

# Mapping the case analysis genre continuum in an Information Systems program

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**Abstract:** The case analysis, a prominent genre within business and information systems (IS) programs, is challenging for students because there are competing demands to perform both academic/learner and professional/mock-consultant roles. Drawing on design-based research data from four different IS courses at our institution, in this paper we aim to map a pedagogical to professional case analysis genre continuum. We examine the expectations for student roles in these four different courses, where and how the case analysis assignments in these courses fit into the continuum, and whether they facilitate an effective developmental trajectory as a whole. Our analysis shows that our institution's trajectory is mostly effective in moving students from pedagogical to professional roles, but could be enhanced with extra support for case analysis writing that falls in the middle of the continuum. We offer recommendations for how academic programs could leverage the value of the developmental trajectory to create a cohesive sequence across the four-year student experience.

**Keywords:** disciplinary writing, case analysis genre, pedagogical genres, professional genres, information systems



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### 1. The case analysis genre continuum: Moving from pedagogical to professional genres

The case analysis is a prominent genre in business and information systems (IS) undergraduate classrooms. It is a genre that requires the student writer to analyze a business/organization's problems or opportunities to improve and provide recommendations (Forman & Rymer, 1999a, 1999b; Gardner, 2012; Nathan, 2013; Zhu, 2004). In this genre, students apply disciplinary concepts, theory, and knowledge in their analysis of the case and as the foundation of their recommendations.

Some scholars have described the case analysis as a purely pedagogical genre (e.g., Forman & Rymer, 1999a), while others have described it as a simulation of real-life business writing (Mauffette-Leenders, Erskine, & Leenders, 1997). Pedagogical genres are institutional or curriculum texts that students produce to display their learning and to earn grades. Pedagogical genres may share some of the textual features and conventions of disciplinary genres but may not necessarily exist outside of educational settings (Berkenkotter & Huckin, 1993; Freedman & Adam, 1996; Freedman, Adam, & Smart, 1994). In contrast, professional genres are "focused on material or discursive outcomes" and "participants are often unaware of the learning that occurs" (Freedman & Adam, 1996, p. 410). Thus, in pedagogical genres, both the writer and reader are concerned with what the writer knows—the purpose is epistemic—while in professional genres, the main concern is what the reader can get from the text—the purpose is instrumental (practical, ordinary, action oriented) (Freedman, Adam, & Smart, 1994). To assert that the case analysis genre is purely pedagogical or professional, however, would be to ignore its complexity, the variety of goals and expectations that different instructors have when assigning a case analysis, and the value that pedagogical genres have in preparing students to meet professional expectations (Freedman & Adam, 1994; see also Parkinson, Demecheleer, & Mackay, 2017, for similar arguments about a different genre in a different discipline).

Considering its complexity and diverse classroom use, it is more accurate to understand the case analysis as a genre family comprising genres that sit "along a pedagogical to professional continuum" and that have distinct social purposes that range "from more discursive 'essay-like' assignments to more highly structured professional report assignments" (Gardner, 2012, p. 32). Despite the differences in social purpose across this continuum, Gardner asserts that all case study genres can be described as "apprenticeship genres" because they are "intended to assess students' ability to deal with practical problems associated with their chosen profession" while also requiring students to "show their current knowledge and understanding, or to apply theory in practice" (p. 14). According to this view, then, all case analysis genres have, to some extent, competing

pedagogical and professional demands and their relative proportion would determine where a particular case analysis exists along the continuum.

The existence of these competing demands means that students may be expected to enact, on the one hand, the role of student by spelling out disciplinary knowledge (Freedman & Adam, 1996, see also Lung, 2008; Yeung, 2007), while, on the other, the student may be expected to enact the role of consultant by focusing on recommendations and policy-making. The expectation to enact dual roles is challenging for students. Research has shown that the need to draw on the course content and the awareness of the professor as an audience member constrains students' ability to go beyond the student role even when asked to make recommendations as a consultant (Freedman et al., 1994; Forman & Rymer 1999; Nathan 2013). When students are confused about these roles they often resort to reporting on the case rather than engaging in analysis (Miller & Pessoa, 2016).

These dual roles, then, are a source of tension for students, a tension created by the competing pedagogical and professional demands of the genre. This tension is likely to be greatest in case analyses that sit near the middle of the genre continuum, where both roles are central to instructor goals. As Zhu (2004) points out, the two roles "may co-exist in the same course and even the same assignment. The school and professional forums [...] may be juxtaposed and co-existent" (p. 130), and with enough explicit instruction, it may be possible to alleviate the tension between the two roles such that their coexistence is productive (Pessoa et al., under review).

Given the varied expectations for the genre and potential tensions caused by competing academic and professional demands, Gardner and Nesi (2012) suggest that understanding "how [the case analysis] is realized in discipline-specific genres would be of value" (Gardner & Nesi, 2012, p. 33) to help students effectively meet disciplinary genre expectations. Responding to this call, in this article we provide a detailed look at the case analysis genres assigned in four different courses in the Information Systems (IS) program in our institution. The genre continuum described by Gardner (2012) has been extremely valuable to our understanding of case analysis writing. We agree with Gardner and Nesi (2012) that the developmental trajectory that the continuum embodies "can create assessment pathways for [...] students, using less complex genres as a gateway to the more elaborate genres in which they may be re-contextualized" (p. 47), and is therefore very valuable to teachers and students.

Based on what we have learned from our interdisciplinary collaboration with IS faculty, we aim to map a pedagogical to professional case analysis genre continuum in IS. We draw on design-based research data—assignment guidelines, faculty interviews, and analysis of student writing—from four courses to examine: differing expectations for student roles, where and how the case analysis

assignments in these courses fit into the continuum, and whether they facilitate an effective developmental trajectory as a whole. While we have analyzed student writing in these courses (discussed elsewhere in detail; see Miller & Pessoa, 2016; Pessoa, Gomez-Laich, Liginlal, & Mitchell, 2019; Pessoa et al., under review), in this paper we take a broader view of the entire program. Our analysis shows that our institution's trajectory is mostly effective in moving students from pedagogical to professional roles, but could be enhanced with extra support for case analysis writing that falls in the middle of the continuum. We offer recommendations for how academic programs could leverage the value of the developmental trajectory to create a cohesive sequence across the four-year student experience.

## **2. The context of the study**

This study is part of a larger interdisciplinary collaboration between us – English faculty with training in linguistics – and six IS professors at an English-medium American branch campus in the Middle East. The IS professors we worked with have extensive experience teaching IS and working in this context (three to twelve years). All courses at the institution are taught in English, and the curriculum largely follows that of the main campus in the U.S. Approximately four hundred and fifty students from thirty-five nationalities study at the institution, with most coming from Qatar, the greater Middle East, Pakistan, India, Bangladesh and an increasing number from China. The students have been educated in various educational settings, including Arabic-medium public schools, English-medium private schools, and local “national” schools (e.g., the Indian educational system in Qatar). While some arrive well prepared, many students struggle in the transition to college and have difficulties meeting disciplinary writing expectations, largely due to their limited experience reading and writing academic texts in English and because some faculty are unprepared to meet the needs of our linguistically and educationally diverse student body (see e.g., Miller, Mitchell, & Pessoa, 2014; Miller & Pessoa, 2016; Mitchell & Pessoa, 2017).

