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USING BUSINESS CASES TO FOSTER CRITICAL THINKING SKILLS

Kathryn O'Neill
Sam Houston State University
Huntsville, TX 77341-2056
USA

Gary May
Clayton State University
Morrow, GA 30260

ABSTRACT

Students are deeply educated in their specialties, but do they know how to use what they know to analyze business problems and make recommendations for action? This paper describes the use of cases from various business settings that require critical thinking to propose a course of action. All cases require a persuasive element and an indirect writing approach that leads to conclusions and recommendations. As a second step, students then convert their written channel work into a spoken channel in the form of a persuasive presentation delivered to decision-makers. We describe the cases and the overall approach and explain the strategy in terms of existing frames and theory about critical thinking in the classroom. We will also talk about the results we have experienced in the work of our students using this approach.

Keywords: critical thinking, business cases, business writing

INTRODUCTION

Problem solving and communication skills continue to appear high on "want lists" for employers. The NACE 2012 Job Outlook Report (National Association of Colleges and Employers 2012) respondents identified "ability to verbally communicate" as second on their list, and "ability to make decisions and solve problems" as third. Respondents to the AMA 2012 Critical Skills Survey (American Management Association, 2012) identified critical thinking and problem solving as the critical skill they need in their workforce, with effective communication as the second most critical. Responding to these needs, schools of business have included these skills in their overall objectives for all disciplines (Association to Advance Collegiate Schools of Business 2013).

Paul and Elder (2009, 2007) define critical thinking as "the art of analyzing and evaluating thinking with a view to improving it" (2009, p. 2). Roever (1998) further notes that the process of critical thinking includes analysis and inference. Dyrud and Worley (1998) cite Bloom's Taxonomy to connect critical thinking with the higher skill levels of analysis, synthesis, and evaluation. Young and Warren (2011) quote the definition for "strategic/critical thinking" from the 1999 Core Competency Framework for the American Institute of Certified Public Accountants (AICPA): "the ability to link data, knowledge, and insight together from various disciplines to provide information for decision making" (p. 859). Critical thinking thus requires the individual to examine a problem from a variety of perspectives, to evaluate those approaches, and to arrive at conclusions and recommendations for decision makers.

Students are deeply educated in their specialties, but how do they use what they know to analyze business problems and make recommendations for action? Classroom projects often call upon students to research and report on business topics, but seldom do these projects require them to engage in analysis. Smart, Hicks and Melton (2012) note that we often ask students to write as a way of demonstrating to us how much they know about a topic, and that this purpose is the opposite of what their business leaders will expect of them on the job. Especially when our students are new on the job, they will need sound thinking and persuasion skills to propose and gain acceptance for ideas they may have. Paul and Elder (2009) define eight Elements of Thought as illustrated in Table 1.

Table 1
A Checklist for Reasoning

ALL reasoning…	
1	Has a PURPOSE.
2	Is an attempt to figure something out, to settle some QUESTION, to solve some PROBLEM.
3	Is based on ASSUMPTIONS.
4	Is done from some POINT OF VIEW.
5	Is based on DATA, INFORMATION, and EVIDENCE.
6	Is expressed through and shaped by CONCEPTS, and THEORIES.
7	Contains INFERENCES or INTERPRETATIONS by which we draw CONCLUSIONS and give meaning to data.
8	Leads somewhere or has IMPLICATIONS and CONSEQUENCES.

(Paul & Elder, 2009)

Assignments that foster critical thinking skills will require students to engage in these aspects of thinking versus straight research and reporting.

Business communication educators have devoted consideration and thought to what demands the workplace imposes on thinkers and communicators as a way to focus their instructional efforts. Muir (1996) discusses teaching business and technical communication with a focus on the complexity of superior-subordinate relationships. These complexities include differences in backgrounds, student to business culture, and skills required to question existing business practices in ways that allow them to contribute to the enterprise. New employees need ways to identify and challenge existing assumptions in business practices, and to make a case for change. Paulson (2011) cites findings that document employers' expectations that newly-hired employees will contribute to teams and to meaningful innovation, expectations that assume skill in both communication and critical thinking. As educators become more and more acquainted with the real-world demands in thinking and communication, they are exploring ways to foster and improve students' skills in both areas.

