

ATHABASCA UNIVERSITY

A CASE STUDY IN THE PLANNING OF INTERACTION  
IN THE CONVERSION OF AN EXISTING COURSE  
FOR ONLINE DELIVERY

BY

LAWRENCE ARTHUR MURPHY


A thesis submitted to the  
Athabasca University Governing Council in partial fulfillment  
Of the requirements for the degree of  
MASTER OF DISTANCE EDUCATION

Athabasca, Alberta

June 2001

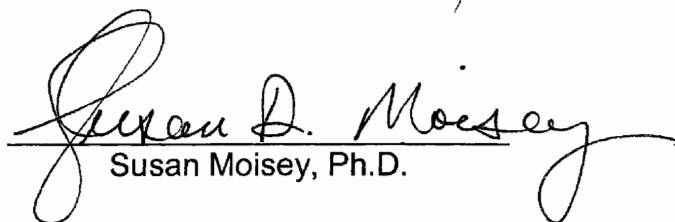
# ATHABASCA UNIVERSITY

The undersigned certify that they have read and recommend to the Athabasca University Governing Council for acceptance a thesis, **A CASE STUDY IN THE PLANNING OF INTERACTION IN THE CONVERSION OF AN EXISTING COURSE FOR ONLINE DELIVERY**, submitted by **LAWRENCE ARTHUR MURPHY** in partial fulfillment of the requirements for the degree of **MASTER OF DISTANCE EDUCATION**.




---

Patrick J. Fahy, Ph.D.  
Supervisor



---

Susan Moisey, Ph.D.



---

Susan May, Ed.D.

Date: June 2001

## ABSTRACT

The purpose of this qualitative case study was to investigate the effects of planning learning activities intended to encourage online student interaction. The investigation targeted several pivotal decision-making points in instructional systems design (ISD) processes during conversion of an existing on-campus face-to-face course for online delivery. The ISD model chosen for use in this study was *Training for Improved Performance* (TIP), developed by Athabasca University (1990).

Effects were investigated in terms of encouraging student interaction through the TIP processes of analysis, design, and development. The research problem posed the question, what design decisions affected interaction that students will ultimately experience? The literature review examined: ISD and the TIP Model; computer conferencing; interaction, collaboration, and constructivism; interaction schemes; guidelines for moderating computer conferences; and changes in online teaching and learning.

In this case, the researcher studied an instance of course development involving planning decisions taken while completing TIP processes. The researcher identified interaction strategies (Wagner, 1997) that would be employed as a result of applying these processes. Findings from the analysis described: the design and development of the online course; implementing the course and moderating asynchronous online discussion; planning for online interaction; and the interaction as it actually unfolded.

The researcher urged that the teacher employ an instructional design (ID) for online learning that relied on tenets of active learning. Interaction is an essential part of the learning strategy for any online course *wrapping around a textbook* (Rowntree, 1996). In addition to readings from a textbook, several items had been incorporated in ID, including learning outcomes, overviews, discussion, contrasting viewpoints, alternative examples, and feedback. Computer conferencing offered a venue for this interaction and learning activity; it provided an environment for students and teacher where they could share and build meanings as part of constructivist learning. To more effectively accomplish ID, the researcher had urged the teacher to follow TIP processes in making planning decisions related to the design and development of interaction in online learning. Interaction arises from clearly conceptualized, well-designed, and well-developed instruction.

## ACKNOWLEDGMENTS

This study was developed and completed with the assistance of a number of individuals to whom I express my sincere appreciation and gratitude.

To: Dr. Patrick J. (Pat) Fahy for his valued guidance, encouragement and support throughout the process;

To: The committee members, Dr. Susan D. Moisey and Dr. Susan May for their time, effort, and input into my learning;

To: Dr. Tom Jones for planting the seed of a research problem, during the Master of Distance Education Thesis / Project Workshop;

To: The teacher, known by the pseudonym of John, for his enthusiastic participation in our instructional design team, delivering the trial course and data interpretation; and

To: My wife, Sophie, for her unremitting support and patience.

## TABLE OF CONTENTS

<b>CHAPTER I – INTRODUCTION AND BACKGROUND .....</b>	<b>1</b>
Purpose.....	1
Research Problem .....	2
Study Questions.....	3
Assumptions.....	3
Significance Of The Study.....	4
Limitations Of The Study.....	5
Organization Of The Thesis .....	6
<b>CHAPTER II – REVIEW OF THE LITERATURE .....</b>	<b>7</b>
Instructional Systems Design.....	7
Computer Conferencing.....	11
Interaction, Collaboration and Constructivism.....	12
Interaction Schemes .....	17
Guidelines For Moderating Computer Conferences.....	21
Changes In Online Teaching And Learning.....	22
Summary.....	23
<b>CHAPTER III – METHOD .....</b>	<b>26</b>
Design.....	26
Operational Definitions.....	28
Participants .....	31
Instruments .....	34
Procedures.....	35

Summary.....	42
<b>CHAPTER IV – FINDINGS.....</b>	<b>44</b>
Design And Development Of The Online Course.....	44
Development .....	47
Implementing The Course; Coaching Moderating Discussion.....	59
Planning For Interaction .....	63
Interaction, As It Actually Unfolded .....	71
<b>CHAPTER V – CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>88</b>
Conclusions.....	88
Recommendations .....	95
<b>REFERENCES.....</b>	<b>97</b>
<b>APPENDIX 1 – AN INVITATION TO PARTICIPATE IN A DISTANCE EDUCATION RESEARCH STUDY .....</b>	<b>106</b>
<b>APPENDIX 2 – INTERVIEW PROTOCOL FOR THE FIRST INTERVIEW WITH JOHN, PRIOR TO THE RUNNING OF THE TRIAL COURSE.....</b>	<b>108</b>
<b>APPENDIX 3 – INTERVIEW PROTOCOL FOR THE SECOND INTERVIEW WITH JOHN, AFTER THE RUNNING OF THE TRIAL COURSE .....</b>	<b>110</b>
<b>APPENDIX 4 – EXPLANATION OF WAGNER’S INTERACTION STRATEGIES AND WEEKLY SUMMARY FORM.....</b>	<b>111</b>
<b>APPENDIX 5 – UNIT-LEVEL AND COURSE-LEVEL LEARNING OUTCOMES, AND COURSE PERFORMANCE OBJECTIVE.....</b>	<b>113</b>
<b>APPENDIX 6 – SUMMARIES OF INTERACTION IN WEEKLY DISCUSSION FORUMS.....</b>	<b>117</b>
<b>APPENDIX 7 – TRANSCRIPT OF THE FIRST INTERVIEW WITH JOHN .....</b>	<b>125</b>
<b>APPENDIX 8 – TRANSCRIPT OF THE SECOND INTERVIEW WITH JOHN .....</b>	<b>140</b>

## LIST OF TABLES AND FIGURES

### TABLES

Table 1 – Selected TIP Processes .....	36
Table 2 – TIP Planning Decisions Associated With Interaction Strategies .....	66
Table 3 – Types Of Interaction Strategies Anticipated And Observed .....	70
Table 4 – Summary Of Planning Decisions And Interaction Strategies.....	90

### FIGURES

Figure 1 – Training For Improved Performance (TIP) Model.....	47
Figure 2 – Interaction Strategies Observed In Weekly Discussion Forums.....	72



# CHAPTER I

## INTRODUCTION AND BACKGROUND

### Purpose

The purpose of this qualitative case study was to investigate the effect of planning learning activities intended to encourage online student interaction. The investigation targeted several pivotal decision-making points in instructional systems design (ISD) processes that would be addressed during the conversion of an existing on-campus face-to-face course to an online course. The particular ISD model chosen for use in this study was *Training for Improved Performance* (TIP), developed by Athabasca University (1990). The study sought to identify the effects of planning for learning activities during analysis, design, and development processes in terms of encouraging student interaction.

The study investigation looked at three types of interaction, identified by Moore (1989). The case study involved the following examples, for each of Moore's three types of interaction:

- a. student–content interaction – students using learning resources such as a textbook and online instructional materials;
- b. student–teacher interaction – students communicating with the teacher who moderated conferences and provided learner support; and
- c. student–student interaction – students conferencing and collaborating together in a virtual learning environment.

## Research Problem

The study built on previous research from the field of distance education, particularly that research which has recognized the importance of interaction in contributing to the efficacy of learning online. Starting in the 2000 fall semester, the community college at which the study was undertaken adopted the Blackboard CourseInfo™ learning management system for online delivery. The study specifically involved the course, *Planning the Marketing Strategy*, which is offered in the second semester of a three-year automotive marketing diploma program. In selecting this course for online learning, it was the goal of the community college teacher (who will be known by the pseudonym of John) to make use of the asynchronous presentation of information and computer-mediated communication (CMC).

The following research problem was posed:

In the conversion of a post-secondary on-campus course to online delivery, what decisions in the instructional design processes affected the interaction students ultimately experienced?

## Study Questions

The following questions were addressed in the study complete:

- a. In completing analysis, design and development processes, what effect did planning decisions have on interaction?
- b. How did decisions, relating to the use of an offline textbook and course assignment, affect the opportunity for interaction in the online course?
- c. What types of interaction strategies were anticipated for the asynchronous computer conferencing and messaging?
- d. What help did the teacher provide to students so they could quickly master skills needed for interaction?
- e. While implementing online delivery, what effect did the teacher's conference moderation have on interaction?
- f. What types of interaction strategies were actually observed in the asynchronous computer conferencing and messaging?

## Assumptions

Many distance-learning courses have been successfully implemented using online delivery, and it is generally realized that some degree of this success was due to the incorporation of interaction within the learning activities. Two assumptions were made at the beginning of this study.

First, it was assumed that using the TIP taxonomy to categorize and refine statements of learning need would help guide the determination of context-appropriate, performance-oriented student learning outcomes. In the

achievement of these outcomes, interaction would be encouraged in the learning strategy that focused on *application skills* in the TIP taxonomy rather than *information skills*. This focus would lead to the creation of a more effective learning strategy.

Second, it was assumed that community college students would perceive changes in course delivery involving *flexible learning* as being personally advantageous. This perception would be both in terms of the *flexibility* gained in completing a distance delivered course as well as a personal preference for online delivery and CMC. While following their own schedules, learners were able to complete coursework more easily in the online environment than in a classroom.