The IS program at our institution exposes students to four areas that are fundamental to understanding problems in this discipline: organizations, decision making, research methods, and professional communication. The program is based on professional core courses that teach students to analyze, design, implement, and test information systems using current and emerging organizational and technological solutions to real-world problems. One of the core courses is project-based: small groups develop solutions to real-world clients' problems. The flexible nature of the program encourages students to explore their interests. For example, students may specialize in social and global aspects of technology; technology and applications development; applications of technology to business; or user experience in design.

### 3. Design-based research and SFL for scaffolding disciplinary writing

We employ a design-based research approach (Anderson & Shattuck, 2012). Design-based research is a formative research method that involves collaborations between researchers and practitioners. This method focuses on the design and implementation of an intervention to examine its impact on learning and teaching in a real-world setting through mixed methods and techniques. Design-based research is an iterative process: data is collected, analyzed, and reflected upon to improve outcomes and more effectively develop future interventions, pedagogical practices, and theory building.

We rely on systemic functional linguistics (SFL) as a theory of language and SFL-based genre pedagogy as a theoretical basis for making genre expectations explicit for students. SFL focuses on the analysis of language as a meaning-making resource to accomplish different functional goals in different social contexts. SFL provides rich descriptions of features of disciplinary genres with an explicit focus on the linguistic resources needed to meet genre expectations (e.g., Christie & Derewianka, 2010; Coffin, 2006; Schleppegrell, 2004). Using the teaching and learning cycle (Rothery, 1996), SFL-based genre instruction aims to make language choices explicit to students by deconstructing mentor texts and co-constructing texts with students so that they can eventually meet genre expectations independently.

From SFL, we use the Onion Model to help students move from knowledge display to knowledge transformation which is required for analysis. In our previous research, we found that many students resort to describing the case or reproducing disciplinary knowledge rather than using the disciplinary knowledge to analyze and evaluate the case. Thus, we knew from the outset that we needed to provide explicit instruction to help students move from knowledge display to knowledge transformation (cf. McCarthy Young & Leinhardt, 1998; Scardamalia & Bereiter, 1987). To address this need, we use the SFL-based Onion Model (Humphrey & Economou, 2015) extensively in our scaffolding materials. The Onion is a model of academic writing development that can aid in unpacking the language expectations of genres across the disciplines. We use this model to draw students' attention to the differences between the language patterns of description, analysis, and argument, and to how these patterns are layered and interdependent. Description involves "reproduc[ing] knowledge usually by summarizing" with a focus on entities and sequences of events (p. 40). Analysis is characterized by "re-organisation by the writer of information from the field, or one or more sources, in some original way for the purposes of the text" (p. 42). Description, with its summarizing function, is often embedded within Analysis to serve the purposes of the writer. Finally, Argument "develops and argues for an explicit evaluation of, or claim about" ideas or perspectives within a field of study. Description and Analysis can be embedded within an Argument to serve the

purposes of the author's claim. Arguments are also generally characterized by a claims-reasons framework. With this framework, we can better explicate and scaffold the language expectations of academic writing genres for students in many disciplines. We discuss how we used the Onion Model to scaffold case analysis writing in more detail elsewhere (Mitchell & Pessoa, 2019; Pessoa et al., 2019).

Using our SFL-grounded, design-based research approach, we scaffolded case analysis writing with six different professors in four different classes. Our iterative collaborative process includes: 1) meetings with the professor to understand his/her writing expectations; 2) analysis of former high-graded and low-graded student writing to identify valued features of the case analysis genre; 3) think-aloud protocols with the professors to confirm valued features of the genre; 4) re-design of the assignments to make expectations more explicit for students; 5) design of teaching materials to scaffold case analysis writing; 6) 30-minute-long writing workshops in the IS classes to unpack valued language resources using student sample texts and mentor texts written by us; 7) analysis of writing produced by students after the workshops; 8) reflection on the process of collaboration with the faculty; 9) surveys and interviews with students on the writing workshops; and 10) re-design of the scaffolding materials based on what we learned from the whole process. We discuss our process of collaboration more thoroughly elsewhere (Mitchell & Pessoa, 2019; Pessoa et al., 2019).

#### **4. Data sources**

We focus on four classes where students write case analysis genres that sit along the academic-professional continuum. Table 1 shows the name for each course and a description of each assignment.

Students take these four courses during their studies in the order in which they are listed. Courses 1 and 2 are required courses for first-year students. Students take Course 1 in their first semester and Course 2 in the second semester. Course 1 focuses on introducing students to the field of IS by providing an overview of what students will encounter in their future courses and in the IS field. Course 2 aims to help students understand the role of information systems in modern society and the means by which these systems are created. Course 3 is an elective course taken by many students during their third year. This course aims to promote an understanding of designing for user experience and it focuses on three main contexts: web design, mobile app design, and multimodal interactive design. Course 4 is the required capstone course for IS students in this IS program. In this course, the students work with a real client to propose, design, and implement an information systems solution.

Table 1. Courses under Study and Type of Case Analysis

Course	Details of the Case Analysis Assignment
Course 1: Concepts of Information Systems	Students produce a full-fledged case analysis write-up with expected sections including an analysis and evaluation of a company using a specific concept from the discipline and brief recommendations for the company and similar companies to enhance their practice.
Course 2: The Information Systems Milieux	Students answer questions about a specific company using concepts from the discipline.
Course 3: Human Computer Interface Design and Testing	Students describe/narrate an experience followed by an analysis of the experience using a disciplinary framework and technology-based recommendations to enhance the user experience.
Course 4: Information Systems Consulting Project	Students propose, design, and implement a usable information system to solve a problem for a real client and write various documents for the real client audience including a proposal, a report, and system's specifications.

In each course, the students write a case analysis genre, as shown in Table 1. Following from the definition of case analysis, the assignments in Courses 1-3 ask students to apply disciplinary knowledge to a case provided by the professor in order to analyze, evaluate, and provide recommendations. Course 4 is distinct because the case comes from the details provided by the real client the students have been assigned; students need to analyze and evaluate the client's problem and argue for their proposed solution. Although students may rely on disciplinary knowledge throughout this project, there is no specific disciplinary framework for students to apply to their case.

Given the required nature of Courses 1, 2, and 4, the case analysis expectations remain mostly consistent no matter who teaches these courses. As an elective course, Course 3 is unique in consistently requiring students to produce one or two case analyses: during the course of our 3-year interdisciplinary collaboration, this was the only elective course that required case analysis writing. More information about each assignment is discussed in the Findings section.

