1 shows the structure of student perception survey.

Except for understanding student satisfaction and perception of the offered multimedia modules, the invited industry consultants were also given a nine-item survey to share their perception of student group projects and multimedia modules based on their involvement in the courses. The structure of the consultant perception survey was as follows:

1. Q1–Q2 and Q5–Q6 were 4-point Likert items related to the quality of student group projects (To a Great Extent = 4, Somewhat = 3, Very Little = 2, and Not at All = 1).
2. Q3–Q4 were 4-point Likert items related to the helpfulness of multimedia modules to student learning (To a Great Extent = 4, Somewhat = 3, Very Little = 2, and Not at All = 1).
3. Q7 contained three 6-item subscales of required tasks on Commercial Liability, Commercial Property, and Employee Benefits. The items in these three subscales were 3-point Likert questions (To a Great Extent = 3, Somewhat = 2, and Very Little = 1). The industry consultants were asked to provide their responses to those three subscales based on their involvement in the

Table 1. The Structure of Student Perception Survey

Section	Description	Questions	Question Type
1	The questions were about the students' demographic information including gender, insurance course taken, and comfort level with multimedia	Q1-Q3	Demographic Questions
2	The questions were used to investigate student satisfaction with multimedia modules.	Q4-Q8	5-point Likert items (1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Neutral, 4 = Satisfied, and 5 = Very Satisfied).
3	The questions were used to investigate student perception of multimedia modules to support experiential e-learning (e.g., podcast files, articles, visual cues, instructor narrations, interview videos, and the overall multimedia approach).	Q9-Q21	5-point Likert items (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree)
4	The questions were used to understand students' suggestions for improving the offered multimedia modules.	Q22-Q23	Open-ended Questions

courses and their review of student group projects. They had to indicate whether they thought the students were able to perform the required tasks in the group projects. If they indicated a “yes” on any of the question items, they had to indicate to what extent they thought students were able to perform these tasks. The required tasks for group projects were to 1) identify an organization’s major [liability, property, and employee benefit] exposures; 2) develop a plan to manage the loss control and loss financing for [liability, property, and employee benefit] risks of an organization; 3) discuss the rationale for selecting coverage options and/or endorsements for a [commercial liability, commercial property, and employee benefit group life/health] insurance policy; 4) compare and evaluate the cost and benefit of alternative approaches to managing [liability, property, and employee benefit] risk; 5) propose recommendations to be adopted by an organization to manage its [liability, property, and employee benefit] risk; and 6) discuss underwriting criteria used in the evaluation of [liability, property, and employee benefit] risk.

4. Q8–Q9 were open-ended questions asking for written responses and suggestions to student group projects and multimedia modules.

## RESULTS

### *The Student Perspective*

In total, 10 male and 12 female students completed the student perception survey. According to the collected responses, 72.7% of the students had taken only one or two insurance courses including the currently enrolled insurance course, which meant that most of the students did not have enough prior knowledge needed for completing their semester-long group projects. More instructional supports were needed from the instructor to help those students with project completion. Besides, 77.2% of the students felt either comfortable or very comfortable using multimedia for online learning.

**Satisfaction with the Offered Multimedia Modules.** Q4–Q8 were about student satisfaction with these multimedia modules. According to Table 2, students tended to be satisfied with the

instructional resources included within these modules ( $M = 3.78$ ,  $SD = .64$ ). Just as Student 19 said, “they [multimedia modules] were effective in my online learning experience. I have a high-performance machine so there were no IT issues. I appreciated them.” The instructional resources provided in each module included 1) podcast files, 2) articles, 3) visual cues within videos, 4) instructor’s narrations within videos, and 5) interview videos. The highest rating was shown on their satisfaction with the academic and business articles (Q5,  $M = 3.86$ ,  $SD = .56$ ); the lowest rating found was related to their satisfaction with the visual cues within videos (Q6,  $M = 3.68$ ,  $SD = .72$ ).