### Significance Of The Study

This study investigated a case in which the analysis, design, and development of an online course led to encouraging interaction. The application of TIP processes, coupled with the use of an online learning management system, was qualitatively studied to examine the online interaction generated in selected learning activities. The results of this study will enable instructional designers and teachers to plan for and to incorporate interaction in the development of effective online learning strategies.

## Limitations Of The Study

Two limitations might have affected the study of interaction in this online course. First, at the time of the study, online delivery was being introduced for only a few courses of the community college's automotive marketing department. The apparent purpose of introducing these online courses was to offer flexibility within the educational program that would allow the students to complete a portion of their studies during each week at a time of their own choice. Online courses were considered by the college to be an alternative delivery medium. The course, *Planning the Marketing Strategy*, was chosen for online delivery due to John's willingness to learn about teaching online, and the applicability of this course to other planned departmental initiatives. The full effect of offering online courses within the program cannot be assessed until a larger portion of the program is available online.

The second limitation was that the course content primarily addressed application skills, with some information skills, as categorized by the TIP taxonomy. Other theorists might refer to these skills either as procedural and declarative knowledge (Gagne, 1985), or comprehension and knowledge (Bloom et al., 1956). This course is offered prior to students experiencing their first co-op placement, as part of the program. Indeed, they will have had some life experience as consumers, but they will not have had a great deal of experience in automotive marketing per se. In the first year of a three-year program, these students will have had limited experience with higher ordered thinking skills (i.e. Bloom's et al., 1956, analysis, synthesis, and evaluation) in automotive

marketing. These first two limitations may have restricted the kind and degree of interaction that was demonstrated by the students while taking this course.

### Organization Of The Thesis

The thesis chapter titles include:

- a. Introduction and Background;
- b. Review of the Literature;
- c. Design;
- d. Findings; and
- e. Conclusions and Recommendation.

## CHAPTER II

### REVIEW OF THE LITERATURE

In planning for this case study, the two original research interests were instructional design and online interaction. An investigative focus for reviewing theorists in the literature review addressed two themes, instructional system design processes and online interaction in computer conferencing. From the outset of the study, the *Training for Improved Performance (TIP) Model* had been selected as the instructional system design model, and one of the learning strategies included group discussion via computer conferencing. These decisions were starting points for this review.

The literature review looked at the selected instructional systems design model, TIP, and online interaction. The focus on interaction was further defined as asynchronous computer conferencing with special interest in collaboration, constructivism, and various interaction schemes. Guidelines for moderating computer conferences were sought to identify new skills necessary for delivering the online course in the study. Finally, differences between teaching and learning in the two environments, face-to-face and online, were briefly summarized.

#### Instructional Systems Design

“The Instructional Systems Design (ISD) Model [as depicted in the *Training for Improved Performance (TIP) series*] is intended to help those involved in instruction identify human performance problems, as well as design,

implement, and evaluate potential solutions to these problems” (Athabasca University, 1990, p. 3). An online course may be one such solution that deals with the students’ need to acquire the knowledge and skills necessary to perform a task.

“ISD is a systematic method for addressing human performance problems and for developing instruction to help solve those problems” (p. 6). ISD is systematic in that “it follows a prescribed series of steps” (Braden, 1996, p. 5). It can help to address several issues; but in this case study it was used to address *strategy* implementation. A determination can be made as to how best to implement a learning strategy, using online delivery. Of specific interest was the employment of ISD processes in planning learning activities that would encourage student interaction in an online course.

The TIP Model is linear. As an example of linear instructional design and development, the TIP Model comprises steps that are “conducted in a predetermined order, one after another. It involves design in that the procedure calls for analysis, creative planning, and decision making” (Braden, 1996, p. 5).

Each TIP phase represents a subsystem in creating the educational solution. The five phases of the TIP Model (Athabasca University, 1990) are analysis, design, development, implementation, and evaluation. The analysis phase determines problems or needs, and relates them to instructional goals. The design phase develops objectives and performance measures, and produces a detailed plan or *blue print* for the course, which includes the determination of student interaction. The development phase involves the



creation of instructional materials, in this case, for the online environment. The implementation phase involves the delivery of the online course. And the final phase, evaluation, provides feedback that is formative in nature during the completion of the four previous phases, and in the running of the trial course.

Adding support to the notion of employing ISD to encourage interaction, Kirby (1999) describes a four-step strategy in planning a course *to build interaction*. These steps include:

- a. Identifying course objectives and developing student evaluation strategies and learning activities;
- b. Analyzing evaluation strategies and learning activities to determine requirements for interaction (information, discussion, collaboration, feedback), group (individually, small or large group, with teacher), and time (synchronous or asynchronous);
- c. Introducing and guiding students through each technology used; and
- d. Employing formative and summative evaluation to improve and assess the course.

These four steps mirror the final four phases in the TIP Model, those of design, development, implementation, and evaluation.

Other descriptions that showcase instructional design in the creation of online learning programs are also available. The models depicted in these websites also rely on an ISD approach. Two such examples are reflected by Canadian websites: TeleEducation New Brunswick's (2001) [Learning on the Web](#)

2001 and LearnOntario's Instructional Design For The New Media

([http://www.rcc.ryerson.ca/learnontario/idnm/main\\_page/coursepage.htm](http://www.rcc.ryerson.ca/learnontario/idnm/main_page/coursepage.htm)).

In designing distance learning, it is advantageous to select methods and techniques that foster the *process* of interaction to encourage the *product* of online collaboration among students and teacher (Collins & Berge, 1996). The selection of an instructional strategy and medium should be made on the basis of the effectiveness of each to deliver content (Bull et al., 1998) and facilitate interaction (Miller & Miller, 1999). This media mix can involve an interactive online medium in combination with print-based material such as textbook readings (Collins & Berge, 1996; Rowntree, 2000). Actually, this combined approach has been an accepted instructional practice since the days of adjunct programming in programmed instruction (Espich & Williams, 1967), a predecessor to computer-based and web-based learning.

Bull et al. (1998) recommend that instructional designers should incorporate the following instructional strategies to develop interaction:

- a. Collaboration;
- b. Coaching and moderating online discussions; and
- c. Teacher control in setting goals, determining learning activities and linking students to instructional materials.

Again, these interventions reflect methodology traditionally advocated by many ISD models. The view that learning benefits from planned interaction with the teacher and students was also supported.

## Computer Conferencing

Hiltz (1998) described asynchronous learning networks, or the technology of *computer conferencing*, as using the Internet to “deliver *anytime, anywhere* education.” Soo and Bonk (1998) rated asynchronous student-student interaction, which arises in these networks, as the most favoured type of interaction for online distance education.

Computer conferencing is one technology used to establish asynchronous networks. “Computer conferences should be thought of as spaces that can be shaped by topical structuring and sequencing to form an educational environment” (Harasim et al., 1996, p. 139). This medium supports instructional strategies such as collaboration that require students to openly engage in learning.

Soo and Bonk (1998) suggested the following:

Technology appears to be the factor that both enables and constrains the learning [teachers] want to instil in these online learning environments. [Teachers] should, indeed must, begin our inquiry from the kind of learning and by extension, the types of interaction that we want. However, the second step is to refer to the technologies that exist to see if they support the interaction and learning we want. (third page)

To ease adoption of computer conferencing by learners, Misanchuk et al. (1997) note that “the familiarity of print materials may offer a psychological touchstone: Learners are experienced in using print, and that may help them

bridge more easily into the less familiar territory of learning in a computer conferencing environment” (p. 3). Students, with active learning styles, easily adapt to communicating and learning in this online medium.

### Interaction, Collaboration and Constructivism

Vygotsky (1978, as cited in Misanchuk et al., 1997) states, “Learning is a social, as well as a cognitive activity” (p. 5). Social / organizational interactivity and informational / instructional interactivity are required in both face-to-face and distance teaching (Collins & Berge, 1996; Gilbert & Moore, 1997). Educators must understand the tools available for designing online courses that prompt the two kinds of interaction (Gilbert & Moore, 1997). These two kinds of interactions are equally important and both must be taken into consideration in instructional design.

“Although on-line participants cannot interact in a physical sense, they do nonetheless interact in a virtual sense. The exchange of ideas, emotions, and experiences can and does lead to the same sort of group development one would expect of any classroom-based cohort” (Misanchuk et al., 1997, p. 5).

To effectively use computer conferencing, Indiana University (2000) has developed a Things To Do list. Four of the items in this list pertain to social and instructional interaction. They are:

- a. Distinguish between formal and informal conferences. The former are for official class or group-project discussion; the latter are for social networking and peer support.

- b. Social support activities provide the emotional glue that motivates students to learn together and to learn from each other.
- c. Set aside enough time to allow students to collaborate in groups.
- d. Each week post a controversial topic related to the class content and request that students discuss it electronically.

Makrakis (1998) described that

in a collaborative distance-learning environment, the teacher's fundamental roles can be [divided] into two categories, instructional and organizational roles. In the context of instructional roles, teachers act as reflective practitioners, as facilitators, and as scaffolders. While in terms of organizational roles, teachers act as resource, technology managers, and curriculum managers. (second page)

Bailey and Luetkehans (1998, p. 20) considered that online educators must focus on “both the productive (task) communication of members as well as the development of roles and relationships among team members (maintenance).” There must be a balance between these two roles. Facilitators have a role to play in ensuring the availability of task information, and designing opportunities for interaction and feedback.

Murphy et al. (1998) asserted that computer conferencing promotes interaction that encourages discussion and reflection, promotes accessibility, and stimulates higher ordered skills. “Collaborative learning and computer conferencing are reciprocally related: while computer conferencing depends on

the ability and willingness of participants to collaborate, collaborative learning is enabled by computer conferencing” (p. 298).

Hiltz (1998, in citing Mead, 1934; Bouton & Garth, 1983; Alavi 1994) offers a similar view, noting “active approaches present learning as a social process that takes place through communication with others. The learner actively constructs knowledge by formulating ideas into words, and these ideas are built through reactions and responses to others. In other words, learning is not only active but also interactive” (third page). In active learning, learners are engaged foremost with learning objectives, but for many, engagement with others in communicative environment is vitally important. The environment must provide motivation and promote sharing of knowledge among the learners (Collins & Berge, 1996).