## 5. Analysis

Based on our interdisciplinary collaboration, we know a great deal about these courses. In this paper, we provide an overview of each assignment and analyze where each of them sits on the case analysis genre continuum, focusing on whether the assignment has a pedagogical and/or professional purpose, and whether students are expected to enact a student and/or mock professional role. We support our analysis with excerpts from the assignment guidelines, student writing, and interviews with the professors.

To determine where student writing sits along the academic-professional continuum, we draw on Gardner's (2012) SFL-based description of the linguistic features of the business case analysis genres and our own SFL-informed work identifying the pedagogical and professional features of student case analysis writing (Authors, under review). Gardner (2012) identifies three case study genres of business along the continuum of pedagogical and professional genres: single issue reports, organizational analyses, and company reports. The single-issue report is written for an academic audience with more explanation of and references to academic theory and is presented in a more essay-like discursive format. The student writer clearly assumes a student role for a multifaceted audience or an assessor. Although general recommendations are given, the student "does not play a consultant role or assume any personal responsibility for the advice that is provided" (p. 22). At the other end of the continuum, the company report is written for a professional audience (a real or imaginary business or client) and is formatted with section headings and bullet points in ways that mimic professional reports written to be easily skimmed by busy managers. Any part of the company report that indexes the pedagogical nature of the assignment is separated from the main document (e.g., in an appendix). In the middle of the continuum are organizational analyses where the students enact both a student role by referencing "theoretical discussion" and a mock professional role by making "recommendations for shareholders" (p. 22).


Based on these descriptions, we focus on the student role as reflected in the target audience and the corresponding document features in order to determine where a student case analysis writing assignment sits on the continuum. When it requires a student role, the case analysis targets an academic audience (i.e., the professor) and includes definitions and repeated references to disciplinary knowledge; displaying and applying disciplinary knowledge takes precedence over making professional recommendations. When it requires a mock-professional role, the case analysis targets a professional audience and the document is formatted for a busy reader with no explicit references to disciplinary knowledge; there is a greater focus on making sound professional recommendations. When it requires both student and mock-professional roles,



the case analysis has a dual academic-professional audience; it may share features of the more academically and professionally oriented documents.

These case analyses with dual audiences that sit in the middle of the continuum may create challenges for students as they are expected to enact both student and professional roles. Elsewhere, we have argued that the academic-professional tension of case analyses that sit in the middle of the continuum can be alleviated by having students enact the student role in the analysis section and the professional role in the recommendations section (Pessoa et al., under review): in the analysis section, the student writer explicitly displays disciplinary knowledge and uses it to analyze the case and identify problems and opportunities; in the recommendations section, the student adopts a mock professional role by providing justified recommendations that stem from the analysis and without explicit references to disciplinary knowledge. Table 2 summarizes the features of case analysis along the pedagogical-professional continuum that we used in our analysis.

Table 2. Summary of features of case analysis along the pedagogical-professional continuum

MORE ACADEMIC		MORE PROFESSIONAL
Pedagogical Case Analysis	Pedagogical/Professional Case Analysis	Mock Professional Case Analysis
Written for an academic audience	Written for a dual academic-professional audience	Written for a professional audience (a real or imaginary business or client)
Makes references to academic theory and is presented in a more essay-like discursive format	Student writer enacts both a student role making reference to theoretical discussion and mock professional role with recommendations for shareholders	Makes no explicit references to disciplinary knowledge
Student writer assumes a student role for a multifaceted audience or an assessor		Formatted with section headings and bullet points in ways that mimic professional reports written to be easily skimmed by busy managers

*Note.* Adapted from Gardner (2012).

Following from this analysis, we map where and how each case analysis fits on the academic-professional continuum and how effectively it aligns with a developmental trajectory in the program under study.

## 6. Findings

### 6.1 Course 1: A pedagogical case analysis with a focus on applying one disciplinary framework

#### Assignment overview and purpose

As a first-year course, the case analysis assignment for Course 1 was based on two short readings on the international toy company LEGO and its main purpose was for students to analyze and evaluate LEGO's performance by applying the disciplinary framework of *innovation*. The assignment guidelines gave students explicit instructions about the sections the assignment had to include (i.e., introduction, summary of the case, analysis of the case, and recommendations) and what to include in each section. See Figure 1 for an overview of the assignment.

#### Where the assignment sits on the continuum

This assignment sits on the pedagogical end of the continuum and students enact a student role. The assignment guidelines reveal its pedagogical nature by asking students to explicitly display their disciplinary knowledge: "*state your evaluation of the company's use of innovation. Define the types of innovation you will refer to. Provide evidence to support your evaluation of the company's use of innovation*". Rather than providing recommendations to LEGO, students are asked to consider how other companies could learn from what was found from the analysis. Excerpt 1 provides an example of how some of these instructions correspond with students enacting a learner role in this pedagogical case analysis.

1. LEGO was successful in its approach to innovation, particularly in its use of complementary and incremental innovation. Complementary innovation is the process of creating new products that 'complement' a company's existing products in order to enhance the original product. LEGO's use of complementary innovation was successful because ... This shows that LEGO was successful in the use of complementary innovation as it increased the company' profits.

LEGO's use of complementary innovation was also successful because it led to an increase in the number of customers...This confirms LEGO's success in its implementation of complementary innovation as it helped the company to increase the number of customers.

**What is a case analysis?**

*A case analysis is a document in which you evaluate how a company dealt with a problem. In this case analysis, you will analyse the strategies that LEGO implemented to overcome its decline in sales and the extent to which they were successful or not. To do this, you will have to first explain the case in your own words. This means that you will have to summarize and synthesize the problem(s) that LEGO faced and the solution(s) the company implemented. After this, you will have to analyze and evaluate the case. To do this, you are to rely on theoretical frameworks or key concepts learned in class. In this case, you will refer to the different approaches to innovation – e.g., incremental vs. radical innovation, process vs. product innovation, and stages of innovation. You will apply these concepts to analyse LEGO’s innovation attempts and their degree of success/failure.*

**I. Introduction (~1/2 page)**

In this section, you will introduce the case, analytical framework, and main argument from your analysis. Here are some guidelines.

- Provide a background and description of the company. Cite one reference to support your discussion. What problem(s) did LEGO encounter? State each issue or problem from “Trouble in Legoland”
- State the purpose of this case analysis based on the above description and the focus of your analysis (Introduce the key concepts from the approaches to innovation that you will use in your analysis)
- State your main argument from your analysis of the case: E.g., “My analysis shows that LEGO was successful/somewhat successful/not very successful in their approach to innovation because of...” (You can name your sub-claims and their connection to your theoretical framework of innovation)

**II. Summary of the case**

In this section, you will report on the issues/problems that LEGO faced and the solutions it implemented to solve its problems. You may consider the following questions.

- What problem(s) did LEGO encounter? State each issue or problem from “Trouble in Legoland”
- In Poul’s vision what kind of innovation strategy was required for LEGO after 1998?
- How did Lego solve their problems?

**IV. Analysis (2/3 page)**

In this section, you will analyze/evaluate the case in connection to theoretical frameworks and/or concepts from information systems. For this case analysis, you will use the different strategies for innovation that we discussed in class: e.g., incremental vs. radical innovation, process vs. product innovation, and stages of innovation.