One way to introduce students to the complexities of workplace demands is to put them in the middle of a business situation or problem and to ask them to reason their way to a solution or conclusion. Paulson (2011) asks his adult learners to work in teams to identify pairs of companies in the news that are considering merger, and to perform their own due diligence to arrive at a conclusion about the prospects for success for combining the companies. The analysis requires students to apply previously-acquired discipline-specific knowledge in a new situation. Smart et al. (2012) use realistic problem-based scenarios to lead students to apply analysis and communication approaches to business situations. Young and Lee (2011) developed the skills of accounting students with the use of two challenge problems. The first led students to assess situations, to identify and construct useful metrics, and, finally, to use their metrics to recommend a choice between alternatives. The second asked student to transfer knowledge of internal control procedures from a for-profit to a non-profit environment. For both problems, recommendations are not obvious or straightforward, so that students must use their knowledge in new ways. Carithers, Lin, and Bean (2008) use "messy problems," that is, ill-structured investment problems, to develop students' analysis skills leading to a recommended course of action. Wahlstrom (2002) advocates the use of the internal proposal as a writing project, since the proposal is a communication strategy to ask for something you or your organization wants: money, permission, space, supplies, resources, or time. He asks students to identify their own projects, and coaches them to appropriate topics. Whether students are currently employed or preparing for professional careers, scenarios and situations offer a way to introduce business thinking that requires them to use of discipline-specific knowledge in new ways.

An additional insight for business students, especially undergraduates, is the need to justify a solution to a business case in financial terms. As Liberman (2012) notes, not all worthy projects can or should be expressed in terms of numbers, but, because the language of profit and loss is universal and money-based arguments are expected and required for decision-making, students need to know how to justify their solution with numbers As Liberman writes, "for most sizeable capital expenses…large corporations commonly draw a cost-based line…to avoid plundering resources that could exceed those actually related to the investment" (p. 29). No matter how worthy the project or idea may be, senior-level decision makers will expect to see money-based measures that illustrate how the project or idea will benefit the enterprise. The ability to use critical thinking and communication skills, especially persuasion, to analyze and arrive at a financially-based argument in support of a recommendation is an invaluable skill, and, as Muir (1996) has noted, one that students may not necessarily have recognized as having value. Additionally, arriving at the business case requires the use of discipline-specific knowledge, so that application of acquired knowledge to a specific scenario prepares the student for future workplace challenges.

To foster critical thinking skills in the context of business problems, then, we have used a set of cases from various business settings that include a question to be answered. In all the cases, more than one answer is possible, and students are free to propose any solution they wish, as long as they can support their ideas with credible sources and information, including a business case expressed in numbers (Liberman 2012; Walhstrom 2002). All cases require a persuasive element and an indirect writing approach that puts explanations of the problem and the solution rationale first and leads to conclusions and recommendations. As a second step, students then convert their written channel work into a spoken channel in the form of a persuasive presentation delivered to decision-makers, making double use of their research and thinking. Case titles and audiences are listed below in Table 2. Detail for three sample cases is in the Appendix.

Table 2

Business Report Case Situations

Case	Title	Audience
1	The Feasibility of Sick Child Daycare	VP Human Resources
2	A New Ventilation System for Sidelines Sports Bar & Grill	Ervin Sidelines, CEO
3	The Feasibility of Full-Time Security Guards for Southhampton	Bill Paul, HOA President
4	Making the Case for a Company Gym	Sarah Best, Technology Company CEO
5	Helping Students Use Debt Responsibly	Juan Maricale, VP of Student Life
6	Implementing a Telecommuting Program	Chad Lee, Senior VP of Operations

Several business communication objectives drive the assignment, including execution of the formal report/proposal format, typically 8 – 10 pages total; skillful use of the language, including correct grammar and mechanics; development of research skills using library databases and other credible sources; use of APA citation style; and demonstration of critical thinking and persuasion strategies. Students choose cases in a random draw, but may trade after the draw with another willing student.