Harasim et al. (1996) identified five attributes of computer conferencing, which help provide a conceptual framework in designing and implementing asynchronous learning networks. These attributes are:

- a. many-to-many (group communication),
- b. anyplace (place independence),
- c. anytime (synchronicity, time independence),
- d. text-based (and increasingly, multimedia), and
- e. computer-mediated messaging. (pp. 138-139)

These communication attributes describe some of the necessary conditions for online collaborative learning. Learning environments add the possibility of group interactivity to wide area distribution capabilities of the World Wide Web (Gilbert

& Moore, 1997). Distance learners can choose to engage in learning activities that allow for greater collaboration.

Harasim et al. (1996) provided the following direction:

Designing an online environment involves structuring conferences by type of task, size of group, duration of task, and scheduling of task ... Providing a conference per topic, and specifying the duration of each topical discussion or conference (such as a weekly topic or focus), can help organize the activities conceptually and procedurally for participants.

(pp. 141-142)

In providing instruction within a constructivist paradigm, learners are engaged in interactive activities, and this learning requires careful planning. Bull et al. (1998) advocated that learning becomes a process in which learners are actively engaged. Asynchronous computer-mediated communication provides the mechanism for interaction, and involves constructivist, collaborative learning.

Jonassen et al. (1995) suggested that the phrase *constructivist instruction* was an oxymoron, and noted that:

Learning can be best facilitated through the design and implementation of constructivist tools and learning environments that foster personal meaning-making and disclosure among communities of learners (socially negotiating meaning) rather than by instructional interventions that control the sequence and

content of instruction and that seek to map out a particular model of thinking onto the learners. (pp. 12-13)

Berge (1999) concluded that:

When students have the opportunity to interact with one another and their instructors about the content, they have the opportunity to build within themselves, and [emphasis added] to communicate, a shared meaning, to make sense of what they are learning. Much of learning inevitably takes place within a social context, and the process includes the mutual construction of meaning. (p. 8)

Many tools have been devised to promote opportunities that engage learners in activities based on learning objectives. In constructivism, interactive learning experiences follow four instructional goals (Miller and Miller, 1999):

1. Present a problem-solving situation in a realistic context;
2. Provide opportunities for learners to collaboratively construct knowledge based on multiple perspectives, discussion, and reflection;
3. Provide opportunities for learners to articulate and revise their thinking in order to insure the accuracy of knowledge construction; and
4. Create opportunities for the instructor to coach and facilitate construction of student knowledge.

“The parallels between the moderate views of constructivism and andragogy are rather striking” (Knowles, Holton & Swanson, 1998, p. 143).



Learners, including those in this case study, have life experiences and a need to know prompted by their future vocation. The assumptions of need to know and experiences of adult learners are also crucial to constructivist learning.

Constructivism stresses all knowledge is context bound, and that individuals make personal meaning of their learning experiences ... For adults, experience might be conceptualized as a giant funnel of previous experience, and new information that enters the top of the funnel cascades downward and eventually falls out unless it sticks to some element of prior knowledge. (p. 142)

Adult learners employ and share their experiences in personal meaning making.

### Interaction Schemes

Interactions involving teachers and students might be classified using various categorization schemes, such as the following:

- a. Synchronous or asynchronous communication;
- b. Individual, one-to-one communication or group communication – one-to-many, many-to-many, and many-to-one (TeleEducation NB, 2001);
- c. Student–content interaction, student–teacher interaction, and student–student interaction (Moore, 1989). Adding to Moore’s three types of interaction, Soo and Bonk (1998) described a fourth type of interaction.

- Student–self interaction refers to the students’ reflection about the content, learning process, and their understanding;
- d. Social / organizational interactivity and informational / instructional interactivity are required in both face-to-face and distance teaching (Gilbert & Moore, 1997); and
  - e. Interaction that involves discussion or dialogue comprising questioning, statements, reflections, scaffolding and engaging, and making references, as described by the Transcript Analysis Tool (Fahy, 2001; P. J. Fahy, personal communication, February 22, 2001).

In yet another way of looking at the types of interaction, Roblyer and Leticia (2000) have proposed the assessment of interaction in distance learning through the use of a rubric with the four following dimensions:

- a. Social rapport-building activities – the level of activity achieved in sharing ideas, opinions, and beliefs;
- b. Instructional designs to increase interaction – the level of interaction in course activities leading to the achievement of objectives;
- c. Impact of interaction on learners – the level of student interaction occurring with teacher, fellow students and outside experts; and
- d. Technology uses and levels of interactivity – the type of media selected and their effectiveness in permitting students and teacher to communicate information.

Although the interaction categories described above provide useful information in describing varying types of interaction, they were NOT deemed

appropriate for use in this research. These categorizations do not adequately classify interaction in terms of planning decisions for learning outcomes and learning activities that were determined during instructional design. Furthermore, interaction in learning activities would likely involve students building on others' ideas and reflecting on their own prior learning. These classifications are crucial to this thesis. One further classification scheme, offered below, was found to be more reflective of the kinds of online interaction or outcomes that would be identified and supported in the application of instructional design (Wagner, 1997) or instructional theory (Miller & Miller, 1999).

Wagner (1997, 1998) asserts that the primary goal of an educational experience is a positive final outcome, not necessarily the agent upon which the educational experience was grounded. "Interaction can serve as an outcome of clearly conceptualized, well-designed, and well-developed instruction (Wagner, 1997, p. 25).

Wagner (1997) identified twelve interaction strategies that focused on what learners can achieve as a result of an interaction. These strategies are identified and briefly described below within the context of conferencing for an online course:

- a. Interaction for *participation* – Conference posts of this nature range from getting acquainted with fellow learners to volunteering to form or lead cohort groups in a learning activity.

- b. Interaction for *communication* – Conference posts of this nature involve sharing information and discussions that focus on the learning outcomes, or advocating a particular viewpoint.
- c. Interaction for *feedback* – Conference posts of this nature offer feedback that the learner can use in judging the quality of his or her performance. They aid in ensuring that the correct information is transferred to long-term memory.
- d. Interaction for *elaboration* – Conference posts of this nature expand on information, either providing alternative examples to explain a new idea, or developing alternative explanations for thinking about a new idea.
- e. Interaction for *learner control* (or self-regulation) – Conference posts of this nature help the learner in staying on task, choosing what and how to study, seeking additional information, and realizing when learning has been successful.
- f. Interaction for *motivation*: Conference posts of this nature challenge the learner in tackling the authentic instructional tasks and determining what must be learned through a variety of sources.
- g. Interaction for *negotiation* – Conference posts of this nature reflect the learner's effort in determining others' willingness to engage in dialogue, reaching a consensus, or conforming to an agreement.
- h. Interaction for *team building* – Conference posts of this nature support the formation and production of learning cohorts. Group attributes such as tolerance, respect and cooperation are expressed.

- i. Interaction for *discovery* – Conference posts of this nature involve sharing ideas, which leads to a group synergy in determining new knowledge.
- j. Interaction for *exploration* – Conference posts of this nature provide discussion as the scope, depth and breadth of a new idea, and determine its difference from prior learning.
- k. Interaction for *clarification* – Conference posts of this nature paraphrase other's expectations to confirm their meanings or intentions.
- l. Interaction for *closure* – Conference posts of this nature signal that one has reached the end of a learning activity, and that the announced learning outcomes have been achieved.

#### Guidelines For Moderating Computer Conferences

A number of authors have provided guidelines for moderating computer conferences; these guidelines were used during this study in coaching John.

To start this synopsis off, Davies and Wells (1991, as cited in Misanchuk et al., 1997) provided the following suggestions that are straightforward and direct:

- a. Pose questions to the group instead of supplying answers;
- b. Deflect follow-on questions to the group; and
- c. Take a *less of centre stage* approach.

Misanchuk et al. (1997, p. 4) have a preference for setting limits on time for discussion topics, and the frequency and length of their contributions. Online discussions can be focused through initiating discussions, ensuring participation,

maintaining a positive tone, summarizing and weaving, and closing the discussion. Collins and Berge (1996) added that online teachers should provide scaffolding for student interaction and meaning-making activities by modelling appropriate interaction and facilitation techniques on screen, and by employing metaphors and analogies to personalize and humanize the transactional space.

Bailey and Luetkehans (1998) provided several tips for virtual learning team facilitators. Facilitators should:

- a. Scaffold topical discussions, using an asynchronous threaded discussion tool;
- b. Encourage elaboration of topics through questioning; and
- c. Provide timely and meaningful feedback to the students (pp. 21-23).

These tips for virtual learning teams are also quite useful for those who moderate computer conferences.

Klemm (1998) proposed eight ways to get students more engaged in on-line conferences. Several of these methods mirrored the above tips for facilitation. Three methods of particular interest included encouraging collaboration, soliciting critical thinking by students, and providing guideposts for open-ended discussion.

### Changes In Online Teaching And Learning

Berge (1995, in Collins & Berge, 1996) identified changes to the roles of teachers and students in online teaching and learning. Teachers should take on the roles of consultants, guides, resource providers, expert questioners and

designers of learning experiences. They should present multiple perspectives on topics, share information with the students as fellow learners, and be sensitive to student learning styles. Similarly, students should take on the roles of constructors of their own knowledge, complex problem-solvers, and self-directed learners. They should look at topics from multiple perspectives and work as a group.

McFerrin (1999) further specified that for online students to be successful they must master communication and information system technologies (i.e. skills in using the Internet, distance learning environment and word processing), and time management and organization skills (i.e. those personal skills that are necessary to be successful as a lifelong learner).

### Summary

The Training for Improved Performance (TIP) model is a systematic, linear approach for developing instruction (Athabasca University, 1990). One question that applying the TIP model answers is that of *strategy implementation*. The analysis, design and development phases of the model support planning learning activities that will encourage interaction during online learning. These processes are used to help in determining how chosen strategies are best implemented.

The notion of planning a course by *building* in interaction was supported by Kirby (1999), and by other systems approaches described by TeleEducation New Brunswick's (2001) and LearnOntario. In designing and developing online courses, it is advantageous to select instructional methods and techniques that

foster interaction. This encourages the product of collaboration among students and with the teacher (Collins & Berge, 1996).