- State your evaluation of the company’s use of innovation (i.e., successful, somewhat successful, unsuccessful). The evaluation becomes the claim you are making.
- Define the types of innovation you will refer to.
- Provide evidence to support your evaluation of the company’s use of innovation.
- Show how your evidence connects to your evaluation that LEGO was successful/unsuccessful in its use of innovation.

**V. Conclusions & Recommendations (3 to 4 sentences)**

- Sum up the main points from the case and link that to what other similar companies can learn from the experience of Lego.

*Figure 1. Course 1 case analysis assignment.*

In Excerpt 1, the student displays their knowledge and understanding of the disciplinary framework of innovation. The student writing in this excerpt is

governed by the student's need to provide appropriate evidence and show control of disciplinary knowledge embodied in the disciplinary framework. Similar to descriptions of pedagogical business case analyses, this writing is not "praxis oriented" (Freedman, Adam, & Smart, 1994, p. 204) and "the reality of the rhetorical situation [has] nothing to do with real world action" (Freedman et al., 1994, p. 205).

### **Our reflection on the assignment**

The professor of this course called this assignment a "baby case analysis," and we think it aptly fits this description and serves an important role in the developmental trajectory. The assignment is strong in that it requires a document that resembles a full-fledged case analysis with expected parts (e.g., analysis and recommendations) in the first semester of the program. This case analysis is clearly pedagogical with students expected to enact a student role. Although specific to the case of the company LEGO, this case analysis resembles Gardner's single-issue report in that students are expected to display their knowledge of one disciplinary framework for the professor audience. This is expected in a first-year introductory disciplinary course where students do not have enough knowledge of multiple disciplinary frameworks and expertise to enact a professional role.

## **6.2 Course 2: A pedagogical case analysis with a focus on applying multiple disciplinary frameworks**

### **Assignment overview and purpose**

The case analysis in Course 2 encompasses a list of questions about the company SmoothPay for which students are to provide discrete answers. When working with the professor to scaffold the case analysis in this course, we suggested that it might be preferable to build on the previous semester by having students write a full-fledged case analysis. However, it became apparent that he preferred to keep the case analysis as a series of questions. The professor stated:

I think of it as multi-dimension report. So, they are talking about many things. One question might be about Porter's Five Forces, another question might be about core competencies, and then another question might be about culture and the company. So, it's not necessarily a single topic report where they can start with the background, then a problem and then recommendations. So, it cannot be integrated together. They need to write the question number or a sub-heading prior to answering the question. So,

in that sense I want to keep that because each question is graded independently.

Despite this preference, the professor was amenable to our recommendation to change the wording and order of some of the questions. We changed some of the wording of the questions to make it more explicit whether students had to describe, analyze, or argue; and we ordered the questions so that they guided students through more coherent processes of planning, analysis, and writing. Figure 2 shows the original questions written by the professor and the revised questions that were provided to the students.

As shown in Figure 2, the original assignment was divided into two sections. Each of these sections had a series of questions that did not seem to be ordered strategically. For example, Question 6, which asks students to consider the case in the context of a bigger industry, was too late in the sequence. The revised assignment is divided into four sections (note that the number of questions did not change). It starts with an introductory question that asks students to contextualize the case of SmoothPay in the broader field of the mobile payment industry by defining mobile payment, identifying its major challenges, and considering how IS could help solve some of these challenges faced by the industry at large.

Original Assignment	Revised Assignment
<p><u><i>Part 1: Enterprise Strategy and IS at SmoothPay</i></u></p> <p>Explain the term “strategic value.” Discuss, with three specific examples from the Smoothpay case, on how IS provide strategic value for the organization. While engaging material from the case, you should <i>also</i> review and evaluate SmoothPay’s website and public systems (e.g. mobile apps, etc.).</p> <p>Define network effects. Explain how SmoothPay uses network effects to grow its business. In your explanation refer to materials in the case and outside sources you independently researched.</p> <p>Does SmoothPay demonstrate operational effectiveness or strategic positioning? Give three reasons to support your argument.</p>	<p><u><i>Part 1: Mobile Payment</i></u></p> <p>What is mobile payment? How has mobile payment evolved over time? Research, identify, and explain four critical challenges facing the mobile payment industry. For each challenge, identify and justify ways in which Information Systems (IS) could provide an innovative solution.</p> <p><u><i>Part 2: Enterprise Strategy</i></u></p> <p>Explain the term “strategic value.” Discuss, with three specific examples from the Smoothpay case, on how IS provide strategic value for the organization. While engaging material from the case, you should <i>also</i> review and evaluate SmoothPay’s website and public systems (e.g. mobile apps, etc.).</p> <p>What are SmoothPay’s core competencies? How do these competencies differ from what is offered by its competitors?</p>

<p>What are SmoothPay’s core competencies? How do these competencies differ from what is offered by its competitors?</p> <p>In class, we discussed how the Internet influences industry structure. Apply Porter's Five Forces framework to analyze SmoothPay’s competitive strategy based on the information provided in the case and other available information about the related industry. Your discussion must clearly identify how SmoothPay could use IS to gain a competitive advantage.</p> <p><u><i>Part 2: Future IS Strategies for SmoothPay</i></u>          What is mobile payment? How has mobile payment evolved over time? Research, identify, and explain four critical challenges facing the mobile payment industry. For each challenge, identify and justify ways in which Information Systems (IS) could provide an innovative solution.</p> <p>How should SmoothPay protect its business model? How should it handle competitors and imitators in Canada and internationally?</p> <p>What could be the next strategic direction for SmoothPay to deal with the challenges faced by the industry and continue its growth? Give three specific examples of how IS could be better leveraged for its growth? For each example, describe: 1) the feasibility of these solutions (e.g. highly feasible, moderately feasible or somewhat feasible); and 2) the timeline required to implement the solution (e.g., long term or in years, mid-term or in months or short-term or in weeks). Justify your response.</p>	<p>Define network effects. Explain how SmoothPay uses network effects to grow its business. In your explanation refer to materials in the case and outside sources you independently researched.</p> <p><u><i>Part 3: Market Positioning</i></u>          Does SmoothPay demonstrate operational effectiveness or strategic positioning? Give three reasons to support your argument.</p> <p>In class, we discussed how the Internet influences industry structure. Apply Porter's Five Forces framework to analyze SmoothPay’s competitive strategy based on the information provided in the case and other available information about the related industry. Your discussion must clearly identify how SmoothPay could use IS to gain a competitive advantage.</p> <p><u><i>Part 4: Future Recommendations</i></u>          How should SmoothPay protect its business model? How should it handle competitors and imitators in Canada and internationally?</p> <p>What could be the next strategic direction for SmoothPay to deal with the challenges faced by the industry and continue its growth? Give three specific examples of how IS could be better leveraged for its growth? For each example, describe: 1) the feasibility of these solutions (e.g. highly feasible, moderately feasible or somewhat feasible); and 2) the timeline required to implement the solution (e.g., long term or in years, mid-term or in months or short-term or in weeks). Justify your response.</p>
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Figure 2. List of questions in Case Analysis in Course 2

In Part 2 and Part 3, students are expected to analyze the company's enterprise strategy and market positioning using a variety of disciplinary concepts (e.g., Porter's Five Forces, network effects, operational effectiveness, strategic positioning). In Part 4, students have to provide recommendations in terms of what the company can do to protect its business model and how IS can help the company to continue its growth.