USING THE CHECKLIST FOR REASONING

Using the Checklist for Reasoning (Paul & Elder 2007, 2009) as a guide, we can describe how the cases lead students to think critically.

Purpose

As the writer in all the cases, the purpose of the proposal is to persuade a decision-maker to commit resources to a recommended solution. For all the cases, students must construct an argument, including a pro forma where appropriate, to make their case for or against implementation of the recommendation they make. While all cases include the need to persuade, the specifics of the persuasive purpose are open to the students' choice and a "correct" choice is not immediately evident. Carithers et al. (2008) make a point about the "messy" problems that exist in the real world, and the cases all reinforce the complexity of business situations and questions.

Question/Problem

All cases involve a question or problem that may or may not be evident to the decision maker. For example, for the Vending Machines in the Schools case, the issue of protecting children's health is easy to defend, but the reality is "messy" in that, in these days of diminished funding, the schools rely on profits from the vending machines to fund school projects and benefits to the students. While the school board will make the decision about whether or not to renew the current contract, they may not have heard from parents and nutritionists cited in the case and may focus solely on the financial aspects of the situation. It's up to the writer to raise the issue and to propose a solution that will protect the children's health while preserving financial support for the school system. The business situation is important to the persuasive case. On the job, a new employee may see existing company practices with a fresh viewpoint, but, to be credible and to persuade decision-makers and leaders, the employee will have to make the case in terms of a financial business case. How the student describes the problem or the question to be answered sets the stage for the solution and the business case. For some cases, the student may need research to define the options and to decide on a direction.

Assumptions

Assumptions about how business decision-makers value information can lead students to put more weight on arguments based on areas other than the business case. For example, when making a case for a corporate gym, students typically give weight to arguments for employee morale and for enhanced recruitment ability without tying these arguments to a business case. As Liberman (2012) notes, hard numbers don't always tell the whole story for worthy projects, such as diversity efforts, but, as he also notes, "ultimately, hard numbers matter more" (p. 11). Students majoring in the more quantitative disciplines, such as accounting and finance, may be doing well in their courses but have done little thinking about how to use what they know to persuade. Critical thinking required by the cases leads them to apply what they know in support of the case they want to make.

Point of View

Because each case has more than one possible feasible recommendation, students must decide on an approach to the problem to arrive at a recommendation. All cases describe a basic point of view for the writer as an employee of the organization with a structural relationship to the decision-maker. The position of being embedded in a structural hierarchy will be common to most professional positions that students might obtain after graduation, and knowing how to propose and argue for an idea from this embedded point of view will serve their career advancement. The cases require students to direct their persuasion upward in a hierarchy or sideways to peers, both situations that will require communication skill to establish credibility for persuasion. In neither case will the writer have the leverage of leadership to mandate a solution, and the quality of the argument will determine the success of the persuasive effort.

Data, Information and Evidence

Developing skill in the use of library resources and source citation is an objective of the business report assignment. Students consider the credibility of resources in the light of what the audience will find credible, and the assignment requires the use of at least five references, including one source from the academic literature. Students receive instruction in the use of library databases customized to the set of cases from a library expert. Though all cases are attuned to issues current in the news, such as nutrition in the schools, public safety, air quality and student debt, students may need to research their topic to determine the issues involved and to decide upon a point of view. Most students include graphs and charts in their reports discovered in the process of research. The use of evidence allows students to consider building their credibility with source citation and to practice the use of APA style.