Bull et al. (1998) believed that, for building in interaction, instructional designers should incorporate a combination of student and teacher-led activities through: learner collaboration, moderation of online discussions, and teacher control (in setting goals, determining learning activities, and linking students to instructional materials). Instructional designers need to consider the kind of learning, and by extension the types of interaction required for online learning in their course designs (Soo & Bonk, 1998).

For computer conferencing to be implemented effectively it is crucial that teachers focus on both “the productive (task) communication of members as well as the development of roles and relationships among team members (maintenance)” (Bailey & Luetkehans, 1998, p. 20). Online learning “can be best facilitated through the design and implementation of constructivist tools and learning environments that foster personal meaning-making and disclosure among communities of learners” (Jonassen et al., 1995, pp. 12-13). In constructivism, certain interactive learning goals are achievable (Miller & Miller, 1999).

Wagner (1997) identified 12 online interaction strategies that focused on what learners achieve as a result of interaction in online discussions. These strategies are for accomplishing the purposes of:

- Participation
- Communication
- Feedback
- Elaboration
- Learner Control
- Motivation
- Negotiation
- Team Building
- Discovery
- Exploration
- Clarification
- Closure



Several guidelines were available in the literature as how to best moderate computer conferences. As a way of reconciling the spirit of this range of guidelines, the following draws them together into a common theme. Teachers carry out the following tasks in moderating computer conferences: scaffolding topical discussions, encouraging elaboration of topics through questioning, and providing timely and meaningful feedback to the students (Bailey & Luetkehans, 1998).

This case study applied the knowledge produced by this literature review while completing its investigation in designing online learning for one particular cohort of learners. Encouraging interaction was a key element in the strategy implementation.

## CHAPTER III

### METHOD

#### Design

A qualitative case study was conducted. Using ethnographic techniques of fieldwork and interviewing, data about the case was gathered during the conversion of an on-campus course to online delivery. Merriam (1998) defined the qualitative case study in terms of:

the process of actually carrying out the investigation, the unit of analysis (the bounded system, the case), or the end product.

As a product of an investigation, a case study is an intensive, holistic description and analysis of a single entity, phenomenon, or social unit. Case studies are particularistic, descriptive and heuristic. (p. 34)

In this particular case study, the researcher examined the resultant student interaction in an instance of a community college online course and associated planning decisions made while completing ISD processes. The researcher analyzed interaction strategies selected for use in the course. This analysis described and illustrated results achieved in applying ISD processes to encourage student interaction. The case study examined the heuristic of why these planning decisions led to a successful conversion of the on-campus course to online delivery.

The researcher investigated student interaction by participating with John (a pseudonym for the community college teacher) during his first experience in designing, developing and delivering an online course. This participation involved mentoring John, including coaching him through procedural skills necessary to complete the TIP phases of analysis, design, development, and implementation, particularly in moderating computer conferences. Processes, selected for use from the TIP model, were deemed by the researcher to be appropriate in respect to the development of an educational course.

The researcher observed the resultant interaction, which occurred in a learning environment's discussion forums during implementation of the online course. The interaction was that between John and his students, the students themselves, and with the course materials. The qualitative case study centred on John's conversion of the on-campus course for online delivery and its initial formative trial. The design and development took place over the summer and fall of 2000, and the trial online course took place in the winter semester of 2001.

The qualitative research method, the case study, was chosen to investigate the effects of ISD on planning online interaction. The researcher's area of interest was in describing this relationship in some detail with a view to discovering the effect of using a systems approach in the design of online interaction. This was an excellent opportunity to apply his personal knowledge gained through Athabasca University coursework in student interaction and systems design.

## Operational Definitions

The following terms and phrases are defined:

- a. *Participant Observer* – A participant observer investigates the setting for the case study and then progressively narrows and directs attention towards elements of the setting that emerged as being theoretically essential (Lui, 1999). In this study, the researcher immersed himself in the instructional design (ID) by mentoring the teacher in ID, sharing in the work involved in the ID processes, and informally talking with and formally interviewing the teacher. During the formative trial of the course, the researcher limited his participation to coaching the teacher in moderating computer conferences. The researcher did NOT directly participate with the teacher and students in the online interaction; here, his role was to observe student–teacher interaction and student–student interaction.
- b. *Interaction* – Berge (1999, p. 6) defined interaction as  
two-way communication among two or more people within a learning context, with the purposes of either task / instructional completion or social relationship-building, that includes a means for teacher and learner to receive feedback and for adaptation to occur based upon information and activities with which the participants are engaged.
- c. *Active Learning* – involves the learners’ adoption of a participative role in mastering learning outcomes. Each learner actively rehearses, both alone and with other learners, the application of information thereby enhancing

- the coding and retention of knowledge (Knowles, Holton & Swanson, 1998).
- d. *Engagement* – Students are meaningfully engaged in learning activities through a combination of individual tasks and group interaction, both of which are based on learning objectives. This engagement involves collaboration, a project-orientation and an authentic focus (Kearsley & Shneiderman, 1999).
  - e. *Participation* – In this thesis, this term and its derivatives are used in one of four ways: 1) in connection with the term *participant observer*, 2) in connection with participants in the research study, 3) as one of the TIP model's primary components of instruction, and 4) as one of Wagner's (1997) 12 interaction strategies. Other terms, such as *interaction* and *engagement*, were used to describe involvement in learning activities.
  - f. *Flexible Learning* – Students learn at a time of their own choosing (i.e. frequency, timing, duration). This permits learning to be scheduled along with other life tasks.
  - g. *Instructional Design (ID)* – A term commonly used for *linear instructional design and development* (Braden, 1996).
  - h. *Blackboard CourseInfo* – The University of Richmond web page (2000) describes this learning management system as
    - a faculty course management tool that facilitates the creation of sophisticated World Wide Web-based educational environments. It can be used to create entire on-line courses,

or to simply publish materials that supplement existing courses.

Blackboard CourseInfo not only produces courses for the WWW, but also uses WWW browsers as the interface for the course-building environment. Aside from facilitating the organization of course material on the web, Blackboard CourseInfo also provides a wide variety of tools and features that can be added to a course. Examples of tools include a conferencing system, on-line chat, student progress tracking, group project organization, student self-evaluation, grade maintenance and distribution, access control, navigation tools, auto-marked quizzes, electronic mail, course calendar, student home pages, course content searches, and much more.

Blackboard CourseInfo is an easy-to-use environment for creating sophisticated WWW-based courses that are otherwise beyond the ability of the non-computer programmer.

- i. *Conversion of an existing course to online delivery* – In this case, conversion was the task of developing, using a systems approach, a new version of an existing course. The course had been delivered as face-to-face instruction, employing an instructional strategy of lectures, assigned readings from a textbook and post-tests (multiple-choice questions and a performance assignment). The teacher had perfected the delivery of this course over a number of years. The new version of the course would employ an instructional strategy of online instructional materials, assigned

readings from a textbook, online embedded quizzes, computer-mediated communications (e-mail and computer conferencing) and post-tests (multiple-choice questions and a performance assignment).

### Participants

The Teacher. John (a pseudonym for the teacher) and I worked together in an ID team to convert one of his existing on-campus courses for online delivery. He had worked in industry prior to entering the teaching profession, and subsequently completing a Master of Arts and Education degree. John has taught an on-campus version of this course for many years.

It had been suggested by a representative of the community college that John and I work together. The community college had been approached in the spring of 2000 about the possibility of a project in distance learning at the institution. For the academic year of 2000 / 2001, John was one of the few teachers at the community college who would, for the first time, be developing an online course. Although other teachers already had been using a learning management system known as First Class for online courses, Blackboard was primarily being introduced at this time to support on-campus courses, delivered in the classroom. As John and I were both members of a local church congregation, his name had been offered as a personal reference when I first approached the community college about the possibility of completing a project there.

Over several years, in discussing teaching with John, and from sharing observations with others about his teaching, I had concluded that John is an

enthusiastic teacher who puts a great deal of energy into his courses. He relates to his students well on a personal level and truly has their best interests at heart. His motivation towards online learning comes from his efforts to keep abreast with current teaching practices and serving the students' needs.

The Researcher. I adopted a role of *participant observer*. In choosing to adopt this particular role in this qualitative research, the option was taken to investigate in depth this instance of a particular ID setting, rather than the breadth of ID. The investigation sought to provide a rich description of the effect of planning decisions taken in the case study. The use of two ethnographic techniques, fieldwork (observation) and interviewing, permitted both a detailed account of the planning decisions to be gathered as well as understanding the teacher's rationale for taking individual decisions.

In this investigation of online interaction, I entered the setting of a community college to mentor and work directly with a teacher in the instructional design of an online course. From the vantage point of my participation within an ID team, I directly observed the teacher's decisions during the ID processes. During the formative trial of the course, I coached the teacher in moderating the computer conferences while passively observing the online interaction.

As a participant observer, I brought expertise to the team in instructional systems design and in moderating computer conferences. In addition to relevant courses from the current Master of Distance Education program, I have completed a Master of Education and military occupational training in Training Development, and hold a Certified Training & Development Professional (CTDP)



designation from the Ontario Society of Training and Development. I have been employed in military training for twenty years.

Students. Twenty-one students initially volunteered to take part in the trial of the online version of the course in place of completing the on-campus version, and to take part in the research study. The form for the invitation to take part in the research was included as Appendix 1. Of the 21 students who originally volunteered, 16 were involved appreciably in the weekly discussion forums. The five remaining students essentially were non-participants, and it was assumed that they primarily engaged the course objectives through the student–content interaction alone.

The trial involved students who were taking the online course during the second semester of a three-year automotive marketing diploma program. The researcher observed the online student–teacher and student–student interaction that occurred in weekly discussion forums. Students’ comments with respect to their interaction with the instructional materials were also noted.

At Georgian College, the Canadian Automotive Institute’s (2000) “six-semester, three-year co-op diploma program is aimed at individuals who expect to assume entry-level management positions or to become entrepreneurs in the automotive industry ... A focus on automotive related courses provides students with options in automotive dealership or aftermarket, business, advertising [and] marketing.” As Georgian College is an Ontario community college, its chief source of students is from that province. This was also true for the students involved in the trial course; three were from other Canadian provinces.