### **Where the assignment sits on the continuum**

In completing this assignment, students assumed a student role. The fact that the case analysis takes the form of a list of questions that students have to answer with explicit references to disciplinary knowledge indicates its pedagogical nature. The questions ask students to display their disciplinary knowledge (e.g., "*Explain the term 'strategic value,' 'Define network effects'*") and apply it to a specific case (e.g., "*Explain how SmoothPay uses network effects to grow its business,' 'Apply Porter's Five Forces framework to analyze SmoothPay's competitive strategy'*"). Students thus enacted their student role in this pedagogical case analysis in similar ways as in Excerpt 1. For an example of how the student displays their understanding of the disciplinary framework of Porter's Five Forces and applies it to the case of SmoothPay, see Excerpt 2.

2. Industry rivalry refers to a company's position in the market in relation to its competitors. Industry rivalry is high for SmoothPay because the mobile payment industry is filled with different options for customers. SmoothPay has many competitors such as LevelUp, Suretap, Ritual, Venmo, Google Wallet, Apple Pay and many others (Patterson, 2017). All these competitors serve similar, if not the same, features and services as SmoothPay. Even though not all of SmoothPay's competitors offer loyalty rewards, most of them do (e.g., LevelUp and Suretap) (Halliday & Dong, 2016). This makes it hard for SmoothPay to differentiate its service and products, leading to fierce competition in the industry and a high pressure of industry rivalry force on SmoothPay.

The student begins by introducing and defining an element of the disciplinary framework (i.e., industry rivalry) to show control of disciplinary knowledge. The student further demonstrates their understanding of this element of the disciplinary framework by applying it to evaluate the case at hand and to support that evaluation with relevant details about SmoothPay.

### **Our reflection on the assignment**

Conceptualizing the case analysis as answers to a series of questions makes this assignment sit on the pedagogical end of the continuum. Referring to problem questions (such as the ones used in this case analysis assignment), Gardner (2012) argues that while they “may provide practice in the skills needed for a workplace activity (legal or financial advice to a client, for example), they have generally been simplified to allow students to focus on a specific issue of theory or application” (p. 19). In this pedagogical case analysis, the focus of each question is clear as it explicitly asks students to apply a specific disciplinary concept. Like in Course 1, this is expected in a second-semester first-year disciplinary course where students do not yet have enough disciplinary knowledge and expertise. However, unlike Course 1, where the focus of the case analysis was on one disciplinary framework (innovation), in Course 2, the students are asked to display knowledge of and apply multiple disciplinary concepts in their analysis. Thus, while conceptualizing this pedagogical case analysis as a set of questions may seem like a setback from Course 1 (in which the students wrote a text that more closely resembles the structure of a professional case analysis), the assignment in Course 2 does represent a step further along the students' developmental trajectory by requiring them to control more disciplinary knowledge. In addition, the professor's willingness to change the order of the questions made the set of questions enable a more coherent planning and writing process. To help students move along the case analysis continuum, courses such as this one could ask students to produce a second case using only one or two disciplinary frameworks (rather than multiple ones) and write a full-fledged document with analysis and recommendations sections.

### **6.3 Course 3: A pedagogical-professional case analysis that highlights the need to alleviate the student-professional role tension**

#### **Assignment overview and purpose**

In the case analysis assignment that students write in Course 3 (third-year elective course) students “develop” the case themselves. Rather than being provided with a case to analyze, the students write their own cases. In line with theories of user experience design, the students visit a place that is a “designed experience” (e.g., a local museum; the national library), narrate the experience, and analyze the experience using relevant disciplinary frameworks. For the two case analysis assignments in this course, the students used Wright and McCarthy's (2003) Technology as Experience Framework to analyze the experience of a visit to a local museum and Jordan's (1999) Pleasure Framework to analyze the National Library



user experience. In both cases analyses, the ultimate goal of the analysis is that it led to technology recommendations to enhance the experience for all users.

### **Where the assignment sits on the continuum**

Our in-depth analysis of this case analysis genre (Pessoa et al., under review) shows that this assignment sits in the middle of the pedagogical-professional case analysis genre continuum since it requires the coexistence of student and professional roles. In the analysis section, the student is expected to enact a learner role by displaying their knowledge of disciplinary frameworks and their ability to apply them to the case in order to identify aspects of the experience that could be improved by technology. This is evident in the revised assignment guidelines: *“ You need to analyze your narrative of your experience at the museum using the four threads of experience in McCarthy’s framework: compositional, sensual, emotional, and spatio-temporal. You will use the four threads to present and organize your analysis. In your analysis, you will focus on the user experience rather than your own personal experience. You will provide depersonalized positive and negative evaluations about the museum from a user experience perspective highlighting negative aspects of the experience that could be improved with the use of technology.”*

In the recommendations section, the student is expected to enact the role of a mock professional by providing technology solutions for enhancing the user experience, justifying their recommendations as *necessary* (addressing problems that have been established to be important in the analysis section), *appropriate* (the best fix for the identified problem), and to a lesser extent, *feasible*. These expectations are outlined in the revised assignment guidelines: *“ Based on your analysis, you need to provide at least five recommendations of how technology can help improve the overall experience in the museum. Your recommendations should feature some innovative technologies and related implementation ideas. The recommendations need to stem from the analysis and need to be motivated by problems with the user experience that you identified in your analysis.”*

### **Our reflection on this assignment**

The dual academic and professional expectations of case analyses that sit in the middle of the continuum are usually not made explicit to students, which can lead to challenges for students (see Miller & Pessoa, 2016). This was the case in the first iteration of this course in which the academic-professional tension of this case analysis assignment resulted in recommendations sections that were overly pedagogical rather than purposefully professional, as seen in Excerpts 3 and 4.

Excerpt 3 shows an overly pedagogical recommendations section in which the student justifies the recommendation with overt references to the disciplinary framework and connects the recommendation to the justifications with relational

verbs (*“links to”*). This explicit listing of elements of the disciplinary framework suggests that the student imagines the professor as the audience. Furthermore, the support for the justification is completely based on the student’s subjective experience (e.g., *“in my narrative”*), and to a lesser extent when the student writer partially generalizes to *“a visitor like me.”*

### 3. Overly pedagogical recommendations

A buzzer near the shelves that calls a librarian for assistance when needed. This technology directly links to the psycho-pleasure part of the participation phase. It directly links to all the 3 lower level attributes which are: Cognitive arousal, Progression and achievement and curiosity fulfillment. This is because when a visitor like me gets a question such as how to find a book they want to find, or how to print in case the printer wasn't connected to the iPad like what happened in my case, the visitor will not bother to go down and ask the question because the library is too big. In my narrative, this was the case, and I couldn't achieve my goal of finding a book related to my research in Psychology topic or I couldn't fulfill my curiosity of exploring the different books collections. This resulted in a lot of questions in my mind which created a negative cognitive arousal.