Concepts and Theories

To drive the persuasive effort, students operate in the context of classic rhetoric with the consideration of *logos* (logic), *pathos* (emotion), and *ethos* (character and credibility). Students are taught that effective persuasion incorporates all three elements. Use of this persuasive framework allows consideration of the importance of credibility, and how credible resources and source citation contribute to the perception of believability, knowledgeability, and honesty. For all topics, logos is required with a clear and compelling logical reasoning path, relevant and credible data, and a quantitative business case. Several of the cases also lend themselves to an emotional appeal. For example, the need for sick child daycare allows the writer to call upon the feelings of parents for their children, and the school vending machine case enables the writer to call upon concerns for children's health because of the epidemic of childhood obesity.

Inferences/Interpretations and Conclusions

The cases require students to interpret the data and evidence they find so that they build a case for their recommendation. Ample information is available on all the cases, but no one source or set of sources provides a roadmap to a recommendation or a "one best way" strategy for action. To craft a persuasive argument, students must weave together the information they find into a logical sequence of ideas, a demand quite different from other assignments they may have accomplished that require them merely to accumulate and report information. A persuasive case will not consist of merely citing a chain of sources, and it is the interpretive statements students make that reveal the depth and complexity of their thinking.

Implications and Consequences

For the business report assignment, students use an indirect strategy that provides all the information and reasoning early in the report. This approach assumes that the reader will need to be educated about the problem or situation and convinced up front that the problem is significant and worth time, effort and money to solve. The business case should illustrate the consequences to the business of the problem as well as the costs and benefits of the proposed solution. The culmination of the business report is a persuasive call to action based on avoiding or achieving financial consequences. The writer urges the decision-maker to take the recommended action, which, as noted by Wahlstrom (2002), "asks for something: money, permission, space, supplies, resources….time" (p. 83). The call to action is the reason for the report, and, as Reave (2002) notes, "unsolicited internal proposals are usually considered impressive when submitted by entry-level employees" (p. 10). With well-thought-out reports and proposals employees can identify themselves early as valuable contributors to the success of the enterprise.

Assignment Results

This assignment is difficult for students, but most are able to find credible sources and assemble them into an argument. When students succeed at this assignment, however, the results are impressive. Two of the first author's students have won the College of Business Administration Writing Award in successive years using their business reports. An assessor outside of our business school identifies the winners, and these students received high marks and good feedback for the cogency of their arguments, including the soundness of the business case.

For many, the need to make a financial case is a wake-up call versus trying to make a case solely on "what seems right." While few will be required to produce researched business reports on the job after graduation, the exercise of thinking in terms of business objectives and of crafting a business case will prepare students for the rigors of the workplace. Further, they benefit from the message that, as "the new kid on the block," they must show disciplined thinking to suggest and achieve changes in workplace procedures or strategies.

Finally, a hidden message in the variety of case settings is that sound business thinking and critical thinking abilities are useful in for-profit, non-profit, and private settings. Critical thinking and communication abilities will allow students to put their discipline-specific knowledge and skill to work for the benefit of clients and organizations. The two really go hand-in-hand to create business professionals who are willing and able to improve their organizations.

Suggestions for Future Research

The use of business cases to foster critical thinking skills and teach persuasive argumentation is a demanding exercise for both the students and the instructor. Some empirical support for the efficacy of the case-based approach would be a welcome addition to the literature on teaching business communication.

In a recent article on assessing and improving business writing at the MBA level, May, Thompson, and Hebblethwaite (2012) provide an assessment model that includes a seated writing assessment under controlled conditions. The assessment requires students, instructed in persuasive business writing, to produce a two page persuasive document in response to a case situation in a 2-hour period. The instructors assess against a comprehensive rubric and calculate percentages of students scoring good, satisfactory, and unsatisfactory for each element and sub-element of the rubric.

Using such a quantitative approach would set the stage for a control – test group design, where randomly drawn class sections receive the case-based treatment outlined in this paper while other sections receive a more traditional model of persuasive writing instruction. External graders, blind to the experimental conditions, could assess the results using a method similar to the approach presented by May et. al.