The program prerequisite for students directly entering post-secondary education is an “Ontario Secondary School Diploma (30 credits) at the general level or the equivalent with a minimum of Grade 12 English and a general level Grade 12 Mathematics” (Georgian College, 2000). Thus, students entering the program start with learning skills commonly gained from the prerequisite education. In addition to educationally related skills, some of the registrants will also have had part-time employment in the automotive market. From this starting point, the program goes on to provide a firm foundation for one’s professional knowledge in automotive marketing.

These students had some exposure to the online learning management system, Blackboard CourseInfo, in their first semester. This system was employed to support on-campus courses. Students were already familiar with navigating in the environment through its folders and documents, and using student tools such as online grade books and e-mail. This prior practice would have ensured that the students were comfortable in the online environment, but not necessarily in interacting in the discussion forums.

### Instruments

Protocols (Appendixes 2 and 3) were developed for questions posed to John in two interviews. The purpose of the first interview was to examine John’s design for the online course. The latter interview examined his moderation of the online discussion forums and perceptions of the interaction strategies that had been anticipated and then employed.

A weekly summary form (Appendix 4) was developed to help: identify, code and summarize interaction strategies, for both student–teacher and student–student interactions. These interaction strategies were recognized in the transcripts of weekly online discussion forums.

### Procedures

The Researcher’s Participation In The ISD Processes. In acting as a participant in converting an on-campus course to that of online delivery, the researcher coached John in undertaking TIP processes and in moderating online discussion forums. John and the researcher met regularly during the development of the course to review the results of completed work, and to discuss the forthcoming planning decisions. The coaching specifically addressed the TIP processes, listed in Table 1 on the next page, that were selected for use in this ID.

A personal journal was kept to record the researcher’s perspective of learning that occurred in mentoring sessions with John. After each session, details about any decisions, the rationale for decisions, or milestones agreed upon were recorded. This journal served as a record of the researcher’s insights for the fieldwork conducted.

Table 1

Selected TIP Processes.

PHASES	PROCESSES
Analysis	<ul style="list-style-type: none"> <li>• Write instructional goals, referred to by the college as <i>learning outcomes</i></li> <li>• Perform an instructional analysis, which looked at the gaps in performance, a lack of knowledge</li> </ul>
Design	<ul style="list-style-type: none"> <li>• Develop the performance objective, <i>Develop a basic marketing plan</i>, which was the task placed at the apex of the hierarchical instructional analysis</li> <li>• Develop performance measures, which included a plan for three 25-item multiple-choice tests and the course assignment, <i>Write a personal marketing plan</i></li> <li>• Sequence study units</li> <li>• Develop the media mix, which comprised a textbook, web-based instructional materials and discussion forums</li> <li>• Develop the principal components of instruction (preparation, presentation, participation, practice with feedback, and performance assessment) for each unit</li> </ul>
Development	<ul style="list-style-type: none"> <li>• Identify instructional resources (selected textbook readings and Websites)</li> <li>• Develop instructional materials, which included:               <ul style="list-style-type: none"> <li>○ <i>Directions</i> for individual study</li> <li>○ <i>Overview</i> of content in relation to past and future content</li> <li>○ <i>Introduction</i> to each unit</li> <li>○ <i>Learning Outcomes</i> for each unit</li> <li>○ <i>Things To Do</i> as an advanced organizer for learning activities</li> </ul> </li> <li>• Develop topics for discussion forums</li> <li>• Formative evaluation – online instructional materials and discussion topic threads were evaluated using a face validation process: peer reviews and a trial course</li> </ul>

**Note:** Outputs from the first two steps of the analysis for the automotive marketing program were accepted in the design of the online course. These steps are: needs assessment and learner analysis.

The Researcher's Observation Of Student Interaction. During the trial, the researcher observed all online interaction strategies that were employed by John and his students. It should be noted that for these on-campus students, offline interaction was also possible; this study did NOT attempt to address this offline interaction. Even though not observed, any offline activity might have provided interaction opportunities that changed the students' perceived need for online conferencing.

John had access rights granted to the researcher to observe interaction in the Blackboard learning management system, including all instructional materials, teacher's announcements or *messaging*, and discussion forums. This access was granted on a read-only basis.

During the running of the trial, the researcher prepared transcripts of the online announcements and eight weekly discussion forums (comprising some 275 individual postings). This preparation involved approximately five days' work. All names and identifying information of any kind were removed. For clarity and the ease of reading, these transcripts were edited. Sentences were corrected for spelling and grammar, mostly by accepting MS Word suggestions of the spelling and grammar editor that seemed appropriate to the meaning of the text, and pronouns were replaced by proper nouns. The researcher was careful to avoid changing the meaning of individual contributions. The information of interest was the patterns of interaction, not the content of the interaction. Redacted transcripts of the announcements and discussion forums, which contain no identifiable information, were then analyzed.

Analysis Of Interviews And Weekly Discussion Forums. The data management for the qualitative case study comprised data preparation, data identification and data manipulation (Merriam, 1998). Handling the data involved:

- a. Preparing transcripts for the interviews and weekly discussion forums, as referred to above;
- b. Identifying and coding sentences from these transcripts, which represented anticipated or observed interaction strategies; and
- c. Manipulating the coded sentences to formulate patterns of interaction, using frequency distributions and table summaries.

*Interaction strategies* were identified by comparing transcripts against Wagner's (1997) descriptions of strategies as described in Chapter II. The descriptions of the strategies were clear to the researcher, which was a factor in ensuring the reliability of the discriminations made about the intent of sentences in the transcripts.

The 12 interaction strategies are:

- |                 |                   |                 |
|-----------------|-------------------|-----------------|
| • Participation | • Learner Control | • Discovery     |
| • Communication | • Motivation      | • Exploration   |
| • Feedback      | • Negotiation     | • Clarification |
| • Elaboration   | • Team Building   | • Closure       |

Although the interaction strategies were quite distinct, two days of practice were required to gain sufficient skill to be able to reliably code transcripts using these strategies. It was found in the beginning that familiarity with only the interaction strategies' labels (i.e. participation, communication, feedback, etc.) was insufficient to reliably complete the task. Five hours of practice were required

to gain a working familiarity with the descriptions of interaction strategies and then reliably code redacted transcripts. This practice was repetitive in nature and was completed using the actual transcripts. The researcher also found personally that he had to work methodically to ensure his accuracy in interpreting the text, as it was recorded in each transcript. (Examples of this text are included in the last section of Chapter IV.)

Interaction strategies, implied by the teacher's comments made in the first interview, have been identified and coded (Appendix 7). The researcher attempted to capture the effects of planning decisions on student interaction taken in the analysis, design and development of the online course. These decisions led the teacher to encourage the use of various interaction strategies in moderating the discussion forums. The interview prompted John to summarize what he had learned about the use of TIP processes from the participant observer's mentoring.

A protocol was developed for the first interview (Appendix 2) and a copy of this protocol was given to John to read over one half-hour prior to the start of the interview. The 75-minute interview was audio taped and was held in a private office at the community college at the end of the 2000 fall semester. The researcher prepared a transcript of the interview. An analysis of John's remarks, made during the interview, identified interaction strategies that would be anticipated to take place in the online discussion forums.

The coding of the first interview with John was also cross-referenced with entries from a journal kept by the researcher while coaching John through the TIP processes. (These processes are listed in Table 1.)

A second one-hour interview was conducted, immediately following completion of the trial. Again, it was held in a private office to avoid interruptions. The purpose of this interview was to confirm John's perceptions of which types of interaction strategies had been envisaged by the planning decisions, and which interaction strategies had been employed by him and students during weekly discussion forums.

A protocol (Appendix 3) was developed for this second interview, and was discussed with John prior to the interview to ensure clarity of the questions. Again, the interview was audio taped and a written transcript was prepared. The analysis of the transcript for the second interview (Appendix 8) identified those interaction strategies, which John had anticipated during the design and perceived taking place in online discussion forums.

Observations of interaction strategies, employed by the teacher and students, were made from redacted transcripts of announcements and eight weekly discussion forums (for Units 1 to 9 except 7, for which a forum was NOT held). Interaction strategies illustrated in the dialogue were identified and coded. The coding of weekly discussion forum transcripts involved a three-day period of work. Again, this coding was made using Wagner's (1997) interaction strategies (see Appendix 4). Patterns of interaction were then highlighted in the manipulation of the data.



Data management was accomplished with the aid of common office computer software. MS Word was employed to prepare the redacted transcripts, and to code the data. Word processing techniques such as tables, underlined text and labels were used to code individual sentences. The sentence was the smallest unit in analyzing transcripts (Fahy, 2001). Due to the manageable amount of transcript material and the researcher's desire to work directly with the transcript material in identifying and coding the interaction strategies, the researcher preferred not to use qualitative software, as described by Merriam (1998).

E. D. Wagner (personal communication, May 8, 2001) advised that even though she had been contacted by a number of people interested in doing some research on the interaction strategy categories, she had never seen the results of any studies that have been designed to test, quantify or qualify the categories.

Concordant reliability, or code-recode reliability, was used by the researcher to assess the consistency of coding interaction strategies from one time to another in the transcript analysis. It was assumed that the researcher's knowledge of the interaction strategies remained constant between the coding and recoding. The measure was applied to two transcripts, the first interview with John and discussion forum for the third unit. These transcripts were initially coded for the references to or observed instances of interaction strategies. Then after the two-week period, both were recoded.

The statistic or index for concordant reliability calculated was the proportion of concordances (same code and recode of a single sentence) over

the total number of sentences. An identical set of results for coding and re-coding would yield an index of 1.0 (100% agreement). Indexes of 0.95 and 0.98 were obtained in the two tests.

To further compare the reliability of the coding by the researcher, Cohen's Kappa (Huebner, 1996), a second statistic, was also calculated. "The closer the Kappa is to 1.0 [100% agreement], the higher the accuracy of the data" (Huebner, 1996). A value of .97 was obtained for the comparison of the coding and re-coding of the transcript for the third week's discussion.

This level of reliability for data handling was considered to be acceptable for determining the interaction strategies employed by the participants in the discussion forums.