Table 2. Means and Standard Deviations on the Measure of Student Satisfaction with the Offered Multimedia Modules

#	Question	M	SD
Satisfaction with the Offered Multimedia Modules		3.78	.64
4	How would you rate your satisfaction with the podcast files provided within the modules?	3.77	.69
5	How would you rate your satisfaction with the articles provided within the modules?	3.86	.56
6	How would you rate your satisfaction with the keywords (visual cues) provided within the videos?	3.68	.72
7	How would you rate your satisfaction with the instructor’s narrations within the videos?	3.77	1.07
8	How would you rate your satisfaction with the interview videos provided within the modules?	3.82	.80

### **Perceived Helpfulness of Multimedia Modules to Support Experiential E-Learning.**

Q9–Q10 related to student perception of the podcast files recorded by the instructor. Two types of podcast files were offered in each multimedia module. One was provided at the beginning of the module to help students construct an overall idea of the module content; the other one was used to provide more details about each category of instructional resources (interview videos, academic articles, and business articles). According to Table 3, students tended to agree with the helpfulness of podcast files to their experiential e-learning ( $M = 3.77$ ,  $SD = .67$ ). However, they tended to value the one used to help them construct the overall idea of the module content slightly higher (Q9,  $M = 3.86$ ,  $SD = .71$ ) as compared to the one used to explain the details of instructional resources (Q10,  $M = 3.68$ ,  $SD = .78$ ).

Q11–Q12 related to student perception of the articles selected by the instructor. According to Table 3, the average rating for academic and business articles was above 3.5 ( $M = 3.77$ ,  $SD = .59$ ). Students tended to perceive a higher value for business articles (Q12,  $M = 3.82$ ,  $SD = .73$ ) as compared to academic articles (Q11,  $M = 3.73$ ,  $SD = .55$ ). The possible reason might relate to the difficulty levels of the selected academic articles. Student 8 provided his or her thoughts on the academic articles, “the [academic] articles were informative but difficult to read at times.” As mentioned previously, 72.7% of the students had taken only one or two insurance courses including this course, which meant that most of the students did not have enough prior knowledge to understand the content of selected academic articles. Therefore, the instructor would need to consider this factor when selecting academic articles for students with low prior knowledge.

Q13–Q14 related to student perception of the helpfulness of visual cues. The visual cues were offered in interview videos to help students understand the concepts. Based on Table 3, students tended to agree with the helpfulness of visual cues ( $M = 3.77$ ,  $SD = .77$ ). They agreed more with using visual cues to understand the concepts mentioned in the instructor’s narrations to each interview video (Q14,  $M = 3.86$ ,  $SD = .89$ ) than to reinforce the concepts mentioned in each interview video (Q13,  $M = 3.68$ ,  $SD = .78$ ).

Q15–Q16 related to student perception of the helpfulness of instructor’s narrations. Table 3 shows the average rating on this section was the highest ( $M = 3.84$ ,  $SD = .82$ ). Students tended to agree that the instructor’s narrations helped them understand the conceptual structure within the scenarios of each real-world problem (Q15,  $M = 3.82$ ,  $SD = .85$ ) and connect the scenarios in the interview videos to the major course content (Q16,  $M = 3.86$ ,  $SD = .89$ ). As mentioned previously, students in these two courses had low prior knowledge, and they needed more support from the instructor to understand the instructional resources and connect them to the main course content.

An additional independent-samples t-test was conducted to compare student perception of the helpfulness of instructor’s narrations between the high knowledge level group and the low knowledge level group. The low knowledge level

group comprised students who had taken only one or two insurance courses, including the currently enrolled one. A significant difference was shown ( $t(20) = 2.52$ ,  $p = .02$ , Cohen’s  $d = 1.12$ ) to prove that students with low prior knowledge ( $M = 4.13$ ,  $SD = .72$ ) tended to agree more that the instructor’s narrations truly helped them make a connection between the scenarios in the interview videos and the main course content as compared to students with high prior knowledge ( $M = 3.17$ ,  $SD = .98$ ).

Q17–Q18 related to student perception of the helpfulness of interview videos. Based on Table 3, the average rating on this section was the lowest ( $M = 3.61$ ,  $SD = .83$ ). Although the average rating was above 3.5, as compared to questions related to other multimedia elements, students tended to agree less that interview videos helped them connect their project with real-world experiences (Q17,  $M = 3.64$ ,  $SD = .85$ ), and apply the offered solutions in the interview videos to their project (Q18,  $M = 3.59$ ,  $SD = .85$ ). One possible explanation for this finding is probably related to the design of the interview videos (e.g., video length). The length of the interview videos in these modules was four to twelve minutes. Some students did mention they preferred shorter videos, which might help them stay focused when watching those interview videos. For example, Student 9 suggested, “Keep them [videos] short and to the point. You lose your students in a one-hour presentation.” Student feedback on the video design would need to be considered when making changes to the existing videos.