In contrast, in Excerpt 4 the student adopts a purposefully professional role. The student argues for the feasibility of the forthcoming recommendations by asserting that they can all be accomplished by taking advantage of cell phones, a technology that users already have with them. By claiming that the recommendations would make the user experience *“much richer and effective,”* the student demonstrates an understanding of the overall purpose of this section. By referring back to *“all of the above problems,”* the student highlights the relationship between the analysis and recommendations section. The student makes a recommendation and articulates the benefits of the recommendation through material processes: by leveraging a piece of technology of the user’s phone, the museum could *“solve the problem”* of losing visitors’ interest. The student subtly refers back to a problem that was established in the analysis section and as part of the experience analyzed with the disciplinary framework; rather than saying *this links to the emotional thread* or *this would help the part where I got bored during the visit*, the student focuses the justification on how it would benefit any user as support for the overall claim about improving the entire museum experience.

### 4. Purposefully professional recommendations

All the above problems can be solved by making use of that one device that almost every visitor of the museum would have with themselves: a mobile phone. The following solutions would help make a museum visitors

experience much richer and effective as the only thing they would need is their mobile phone which they anyways would carry with them: First, a mobile application that would make use of the camera of the phone to scan an artifact and pull out information about it. In this case, the tour guides would not be needed and a visitor could go around by himself and pull out information only about the artifacts he is interested in. This will solve the problem of visitors finding the experience monotonous, boring and will be quickly able to find out things that look interesting to them. Second, a...

In order to help students navigate the academic-professional tension posed by this assignment, it is important to be explicit about the purposefully pedagogical nature of the analysis section, the purposefully professional nature of the recommendations section, and the rhetorical interdependence of the two. In a purposefully pedagogical analysis section, the student imagines the professor as the audience, applies the disciplinary framework(s) explicitly to analyze details from the case, and comments on the case's strengths and—more importantly—its shortcomings that could be revisited in the recommendations section. In purposefully professional recommendations sections, students enact a mock-professional role by imagining a client as the audience. Students create a clear relationship between the two sections by repurposing negative evaluations from the analysis as justifications for the recommendations. Having demonstrated explicit disciplinary knowledge in the analysis section, the recommendations can be based on the analysis without explicit references to specialized disciplinary terminology that would be irrelevant to a professional audience.

Rather than viewing the competing demands of the two roles as problematic, we believe it is important to be explicit with students about the language needed to enact learner and mock-professional roles effectively. This assignment certainly provides an opportunity for students to gain practice applying disciplinary frameworks to real-world problems while also learning to use that analysis to support recommendations written as professionals in their field.

#### **6.4 Course 4: Professional case analysis proposal and report for a real audience in the context of university course work**

##### **Assignment overview and purpose**

In their third year, the IS students write a project proposal and project report which closely approximates a professional case analysis. In this course, the students work intensively with a real client to propose and implement a technology solution for a problem in the client's institution/company. For the purposes of this course, the students complete a project proposal, a project report, and a series of technical documents, such as design requirements and user

manuals. The project proposal and the project report are the ones that mostly resemble the case analysis genre. The project proposal's main aim is *"for your team to identify your client's problem(s) and propose and argue for an IS solution"* and it includes the following sections: cover page, community partner background, problem analysis, solution (solution alternatives, chosen alternative and justification), systems development (methodology selection, feasibility study), project management (project team and project stakeholders, risk analysis, work schedule), conclusion, references, and appendices. The final project report is described as a document where *"your team will describe the background of the client organization, describe the problem they are facing, and provide a description and an argument to support the final IS solution and sustained outcomes of your project."* The final project report includes the following sections: executive summary, background, project description (project opportunity and project vision), project solution and outcomes, project deliverables, project sustainability, student development team, community partner background, about the team, community partner project description (project opportunity, project vision and objectives), project solution and outcomes (process, solution, outcomes, final deliverables), testing (usability testing, limitations), project sustainability, conclusion, acknowledgments, references, and appendices.

When we interviewed the professor teaching this course about whether the project report/proposal resembles the case analysis and whether there is analysis of the problem in these documents, the professor commented:

The project report and project proposal are like a case analysis. The client's organization is the case and the client either tells the students what their problem is or the students identify the problem based on their analysis. The analysis here is not done with disciplinary frameworks explicitly but the students do apply many of the concepts they have learned in their IS studies either to identify a problem, analyze alternative solutions, and argue for their solution. I could introduce students to more disciplinary frameworks, especially business-oriented ones, but the focus with the Junior Project is on developing a solution, not so much on analysis.

The focus on providing solutions to a real client without being explicit about disciplinary knowledge is what makes this particular case analysis more professional than the others. The students deliver final presentations of their report to an audience of professors, students, and the clients. Thus, the academic context is still relevant, but the overall purpose is to make the project as real-world as possible within that context.

### **Where the assignment sits on the continuum**

The case project proposal and project final report sit at the professional end of the continuum with the student expected to enact a professional role. The required parts and formatting of these assignments indicate their professional nature as they are expected to be written in a more professional style that makes these documents easy to read (i.e., they have an executive summary, subheadings, bullet points, visualizations, and appropriate chunking of information that does not overwhelm a reader). The documents do not make explicit reference to theories or concepts in IS by quoting authors and citing sources. However, although the existence of a real client makes the immediate audience real and dictates the purpose and style of the document, students know that they are also writing for the professor and for a grade in the course. Thus, in some of the documents, especially in the early drafts of the documents, there are traces of the semi-pedagogical nature of this document. For example, when students discuss that they have the skills to carry out the suggested solution, they refer to course numbers and their content (See Excerpt 5).

#### 5. Role: Documentation & Testing Lead, Development Team Member

Third-year student (junior) X is majoring in Information Systems with a specialization in the Design track and minoring in Business Administration. X has acquired substantial knowledge of database design, development and modeling by taking the “Advanced Database Design & Development” course at X University. She is also currently taking “Enterprise Systems: Concepts & Practice” in order to gain a better understanding of SAP HANA, which is the underlying technology that is going to be used to develop the Inventory Reporting & Analysis System. She has also acquired analytical skills in “Healthcare Analytics”, design thinking skills from the “Electronic Business” course as well as documentation skills through the “Writing for the Professions” course, all of which are important skills to have as a consultant. The knowledge she acquired in these courses is expected to help in managing and empathizing with the users to deliver a comprehensible system.

Excerpt 5 shows how the content is very context-specific and turns the focus of the audience from the client to the professor. When giving feedback to the students in early drafts, we encourage them focus on their client as their primary audience and avoid explicit references to the classroom context.