### Summary

The research design was that of a qualitative case study, which investigated the effects of TIP processes in encouraging online interaction. The case involved the conversion to online delivery of an existing community college in-class course; the online instructional strategy made use of online materials and computer conferencing in an electronic learning environment with an adjunct textbook. Of specific interest were the planning decisions from the TIP processes, and more specifically, their effect in invoking interaction strategies.

The researcher used ethnographic techniques to gather data. He acted as a participant observer in mentoring a community college teacher in the analysis, design, development, and implementation of the online course, and moderating

computer conferences. The researcher then observed interaction strategies that were employed by teacher and students in the formative trial course during its implementation.

An interview, which was conducted just prior to the start of the trial online course, reviewed the anticipated interaction strategies from a discussion of undertaking the TIP processes. A second interview was used to capture the teacher's perceptions of the patterns of interaction strategies used during the course.

Data management primarily involved an analysis of transcripts for two interviews with the teacher and weekly discussion forums. The analysis of interaction observed during the implementation of the instructional design was supplemented by information from a journal kept by the researcher while coaching the teacher. Measures of concordant reliability were made to determine that transcript analysis would be considered to be reliable.

Findings, produced from an analysis of the qualitative data gathered, are presented in Chapter IV, Findings.

## CHAPTER IV

### FINDINGS

#### Design And Development Of The Online Course

In 1999, interest was growing in online courses at a department of a nearby Ontario community college. Initially, this interest had been exclusively focused on offering distributed training for the certification of people already in industry, but it was escalating to include providing opportunity for flexible learning within the department's on-campus program. It was in this opportunity that I was to form a professional working relationship to analyze, design and develop an online course with one of the department's teachers, known as *John*. He intended to convert one of his on-campus courses to online delivery.

Concurrently within the college, an initiative known as Alternative Delivery was gaining momentum. This involved using educational technology to deliver programs. An *online course* was one of the methods of alternative delivery being explored as part of this initiative. Members of the college had initially investigated the use of computer conferencing, First Class™, and now were investigating the wider application of learning management systems. Just prior to the start of my study, the college had adopted Blackboard CourseInfo™. Three planned uses were envisaged in the implementation of this learning management system:

- Providing online resources,
- Extending the on-campus discussions, and
- Delivering online courses.

Although the college had acquired a distance learning capability, its main focus was to remain primarily a single-mode campus. Flexible learning appeared to be the advantage gained in introducing online courses as alternative delivery.

I approached a representative of the community college about the possibility of completing a project at the college for my case study. Her function was to coordinate the implementation of alternative delivery throughout the community college. After several meetings, she suggested that I work with John, one of the few teachers who were pursuing online delivery for the first time.

My first meeting with John was to explore the possibility of converting one of his in-class courses to online delivery. In his description of the educational course as it was currently delivered, the delivery primarily comprised classroom presentations with a comprehensive individual assignment as its final performance measure. John provided a copy of the college's official course outline and assignment instruction, entitled *Developing A Personal Marketing Plan*. In forming our professional relationship, he was looking for guidance in converting his course into an online course whereas my purpose was in completing fieldwork towards my thesis.

The department had just replaced the textbook used to support its two introductory marketing courses. The publisher promised that an Instructor Resource CD-ROM would be available to support the teachers' delivery of their courses. Of particular interest was possibly incorporating PowerPoint presentations and question bank items into the online delivery. My initial cursory

check of this resource would indicate that both presentations and the question bank appeared to be well constructed and easy to use.

I advised John that my study would involve examining instructional design (ID) decisions with regard to their effect in encouraging online interaction. It was my view that in implementing online delivery, interaction would be crucial in ensuring the success of students' learning. His students would benefit from engaging in learning activities that supported the objectives. John consented that we join together in a team approach for the ID.

Our opening discussions reacquainted John with instructional systems design (ISD). He had been previously introduced in his own earlier postgraduate studies to a systems approach. Specifically, discussions focused on introducing the Training for Improved Performance (TIP) model (Athabasca University, 1990). The bulleted list, Figure 1 as shown on the next page, identifies TIP processes in analysis, design, development, implementation, and evaluation.

Figure 1  
Training For Improved Performance (TIP) Model.

<b>F e e d b a c k  a n d  R e v i s i o n</b>	<b>Analysis</b>
	<ul style="list-style-type: none"> <li>- conduct needs assessment</li> <li>- identify entry skills and other learner characteristics</li> <li>- identify resources and constraints</li> <li>- identify problem statement components (gap, importance of closing gap, suitability of instructional solution)</li> <li>- write instructional goals</li> <li>- conduct task analysis (structure of tasks and their relationships)</li> <li>- conduct content analysis (body of knowledge and topics)</li> <li>- conduct instructional analysis (classify goals using TIP taxonomy)</li> </ul>
	<b>Design</b>
	<ul style="list-style-type: none"> <li>- write performance objectives</li> <li>- identify performance measures</li> <li>- identify types of tests</li> <li>- sequence and group performance objectives</li> <li>- specify the primary components for the instructional strategy</li> <li>- select media</li> <li>- select instructional techniques</li> <li>- identify and incorporate secondary components</li> </ul>
	<b>Development</b>
	<b>Implementation</b>
	<ul style="list-style-type: none"> <li>- formulate implementation plan</li> </ul>
	<b>Evaluation</b>
	<ul style="list-style-type: none"> <li>- develop formative evaluation plan</li> <li>- construct formative evaluation instruments</li> <li>- identify and summarize formative evaluation data</li> <li>- revise instruction</li> <li>- develop summative evaluation plan (cost-benefit analysis and impact analysis)</li> <li>- write final report</li> </ul>

I proposed to John an approach for online learning. This approach would require students to study course content from assigned readings, and contribute ideas in online discussion forums. Of course, John's primary teaching role would be transformed from that of a 'presenter' in an on-campus course to that of a 'moderator' for online computer conferences. Online materials would include a course outline, unit study guides, and assignment instructions. Computer conferencing would be used to provide student support in terms of welcoming students to the course, offering practice in applying concepts from unit readings, and if necessary, grouping students to work on developing ideas and materials for their course projects. (Since only 16 students were involved in the discussion, a single computer conference was employed.)

Although John accepted in principle using this approach, he would remain reticent about the possible interaction that could be achieved until proceeding further with the ID. This reticence was expressed by John's feeling that the number of student postings in the computer conferences would be insufficient to produce any real learning.

To help alleviate this reluctance, I shared with him Rowntree's (1995) considerations for *wrapping around* a textbook. I believed that John would appreciate on the soundness of this combined instructional strategy. The intent of the many learning activities is to develop student interest and prompt them to become engaged in discussion. Rowntree's considerations effectively summarized necessary online materials that needed to be designed and developed.



These considerations addressed the following items:

- learning outcomes
- textbook readings
- introductions / overviews
- discussion topics
- summaries
- clearer explanations
- contrasting viewpoints
- alternative examples
- illustrations
- case studies
- activities
- feedback on such activities
- instructions on practical work
- glossaries (p. 81)

While John and I worked through the TIP processes, I maintained a positive attitude towards realizing a high degree of student interaction and engagement in learning. With the completion of each TIP process, John's comfort level for prompting student interaction in conferences increased. A metaphor that represented my positive stance is reflected in the adage, *Build it and they will come!* Each ID decision, each output from a TIP process, each building block for a set of learning activities ... helped to provide the scaffolding to create a successful setting for interaction to engage learners.

John let me know that the course was part of an automotive marketing educational program in which graduates were preparing for jobs in dealership operations, the automotive aftermarket sector, and automotive manufacturing. The target audience comprised post-secondary students, aged 18 to 25, who have little experience with distance learning. The need for this course had been well defined during the development of the program. The target audience was fairly well known to John after several years of teaching. Therefore, John and I concluded that two TIP analysis processes were already essentially complete.

These processes involved conducting needs assessment, and identifying entry skills and other learner characteristics.

The first two TIP analysis processes to be undertaken in the conversion of the course were writing instructional goals and conducting an instructional analysis. (See Table 1, Chapter III, for a list of TIP processes that were selected for completion within this ID.) John and I scrutinized the current official course outline, an activity that involved verifying instructional goals, or learning outcomes as they are referred by the college, for completeness and appropriateness of being student-oriented and performance-oriented.

The outline contained what I considered to be a single course-level learning outcome, developing a marketing strategy, along with intermediary learning outcomes (i.e. groupings of unit-level learning outcomes). In interactive learning activities, it was anticipated that students would be applying marketing concepts, which would lead to a project of developing a personal marketing plan.

In performing an instructional analysis, John identified several relevant learning outcomes for each textbook chapter. I emphasized that this was an important step in determining the *cognitive roadmap* or *blue print* for this course. It highlighted the actions that students need to be able to do after completing learning activities. Of import, this analysis also provided substantial clues to possible learning activities for generating interaction. For example, the interaction strategy for communication fosters the sharing of ideas and students' experience about the course and unit-level learning outcomes. John said, "What we have to do is help students understand, through the interaction on

this online course, that the unit-level learning outcomes have a part to play in the development of the marketing plan, the course learning outcome.”

As the instructional analysis neared completion, we found that the course content primarily comprised application skills with some information skills, as defined by the TIP Taxonomy (Athabasca, 1990). All of these application skills were considered essential in performing the ultimate hierarchical skill, a procedure for developing a marketing plan. Application skills enable learners to differentiate and identify stimuli in a given scenario, or from a list of examples and non-examples. A listing of these skills would represent the guiding criteria for identifying and designing questions posed in weekly discussion forums. The determination of interesting, relevant questions as conferences topics would be key in providing motivation for joining in interactive learning activities.

In reviewing John’s draft unit-level learning outcomes, we verified the selection of appropriate actions or verbs. In initially determining these learning outcomes, John chose to use an approach from the TIP Model, called problem analysis. First he asked himself, what do new students need to know about marketing? He then developed unit-level learning outcomes based on deficient knowledge. From the problem definitions, John and I were able to clarify the types of skills or actions. (See the listing of unit-level learning outcomes in Appendix 5.)

As part of my own Athabasca course work, I developed a Blackboard module or prototype based on one of the textbook chapters. My prototype also included a shell for the course, with a course outline and instructions for the course assignment. I talked John through this prototype with the intent of

illustrating how ID processes transformed inputs from analysis, learning outcomes, into outputs, instructional materials. I emphasized that instructional and evaluative materials must reflect the actions in the learning outcomes. Of course, this is also true for any interaction supporting learning.