Q19–Q21 related to student perception of the helpfulness of the overall multimedia approach. According to Table 3, students agreed with the helpfulness of the overall multimedia approach used to their learning ( $M = 3.76$ ,  $SD = .72$ ). Students tended to agree more with the helpfulness of it to interpret relevant course concepts needed in their authentic group projects (Q19,  $M = 3.86$ ,  $SD = .71$ ) and offer applicable real-world experiences (Q20,  $M = 3.73$ ,  $SD = .77$ ). However, when compared to Q19 and Q20, the rating on the last question about whether this approach significantly supported experiential learning in an online course was relatively lower (Q21,  $M = 3.68$ ,  $SD = .90$ ). It seemed that the multimedia content did help support the development of student group projects and offered authentic experiences; however, more could be done to make it more effective to student learning (e.g.,

the difficulty level of selected academic articles, the needs of students with different levels of prior knowledge, and video design ... ).

Table 3. Means and Standard Deviations on the Measure of Student Satisfaction and Perception of Multimedia Modules Offered

Section	Questions	M	SD
Satisfaction	Q4-Q8	3.78	.64
Perception	Podcast Files	3.77	.67
	Articles	3.77	.59
	Visual Cues	3.77	.77
	Instructor's Narrations	3.84	.82
	Interview Videos	3.61	.83
	Overall Multimedia Approach	3.76	.72

*The Industry Consultant Perspective*

**Perceived Quality of Student Projects.** In total, 13 consultants completed the survey. Table 4 shows that the average rating on the quality of the student projects was 3.40 (SD = .47). The consultants agreed that students were able to somewhat 1) utilize their prior knowledge to support the risk management process (Q1, M = 3.54, SD = .52), 2) formulate inference from the data and evidence (Q2, M = 3.69, SD = .48), and 3) utilize basic statistical procedures, i.e., linear regression and correlation, and simulation to project future losses (Q6, M = 3.46, SD = .78). Six consultants provided positive comments on the quality of student projects. For example, Consultant 1 said, “I was very impressed with the student’s ability to identify loss exposures faced by Citi Trends, Inc. The students who wrote this paper have a very good understanding of P&C insurance and how it manages loss.” Consultant 2 also noticed the students’ abilities of categorizing the potential business risk. He or she said, “The students did a good job categorizing [categorizing] the risks and having appropriate discussions about each risk. There were valuable comments that were made.”

The lowest rating related to the quality of the student projects was found in the response to Q5 (M = 2.92, SD = .64), which was about whether the group projects paralleled to what a new employee would be expected if they worked for the consultant’ company. This lower rating was not unexpected or surprising. In a real-world setting,

business organizations would organize a team of one or two entry-level individuals working under the supervision of many mid-level professionals and directed by one or more senior-level managers. These experienced professions would bring their respective backgrounds in analysis, problem-solving, and developing financial solutions to the risk problem being studied. Thus, the solutions they generated, of course, should be more sophisticated as compared to a student group at a functional team level within a semester (15-week) period. However, with regard to the overall quality, these student group projects did show fine qualities. Just as Consultant 7 said, “It appears these students are ahead of where my class was in 1905. This was a great report at the university level.”

Table 4. Means and Standard Deviations on the Measure of Industry Consultants’ Perceived Quality of Student Projects

#	Question	M	SD
Perceived Quality of Student Projects		3.40	.47
1	How well did the students utilize prior knowledge from previous courses, especially Commercial Property, Commercial Liability, or Employee Benefits, to support the risk management process in this course?	3.54	.52
2	Once the students made their projections of future losses, how well were they able to formulate inferences from the data and evidence?	3.69	.48
5	How close did the group projects, i.e., the final written reports, parallel what a new employee would be expected to prepare if they worked for your company?	2.92	.64
6	How well did the students understand how to utilize basic statistical procedures, i.e., linear regression, and correlation and simulation to project future losses?	3.46	.78

Question 7 contained three 6-item subscales. Those 3-point Likert items asked about the consultants’ thoughts on the students’ abilities to carry out the required tasks on Commercial Liability, Commercial Property, and Employee Benefits. According to Table 5, the average ratings on the three subscales of the required tasks were 2.40 (SD = .50), 2.36 (SD = .56) and 2.33 (SD = .24). The consultants agreed that the students were able to somewhat 1) identify an organization’s

major exposures, 2) develop a plan for managing the loss control and loss financing for risks of an organization, 3) discuss the rationale for selecting coverage options and/or endorsements for an insurance policy, 4) compare and evaluate the cost and benefit of alternative approaches to managing risk, 5) propose recommendations to be adopted by an organization to manage its risk, and 6) discuss underwriting criteria used in the evaluation of risk on Commercial Liability, Commercial Property, and Employee Benefits.