### **Our reflection on this assignment**

One reason why students are confused by how to enact a professional role in this course is that there is a big jump from the expectations of previous case analysis

assignments. It seems that students would perhaps be better prepared to produce a more professional project proposal if they were required to get more practice with case analysis writing after their first year, and specifically with case analyses that sit in the middle of the academic-professional continuum. A potential idea could be to draw from the case proposal genre used in an Organizational Behavior (OB) course taught in the Business Administration Program at our institution, in which we also scaffolded writing.

In the OB course, students write a *case proposal* in which they have to “propose changes in a corporation based on the analysis of the corporation (case)” (OB case proposal assignment guidelines). The assignment guidelines state: *“In this case proposal, you will analyze and evaluate the organizational behavior of a company through an organizational behavior lens (i.e., course concepts, insights, and frameworks) by interpreting qualitative case data and evidence-based literature. Based on your analysis, you will provide recommendations for improving the company’s organizational behavior.”* While the description of the case proposal assignment breaks down the task as analysis, evaluation, and recommendation, the main purpose of the case proposal is to recommend changes in a corporation based on the students’ analysis. And this purpose is emphasized with the name of the genre: case proposal.

The OB Professor, having worked in industry, opted for calling this assignment a case proposal because she expected students to propose a solution to a problem. The professor stated:

They identify a problem which comes with an opportunity and they then discuss and recommend some options for how to solve and overcome this. So, for instance, employees are not happy because leadership is not good. Therefore, what we can do is recommend a change in leadership or we recommend a revolution of remuneration structure or we propose a change in shift work hours, etc. So, they will position themselves as consultants that have been requested by management to help solve an issue.

In line with this more professional stance, the case proposal is divided into the following sections: Executive Summary, Situation Analysis, Problem and Opportunity Analysis, Recommendation, Action Plan (brief), Anticipated Results (brief), References, and Appendices (optional). According to the OB professor, these are moves that are likely to appear in a professional document. Similar to the case analysis in Course 4, the Problem and Opportunity Analysis section is key to understanding the OB case proposal as a problem-solution genre.

In the OB case proposal, the professor did not want to lose sight of some of the pedagogical goals of the assignment despite strong efforts to approximate a real-world consultant process. Three of the objectives of the assignment are:

*“Write evidence-based arguments and properly integrate the evidence into a text, use concepts/lenses/tools/frameworks to solve problems, and analyze qualitative data.”* Although she encouraged a professional style, the professor was adamant about her students developing evidence-based argumentation skills, pointing out that:

I have noticed that the Business students are not familiar with integrating evidence-based literature in their writing (though this is less widely used in the real world, but consultants do refer to it – sometimes not as effectively though, but it could be a value-adding skill with which to graduate). So, we could ask them to cite a few academic articles (about the OB issue and solution), in addition to using the provided case material.

The Professor recognizes that consultants in the workplace do not integrate literature into their documents, but she sees value in students developing this skill.

Our findings about the case analysis assignments in the four IS courses is summarized in Table 3 and the assignments are visualized according to our interpretation of where they fall on the IS pedagogical-professional continuum in Figure 3.

Table 3. Summary of findings

	Course 1	Course 2	Course 3	Course 4
Purpose	Evaluate and analyze a company's performance applying a disciplinary framework.	Provide discrete answers to questions that ask students to evaluate and analyze a company's enterprise strategy and market positioning using disciplinary concepts. Provide recommendations in terms of what the company can do	Visit a place that is a “designed experience”, narrate the experience, and analyze the experience using relevant disciplinary frameworks to provide technology recommendations to enhance the experience for all users.	Work closely with a real client to propose a technology solution for a problem in the client's institution/ company

		to protect its business model and how IS can help the company to continue its growth.		
Role	Student	Student	Student/Professional	Mock Professional
Summary of Reflection	Pedagogical: Students write a full-fledged case analysis in which they are expected to enact their student role and display knowledge of one disciplinary framework. Assignment is appropriate for a first-year course.	Pedagogical: Students answer questions about a case using <i>multiple</i> disciplinary frameworks. The question format seems appropriate given that students are expected to display knowledge of and apply <i>multiple</i> disciplinary frameworks in a first-year course.	Pedagogical-Mock Professional: The assignment provides an opportunity for students to gain practice applying disciplinary frameworks to real-world problems while also learning to use that analysis to support recommendations written as professionals in their field. Explicit instruction about expected student roles is necessary to alleviate the academic-professional tension of case analyses that sit in the middle of the continuum.	Mock professional: Students write for a real client in mind but in the context of the university. Some confusion about the professional purpose of the text which could be eased by having students write something similar in a previous class.

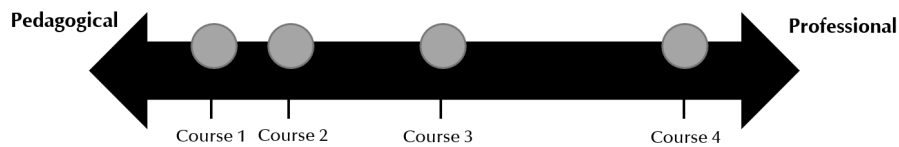


Figure 3. IS case analysis pedagogical-professional continuum.



## **7. Discussion and conclusions: Mapping the IS case analysis continuum to assess the program's developmental trajectory**

Responding to Gardner and Nesi's (2012) call to understand how the case analysis genre is realized in specific disciplines, in this paper we have provided a detailed description of the pedagogical to professional case analysis genre continuum in the IS program at our institution. Our analysis of assignment guidelines, scaffolding materials, interviews with professors, and student writing points to the existence of a developmental trajectory of the case analysis genre in the IS program at our institution. This trajectory is in line with the continuum of case study genres of business identified by Gardner (2012) (i.e., single issue reports, organizational analyses, and company reports).

In line with Freedman and Adam (1994), we find value in pedagogical genres in preparing students to meet professional expectations. Given students' limited knowledge and lack of expertise at the beginning of their studies, it would be inappropriate to ask them to write professional case analyses. Pedagogical case analyses also help students to develop analytical and argumentative writing skills. This is particularly important as research has shown how students face challenges when writing analytically and argumentatively and instead engage in knowledge display rather than knowledge transformation (see Miller & Pessoa, 2016). Thus, we see great value in emphasizing the target pedagogical features of the case analysis, such as displaying disciplinary knowledge acquisition and the ability to analyze and identify problems using disciplinary framework. In line with our SFL-informed pedagogy and as we have done in our interdisciplinary collaboration, it is important to make explicit to students the linguistic features needed to meet the pedagogical expectations of the case analysis (see Pessoa et al., 2019; Mitchell & Pessoa, 2019).