We examined the textbook publisher's *Instructor's Resource CD-ROM*, which contained PowerPoint presentations and multiple-choice questions. These presentations effectively summarized relevant information in each chapter. Individual questions were well written and had been categorized by the publisher as being a *definition*, *concept* or an *application*. These categories approximated TIP taxonomic categories of information, application and procedural skills, which had been used to identify types of actions for the learning outcomes. This would ease the process of selecting appropriate items in the development of quizzes.

John found the processes of analyzing an educational requirement to have been very worthwhile. By precisely identifying actions that students should be able to do after completing the learning activities, learning outcomes became very apparent. He was able to successfully communicate what skills were necessary, in applying marketing mix concepts. These same skills would become the focus of the online interaction. John said, "Without understanding the particular elements of the marketing mix – product, place, promotion and price – students can never hope to put a cohesive plan of their own personal marketing objective together."

For students, these learning outcomes were as important to the interaction strategy for elaboration in applying the elements to them as the product in

considering the course assignment. John said, “What the students are asked to do is to take those different elements of the marketing strategy and apply them to themselves in developing a personal marketing plan.” At this point during the ID, we were ready to take the course-level learning outcome, develop a marketing plan, and write a performance objective.

John wanted to know about design processes. This included determining:

- Performance objectives,
- Performance measures,
- A sequence of learning outcomes,
- Media mix, and
- Primary components of instruction.

We discussed that in writing a performance objective more detail was added in the form of conditions and degree of performance. A resource used in our discussion was the website, [ABCD learning objectives](http://www.cabrillo.cc.ca.us/thinking/objectives.html) (<http://www.cabrillo.cc.ca.us/thinking/objectives.html>), which described the Audience, Behaviour, Conditions and Degree of performance. We developed a performance objective for the course. I gave examples of objectives with varying conditions and degrees of acceptable minimum performance to show how the resulting instructional materials and performance measures could be quite different depending on the objective.

With some assistance from myself in formatting, John wrote the performance objective for the procedural skill, Develop A Marketing Plan. (See the performance objective in Appendix 5.) We verified that the existing course assignment properly measured the objective as written. John said, “What

TIP has done is taught me that everything is related to everything. Why do I have course learning outcomes? Because this is what the students need to know to help them with the overall performance objective.”

The evaluation approach for the course assignment was to have students develop a personal marketing plan. As was described online in the assignment’s introduction:

The nature of this assignment is to apply some of these concepts to *you* and develop a Personal Marketing Plan. You will need to focus on a combination of marketing mix elements that will be used to market yourself to a key position with a desired employer (i.e. *you* as the product, who is priced, promoted, and distributed strategically and professionally).

It was anticipated that students would interact with each other while generating ideas for their individual assignments.

John sequenced units by choosing to first present *product and promotion*, those marketing mix elements that were most relevant in completing the course assignment, followed by the remaining two elements, *price and place*. John said, “I don’t want to say that any one of the *P*’s is more important, but in terms of the personal marketing plan some are more applicable than others. I think that *product and promotion* are the two most applicable to a personal marketing plan, so we cover them first.”

The TIP model’s primary components of instruction essentially represent the instructional method. It is necessary to determine these components prior to

selecting the media mix for instruction. We agreed that John would develop the principal components of instruction for a second unit, other than the one I had developed as a prototype. We could then compare the two modules and create a template. John approved this template prior to developing remaining units.

Whenever John and I met to discuss the ID, I usually initiated adjunct conversations that were intended to familiarize John with distance teaching. On one occasion, I chose to share a posting that had been made to the Distance Education Online Symposium (DEOS) list-serve. On July 27, 2000, symposium one participant wrote:

There has been lots of talk about what makes for a "good" DL student ... What about professors? What skills, knowledge, etc. are needed of a professor? Are these a sub or supra set of the skills, etc. of a "traditional professor"?

Well of course, to some extent depends on the format of the dl situation ... Courses all online will require a set of skills not necessarily needed for a more traditional dl course done by text and study guide ... But still from a distance ... So, facility with tech will be one factor.

Other than that ... I don't see much difference ... A good professor has to (amongst other things):

1. Know his/her discipline cold
2. Be able to actively engage students in dialogue and activity relevant to the course objectives
3. Be timely in his or her feedback about a variety of things

4. Be available in reasonable time slots for contact with students
5. Care about the course and the students in the course
6. Be able to clarify sticky wickets ... and all courses have them
7. Run an organized operation
8. Be skilful in being able to translate objectives into good learning activities
9. Be a good assessor of student accomplishment
10. Keep up to date in his/her discipline
11. Be willing to change

As was described in Chapter III, John possessed already many of these competencies. Coaching was planned to provide him with the new competencies necessary for effective implementation of online delivery.

A key bit of advice in the list with respect to this thesis was to *actively engage students in dialogue and activity relevant to the course objectives*.

John and I continued to meet with the purpose of helping to instil in John confidence in manipulating the Blackboard learning management system. This coaching included helping him make use of Blackboard's features, which would minimize students' access time via a browser while downloading courseware.

One discussion topic that I kept emphasizing was the need to plan for the interaction using the asynchronous computer conferencing. Our discussion focused on meeting the needs for students' flexible learning, while balancing John's involvement in this online course and his other teaching commitments. The plan for discussions occasionally relied on scenarios taken from the textbook. Of course, topics selected for weekly discussions would be related to unit-level learning outcomes as closely as possible. Two additional discussion



forums were also created: one entitled Automotive Marketer's Café, where students could socialize, and the other entitled Marketing Strategy Think-Tank, where they could share their ideas being considered for the course assignment.

At this point in the ID, I suggested using quizzes to provide learning activities for one of the principal components of instruction, *practice with feedback*. I realized that this was quite a departure from John's traditional teaching. Usually, each evaluation activity either counted towards the final grade, or it was just not done! I urged John to build in a mixture of formative student evaluation (i.e. helping to improve learning) and summative student evaluation (i.e. measuring the worth of learning) into his course. The quizzes would provide feedback to students, as part of student–content interaction, on how well they applied marketing concepts. The course assignment provided for summative student evaluation.

I suggested that John explore several links on the World Wide Web about moderating conferences and interaction. Our working discussions had been talking around this facilitation, but I wanted to send him to something a little more concrete. These links included [What to Watch for When Moderating a Discussion](http://www.learner.org/courses/rfts/facwht.htm) (<http://www.learner.org/courses/rfts/facwht.htm>), [The Role of the Online Instructor/Facilitator](#) (Berge, 1995) and [Facilitating Interaction in Computer Mediated Online Courses](#) (Collins & Berge, 1996). John grasped the essential aspects of moderating a conference in that he made mention of the following metaphor from an automotive industry setting. The metaphor refers to developing self-directedness in the students' learning. John said about his students:

They're like the green sales force, a bunch of new sales people in a dealership; the sales manager has to really watch over them. Once they start to develop and understand the system, the sales manager can sit back and let them manage themselves.

John and I were beginning to reach a consensus for the template for the units. He began to develop the units. Most of these involved the following learning activities: an assigned reading, PowerPoint summary, quiz with 15 automatically scored multiple-choice items, and a discussion forum. These learning activities were the TIP model's principal instructional components.

The choice of computer conferencing in the media mix was vital to the realization of interaction in implementing the online course. Achieving several interactive learning activities was anticipated for these online discussion forums. In the first interview with John, he anticipated that interaction strategies that might be used in student-student interaction would likely include communication, clarification, elaboration, motivation and discovery. In considering the interaction strategy for discovery, students will be learning within a group. John said, "I think that students will recognize that they are all in this together; that they're all struggling with the same kinds of applications of concepts." An earlier design decision had students making postings to a single computer conference, and thereby, having an opportunity for interaction with all students in the trial.

In further developing John's use of Blackboard's features to manage discussion forums, we talked with another teacher at the college whose task was

to provide assistance in using Blackboard. He demonstrated several features that included presenting a single weekly conference for discussion that would be easy for students to always find, archiving discussion threads at the end of each week and providing summaries at the conclusion of each week's discussion forum. He talked about *mining discussions for gems*; these could be used in the interaction strategy for feedback. John said, "The gems selected reinforce student interaction by letting them know which points came out in the [summary] that week and actually giving the students credit." Finally, the other teacher had one further link that he recommended to us for providing practices in moderating computer conferences, Effectively Using Electronic Conferencing (<http://www.indiana.edu/~ecopts/ectips.html>).

### Implementing The Course; Coaching Moderating Discussion

Early in the first week of January 2001 at the start of the formative trial, I met with John and his students during an introductory briefing. It was my task to briefly explain the students' role in my research, and what is distance learning and asynchronous computer conferencing. I asked that they read the invitation to take part in my research, and if acceptable, to sign indicating their agreement.

John had planned to give a demonstration of how to navigate in Blackboard, but the host server's response was extremely poor at the time of his briefing. As any presenter will appreciate, this was most embarrassing for John. In the end, however, the lack of a demonstration during this briefing failed to present any real hurdles for the students' computer conferencing. This was

apparent by the ease with which students began contributing to the discussion forum, right from the start of the first unit.

While coaching John in moderating discussions forums, I periodically sent him e-mail with my suggestions. The first e-mail read something like this:

Well John, after completing the design and development, your students are finally online. At the midpoint in the first week, you might consider posting a reply with a brief summary of what has piqued your interest so far in the discussion to spur other students to join in. I would suggest making a comment in reply to one of the students who has already taken a stab at the discussion, but prompt for further information that you feel should be included. You may refer to any relevant personal experiences, as their comments so move you, or to any pertinent references in the text. Remember, you want to draw them into the discussion. Conclude with a summary including commenting about any positive interaction and suggestions for improving next week's forum.

At the end of the first unit, I met with John to help him progress through the learning management system tasks of pulling together the summary of the first week's discussion, archiving the discussion and posting next week's topic. We talked about the necessity of reinforcing those contributions that support the unit's learning outcomes, and agreed that the emphasis should be on encouraging student-student interaction.