Another research approach could be the use of surveys of employers who have hired students receiving case-based instruction. The employers could evaluate the former students' critical thinking and persuasive skills, perhaps comparing to experienced employees or to other student hires. This approach, though challenging to execute, could generate some useful evaluative data as well as build rapport with employers who, in the final analysis, are the real customers of our work.

Demonstrated evidence of the efficacy of the approach could thus be of advantage to all stakeholders: to the universities that employ the approach for their business communication instruction, to the business community that employs new graduates, and to the students who acquire thinking and writing skills that will serve them throughout their careers.

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APPENDIX

Opposing Vending Machines in Schools

You are the Director of Business and Finance for a school district in Texas. You have been lobbied by representatives of the PTA and by the nutrition experts in the district to oppose an upcoming vending machine contract renewal with a national soft drink and snack company.

Vending machines, loaded with soft drinks and high-fat snacks, are increasingly under attack in schools and lunchrooms due to the obesity epidemic among youth. However, the School Board sees vending contracts as cash cows. The school district has two high schools, and, for an exclusive 10-year agreement at each school with the vendor, the school district will receive $150,000 up front and an additional $150,000 three years later. Commission sales on the soft drinks and snacks will bring in an additional $650,000 over the 10-year period. In the past, the vending machine payments supported student body activities such as sending students to choir concerts and paying athletic participation fees. Part of the income from the latest contract is already earmarked for new artificial turf on the school athletic field at one of the schools.

You have decided to research this controversy, including what other school districts are doing about their vending machine contracts. Consider a range of alternatives. You will write a business report, including the financial implications, to the Superintendent of Schools stating your position and recommendation. Assume that you will have an opportunity to communicate your findings in a presentation to the School Board.

Making a Case for a Company Gym

You are the Human Resources Vice President for a technology company headquartered in suburban Houston. You work in a multi-story office building owned by the company. Currently, 500 employees work in the building.

The basement of the building has 3,000 square feet of finished space that is currently empty. You believe installing a company gym in the space would be a terrific employee benefit and help the company too. The gym might be part of an overall Wellness Program.

Write a business report, including the financial rationale, to the CEO of your organization, Ms. Sarah Best, making a case for the employee gym. Assume that you will have the opportunity to present your findings to the Executive Committee on the feasibility of offering such a benefit.

The Feasibility of Sick Child Day Care

Day care is a fact of life for working parents in the United States. However, day care centers won't accept sick children. So, when their kids are sick, parents may have to call in sick themselves. The problem wreaks havoc on schedules for production, travel, meetings, and presentations.

Pick a business, government office, nonprofit agency, or educational institution that you know something about. Assume you work for the organization you select. Conduct some Web research on sick child day care (hint: there is a National Association for Sick Child Day Care).

Write a formal business report, including a financial pro forma, to the VP of Human Resources of your organization, making a case for the need for sick child care and recommending that the organization establish such a benefit. Assume that the VP will invite you to deliver an oral presentation to the HR staff on the feasibility of offering such a benefit based on the recommendations in your report.

One model is to create a site in a central area. An organization big enough to need a site just for its employees' children may be able to create one on-site. Small companies will want to team up with several other small businesses and split the cost. Additional alternatives may be possible as well.

ABOUT THE AUTHORS

Kathryn O'Neill has taught Business Communication at Sam Houston State University since 2011. Prior to beginning her career in academia, she enjoyed a career of 30+ years in Human Resource Development in various industry settings, including newspaper publishing, homebuilding, banking, and manufacturing. She earned her Ph.D. in HRD and her Masters of .Arts. in communication from Georgia State University, and her Bachelor's degree. in journalism from Texas Tech University. Her research interests are business communication pedagogy and interpersonal communication in the workplace.

Gary May is Professor of Management in the College of Business at Clayton State University, a senior unit of the University System of Georgia. He holds a Business Administration degree from Duke University and a Masters and Ph.D. in Human Resource Development from Georgia State University. His current research interests include strategic

planning for small businesses, leadership communication skills, the use of persuasion in business presentations, and assessment of learning transfer.