Table 5. Means and Standard Deviations on the Measure of Students' Abilities to Carry Out the Required Tasks

#	Subscale	M	SD
7	Commercial Liability (n=10)	2.40	.50
	Commercial Property (n=10)	2.36	.56
	Employee Benefits (n=2)	2.33	.24

### Perceived Helpfulness of Multimedia Modules to Support Experiential E-Learning.

Table 6 shows that the average rating on the invited consultants' perceived helpfulness of the multimedia module to student learning was high ( $M = 3.65$ ,  $SD = .43$ ). The consultants agreed that using multimedia modules helped students learn and complete their group projects ( $M = 3.62$ ,  $SD = .51$ ) and brought reality to the courses ( $M = 3.69$ ,  $SD = .48$ ). It demonstrated the positive outcomes on the use of multimedia modules to support student learning from the industry consultants' point of view. Four consultants made positive comments and agreed that the multimedia modules brought the real world into the courses. For example, Consultant 1 said, "The multimedia modules are a great learning tool for students. It brings real-world examples and learning to the classroom. The modules help bridge the gap between academia and the workplace." Consultant 6 had a similar thought, "the modules are great—a real look at people in the business." He or she even suggested that the instructor could "do a series [of multimedia modules] on the renewal process . . ." He or she elaborated this idea by saying:

*You could interview a client about putting together info + preparing budgets. Next module could be broker on preparing information to market, slating markets.*

*Then w/a UW reviewing the data, preparing a quote, evaluating the risk. All the way back to the client at posting binding with their next steps.*

Consultant 4 recommended continuing to use the multimedia modules to support students to connect to real-world environments. He or she commented, "Overall. I think the modules are good. Anytime, a student gets information from the real world. I think it is very beneficial. I would recommend continuing [the] use of multimedia modules."

Table 6. Means and Standard Deviations on the Measure of Industry Consultants' Perceived Helpfulness of Multimedia Modules to Student Learning

#	Question	M	SD
Perceived Helpfulness of Multimedia Modules to Student Learning		3.65	.43
3	Do you think the multimedia modules help students learn and complete their projects?	3.62	.51
4	Do you think multimedia modules bring reality to the course?	3.69	.48

### DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The findings showed that most students were satisfied with this multimedia content. They also recognized its helpfulness to experiential e-learning and the development of their group projects. Prior knowledge was found to be a factor affecting student perception as to the helpfulness of the instructor's narrations to their learning. Students who had low prior knowledge needed more support from the instructor to understand the instructional resources and connect them to the main course content. The video design and the difficulty level of selected academic articles would also affect student perception.

The invited industry consultants had similar positive thoughts on the use of multimedia content to support student learning and agreed that it brought the real world into the e-learning courses. They recognized the quality of student group projects and agreed that students were able to somewhat carry out the required tasks related to Commercial Liability, Commercial Property, and Employee Benefits. Although this multimedia content did help support the development of student

group projects and offer real-world experiences, more could be done to make it more effective to student learning by considering the following in the course design process:

- When selecting an academic article as required reading for students, instructors would have to pay attention to its difficulty level and consider the students' prior knowledge. Extra guidance (e.g., narrations, notes) is needed to help students with low prior knowledge understand complex concepts.
- When designing videos for students, the use of visual cues and the video length would need to be well planned to help students stay focused. Therefore, its effect on stimulating real-world experiences could be maximized.
- In these two courses students were asked to verbally reflect on their experiences through online conversations. There was no formal reflection assignment or exercise required. Based on the results and the instructor's observations, including a formal reflection assignment or exercise was suggested. It would help the instructor understand more about what students need and how well they learn during the group work process.

This was a small-scale study that included only 22 students and 13 industry consultants, and it was implemented in a specific e-learning context with multimedia content and experiential learning activities. This makes it difficult to generalize the results to a large population. However, this study did provide valuable insights into the application of experiential e-learning, and this information was scarce in the literature. Directions for future research could 1) include a larger sample size or include different subjects to help generalize and transfer the results to other contexts; 2) employ qualitative research methods to explore the actual process of experiential e-learning; and 3) further investigate how prior knowledge influences the process of experiential e-learning.

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