We also see great value in requiring students to write case analyses towards the professional end of the continuum in order to prepare them for writing in their professions. The IS program in our institution places great value in engaging students in real-life professional experiences. The case analysis proposal and report produced by the students in Course 4 is evidence of this. In this course, students propose, design, and implement a technology solution for a client with whom they work closely during the course of the semester and for whom they present their project at the end of the semester. The texts associated with this project are written with a professional audience in mind and this is reflected in the structure and professional formatting of the documents. However, our findings indicate that because these documents are written in the context of the university and ultimately for a grade, features of the pedagogical nature of these assignments leak into them. Thus, it is equally important to be explicit about the professional audience of these documents for students to write accordingly. In professional documents, rather than emphasizing students' ability to explicitly

display and apply disciplinary knowledge, students should be made aware of the linguistic resources needed to justify their recommendations and proposed solutions.

In order to effectively move along the continuum from pedagogical to professional genres, students in our program also engage with a case analysis genre in the middle of the continuum. In these assignments, the student is expected to enact the learner and mock-professional roles within the same document. These dual expectations can confuse students, as we have seen, particularly in the recommendations section. However, in line with Zhu (2004), rather than viewing the competing demands of the two roles as problematic, we believe that they provide an opportunity for students to gain practice applying disciplinary frameworks to real-world problems while also learning to use that analysis to support arguments written as professionals in their field.

We recommend making students aware of the academic-professional continuum, where a particular assignment sits on it, and its role in the larger curriculum. This would mean that the requirement to enact one or more roles will make more sense to students and the tensions between them can be reduced. Such explicitness would be particularly important as students move away from the assignments that only require student roles. Being explicit about the roles and expectations of the case analysis that sit in the middle of the continuum is particularly important to alleviate the academic-professional tension. We recommend that students write analysis sections that are purposefully pedagogical in which they explicitly display and apply disciplinary knowledge and recommendations sections that are purposefully professional in which they provide justified recommendations based on their analysis without making any explicit references to disciplinary knowledge (Pessoa et al., under review).

In mapping out the pedagogical to professional IS case analysis genre at our institution, it is evident that the students receive adequate exposure to pedagogical and professional case analyses. However, there is a clear need for more exposure to case analyses in the middle of the continuum in preparation for the professional case analyses. Our findings show that the professional case analysis in Course 4 represents a big jump from the case analysis assignment that sits in the middle of the pedagogical-professional end of the continuum (Course 3) and an even bigger jump from the prior required course that assigns case analysis. It seems that students would be better prepared to produce the professional case analysis expected in Course 4 if they wrote something that is more similar in a previous class. This is particularly important because case analysis in the middle of the continuum are only assigned in elective courses such as Course 3 in this program. And whether or not students write a case analysis depends on the professor teaching the elective courses. Throughout our 3-year interdisciplinary collaboration, a pedagogical-professional case analysis was only

taught in Course 3. Thus, we recommend greater exposure to case analysis that sit in the middle of the continuum in order to better prepare students for writing professional case analyses.

A potential solution could be to include a case analysis assignment that sits in the middle of the continuum in a class that students take between Course 3 and Course 4. The case proposal used in the Organizational Behavior (OB) course taught in the Business Administration Program at our institution seems appropriate because it is similar to the case analysis in Course 3 while emphasizing providing recommendations (the name *case proposal* seems fitting for helping students write the more professional documents expected in Course 4).

Figure 4 shows a revised IS case analysis trajectory in our program that includes more exposure to case analysis closer to the professional side of the continuum.

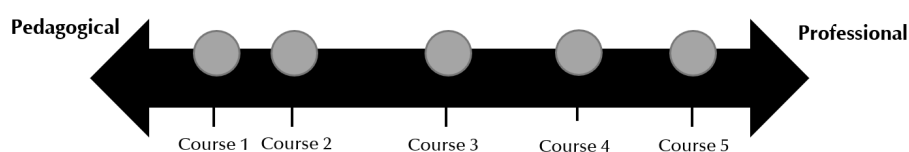


Figure 4. Revised IS case analysis pedagogical-professional continuum.

In short, we argue for a trajectory in the IS curriculum that involves designing case analysis assignments that both help students move in the direction of a more professional writing style and navigate tensions caused by the genre's competing demands on students to enact both learner and professional roles. Through our design-based research approach we have learned and reflected a great deal about the case analysis genre. This knowledge has allowed us to critically map out the case analysis trajectory in our program, evaluating its strengths and opportunities for enhancing the trajectory to better prepare students for writing professional documents. We have also begun to take these findings back to the classroom. We have made substantial changes to our scaffolding materials to reflect our refined understanding of the genre and the expectations of different professors across the four years. For example, in our workshops we now present a mentor text that highlights the linguistic features of a purposefully pedagogical analysis section and a purposefully professional recommendations section.

Our process of collaboration between disciplinary faculty and writing experts requires investment, commitment, evaluation, and continued refinement of materials and methods<sup>1</sup>. The starting point for such collaborations is having a disciplinary faculty member interested in addressing student needs through a focus on language. Then, the language specialists must become familiar with the

particular demands and challenges of the professor's writing assignments, and of the discipline's linguistic and genre demands. This background knowledge forms the basis for the development of our scaffolding materials. After this initial work, it is important to sustain an iterative process of data collection, analysis, and re-implementation to continue refining the materials. Contextual factors also determine the kinds of collaborations that can take place in different settings. In our context, for example, several factors have shaped our collaborations. We are at an advantage because all departments in our institution are housed in the same building. Thus, the physical space enhances the kinds of working relationships we can develop with disciplinary faculty. In addition, we have a relatively light teaching load and opportunities for research funding that allow us to hire full-time research associates. We have also encountered individual differences among the faculty that influence the implementation and sustainability of these collaborations. While some faculty can be highly engaged and committed to working with us, we have also worked with less responsive faculty who see the value of the writing workshops we (the authors) offer to their students but are somewhat resistant to changing their own pedagogical practices. Thus, for these interdisciplinary collaborations to be effectively implemented, we have found it is important to start small with engaged faculty while paying close attention to the contextual factors that may facilitate and constrain productive relationships.

Beyond our program, our mapping of the IS case analysis genres has important implications for curriculum design and writing instruction and research. We hope that other programs learn from our program's trajectory and map out their own trajectory to examine strengths and weaknesses. Our model for scaffolding analytical and argumentative writing can be used in other disciplines for helping students move from knowledge display to knowledge transformation while promoting awareness of the multiple audiences that students will write for in the context of the university (Zhu, 2004) and providing students with the linguistic resources to do so.

### Notes

Our model of collaboration is based on a larger-scale project at the City University of Hong Kong called the SLATE project: Scaffolding literacy in advanced tertiary environments (Dreyfus, Humphrey, Mahboob, & Martin, 2016). In this project, researchers from the University of Sydney worked with faculty in Hong Kong in disciplines such as biology and linguistics to understand assignment expectations. Based on what they learned, they were then able to help scaffold the writing of students in Hong Kong remotely (online). There are even institutions where such collaborations are part of the curriculum. Vantage College (VC) at University of British Columbia (UBC) offers an 11-month-curriculum for international students

of core content courses in one of four programs (Arts, Sciences, Engineering, and Management) taught by disciplinary faculty, which is combined with substantial discipline-specific language training in concurrent language-focused modules or for-credit courses provided by the Academic English Program.

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