During the next week, I offered this advice:

I would suggest selecting one or two comments to reply to. Either agree positively with thoughts that have been contributed, or offer a facilitative comment. This will let them know that you've been in the discussion forum. Since this is the last evening before the final day of this discussion, it's your last chance for any teacher-student interaction. Most students' contributions that I have reviewed seem relative to the topic and show student-student interaction. This is great!

During the third week's discussion forum, I adopted an approach of offering a sample posting that John might make. This posting was intended to illustrate to the students how to work in content from their assigned readings:

John, just start a new thread in the discussion forum, and say something like this – get your cut and paste finger ready! The subject of the reply will be “The Four Is Of Marketing A Service”...

It's great to see this week's discussion off and running! Your replies clearly point out that what NHL team websites market differs from pushing Corn Flakes. It might be helpful to talk about the *product* they're offering in the terms of the four unique elements of marketing services – Intangibility, Inconsistency, Inseparability, and Inventory. Let's see where these contributions take our discussion.

For the fourth week's discussion forum, I chose to remind John of an earlier reference that I had made to a link on the World Wide Web. This link presents a fairly comprehensive list of guidelines for moderators, The Role of the Online Instructor/Facilitator (Berge, 1995). There are many necessary conditions for successful online tutoring, which he categorizes as: pedagogical, social, managerial, and technical. I e-mailed John:

I have one specific suggestion for you to consider at this time.

In reviewing your contributions made so far to this week's discussion forum, the quality of the replies has again been excellent. I like the way that you briefly highlight main inputs for individual posts, and make the links to concepts from the readings. This may be the best way to approach this target audience. Again, this approach is dependent on the students. For your consideration, however, here is another approach to consider from Berge (1995):

Be Responsive. Respond quickly to each contribution.

One way of doing this is by posting a personal message to the contributor or by referring to the author's comments in a post to the conference. In some conferences, it is not advisable to respond to each individual contribution, but better to respond to several at once by weaving them together. Experience with your content and students will need to guide the instructor—test different ways to see what works most effectively.

In my view, if you begin to weave the responses together in the teacher-student interaction, this might prompt greater student-student interaction.

John's preference in moderating the forums remained to reply individually to each student. He said that this took him less time than it would take to weave several responses together. John was, however, enthusiastic in his each and every reply. In mining for gems to produce weekly summaries, John pulled together students' contributions to reinforce both the content and their efforts in supporting the discussion.

### Planning For Interaction

At the beginning of the trial John still was NOT expecting his students to willingly interact in the weekly discussion forums (i.e. to openly engage in learning). He did see the possibility, however, that computer conferencing would provide an opportunity for greater discussion than in the classroom. John felt that his students might be encouraged to share ideas using the strategy of communication. This interaction strategy was thought to be a first step for student-teacher interaction and then student-student interaction.

We planned for the interaction strategy of communication to be further supported by elaboration. Two avenues for elaboration were anticipated, which would provide for sharing of learning resources other than those already used in communication. John said, "The Internet is a very dynamic tool. And, it's going to continue to be dynamic as new sites develop and our knowledge increases. I

expect students will go to sites that I don't know of, but are very applicable to this course." The textbook was the second avenue in that marketing applies to a great many products and services other than the focus of this marketing course, the automobile industry. "So it's good that there are principles, which are universally applicable, whether it's the automotive industry, camera industry, film industry, or whatever; students can use some of these principles."

It was further anticipated that the interaction strategy for motivation would be used. This involved the authenticity of learning tasks. For example in developing one of the forum topics, it was expected that the case study taken from the textbook concerning Polaroid Canada would spark the students' interest. John said, "When they start talking about Polaroid, they'll bring a whole level of interest in photography that may be wasn't pre-planned but adds to their learning about marketing."

One of the emphases that would appear in my coaching of John was to have him encourage students to clarify information; students would interact by agreeing and expressing similar ideas. This would lead to realizing that they held common views for a topic. This might further lead to the interaction strategy of discovery. As John said about students working collaboratively, "along the way they will probably have a lot more input from each other."

John felt that his initial concern, for learner control, presented him with a challenge to encourage interaction in the cohort. He said, "It's going to be difficult to foster the interaction, without being too overbearing. Initially, my job as the moderator is to be encourager, not the enforcer, but the encourager."



Interviews with John. I had formally interviewed John twice, once immediately following the completion of the ID and again just after the completion of the trial course. Analyses, or coding, of these two interview transcripts are included as Appendixes 7 and 8. Table 2, shown on the next page, depicted the relationship that emerged from these analyses. With regard to various planning decisions, interaction strategies were anticipated in the ID and observed in the running of the trial course.

**Table 2**TIP Planning Decisions Associated With Interaction Strategies.

Table 2 presents the analyses of coding from the two interview transcripts, Appendixes 7 and 8.

<b>TIP PLANNING DECISION THAT WERE EXPECTED TO FOSTER INTERACTION</b>	<b>ANTICIPATED INTERACTION STRATEGY IDENTIFIED IN THE FIRST INTERVIEW WITH JOHN – AFTER INSTRUCTIONAL DESIGN</b>	<b>OBSERVED INTERACTION STRATEGY IDENTIFIED IN THE SECOND INTERVIEW WITH JOHN – AFTER THE TRIAL COURSE</b>
<b>INSTRUCTIONAL ANALYSIS</b>	<p>Learner Control – Teacher would set skill levels (TIP taxonomy)</p> <p>Communication – Students would share ideas for unit-level learning outcomes</p> <p>Motivation – Students would be informed of the relevance of learning outcomes in meeting the performance objective</p>	<p>Communication - Student-student interaction was based on achieving learning outcomes</p>
<b>PERFORMANCE MEASURES</b>	<p>Elaboration – In developing a personal marketing plan, students would apply marketing elements to themselves as the product</p> <p>Feedback – Teacher would provide quizzes for students to use in judging their own performance</p>	<p>Elaboration – Student-student interaction in developing ideas for the course assignment</p>
<b>MEDIA MIX</b>	<p>Learner Control – Teacher would encourage use of alternative information such as websites</p> <p>Discovery – Students would learn together within a cohort, in weekly discussion forums</p> <p>Communication – Teacher would present forum topics to prompt the students’ sharing of ideas</p> <p>Clarification – Students would paraphrase other students’ ideas</p>	

Table 2 continued on next page.

<b>TIP PLANNING DECISION THAT WERE EXPECTED TO FOSTER INTERACTION</b>	<b>ANTICIPATED INTERACTION STRATEGY IDENTIFIED IN THE FIRST INTERVIEW WITH JOHN – AFTER INSTRUCTIONAL DESIGN</b>	<b>OBSERVED INTERACTION STRATEGY IDENTIFIED IN THE SECOND INTERVIEW WITH JOHN – AFTER THE TRIAL COURSE</b>
<b>DISCUSSION FORUMS</b>	<p>Participation – Students would be encouraged to join in learning activity</p> <p>Communication – Students and teacher would share ideas</p> <p>Elaboration – Students and teacher would identify common marketing ideas from industries, i.e. automotive, film, sports, etc.</p> <p>Negotiation – Students would form a consensus from contributed ideas</p>	<p>Participation – Computer conferencing was thought to provide a welcoming environment</p> <p>Communication – Forum topics focused student-student interaction on learning tasks</p> <p>Elaboration – Forum topics supported students' use of experiences in their application of concepts</p> <p>Negotiation – Students identified common themes</p>
<b>PRINCIPAL COMPONENTS OF INSTRUCTION</b>	<p>Communication – Students would share information</p> <p>Feedback – Teacher would provide self-quizzes for student-content interaction</p>	<p>Communication – Principal components focused students on achieving learning outcomes</p> <p>Feedback – Quizzes for <i>practice with feedback</i> were employed in student-content interaction</p>
<b>INSTRUCTIONAL RESOURCES</b>	<p>Elaboration – Students would share alternate learning resources and experience</p> <p>Discovery – Students would discover new websites, adding to the group's knowledge</p>	<p>Elaboration – Information from textbook and web resources was authentic in terms of achieving learning outcomes</p>

In both formal interviews with John, he made reference to certain TIP processes that determined the use of various interaction strategies (Appendixes 7 & 8). With respect to Table 2 above, these processes highlighted the following strategies:

- a. *Performing instructional analysis* - learner control, communication and motivation interaction strategies were anticipated. The output from instructional analysis comprised learning outcomes for which students would be asked to share ideas and experiences. This sharing is the substance of the communication interaction strategy. Also, it is the basis for the teacher suggesting appropriate learning tasks (learner control) and students determining the relevance and authenticity of these learning tasks (motivation).
- b. *Developing performance measures* – elaboration and feedback interaction strategies were anticipated. Generally, performance measures provided *measuring sticks* on which feedback was given to students. More specifically, the performance measure of developing a personal marketing plan afforded an opportunity for students to utilize concepts gained in application tasks in the procedure required by this development. This also afforded students opportunities to elaborate on knowledge gained from alternative resources in this learning activity.
- c. *Developing a media mix* – learner control, communication, clarification and discovery interaction strategies were anticipated, specifically in the use of computer conferencing. The selection of the instructional strategy and

- medium of conducting group discussion via computer conferencing provided the venue for sharing information and supporting others' contributions. The teacher anticipated that this moderated learning activity would lead to a group synergy, that of the discovery interaction strategy.
- d. *Developing discussion forum topics* – participation, communication, elaboration and negotiation interaction strategies were anticipated. In developing effective discussion questions, John and I hoped that his chosen topics would provide a welcoming environment for discussion and lead students to contribute from alternative sources of information, other than the textbook. Negotiation represented consensus-forming postings that would be expected as accumulative contributions began to shape the discussion.
  - e. *Developing principal components of instruction* – communication and feedback interaction strategies were anticipated. Taken together, these components represent the instructional strategy. Communication and feedback interaction strategies related directly to three TIP instructional components of participation, practice with feedback, and performance assessment.
  - f. *Developing instructional resources* - elaboration and discovery interaction strategies were anticipated. In addition to using the Internet as the medium for providing this online course, John expected that students to independently find alternative resources, in addition to those highlighted by the instructional resources. These resources would be used to

supplement initial postings for sharing of information related to learning outcomes and activities. In the provision of some these alternate resources, it was hoped that this might lead the group’s discussion beyond those issues originally envisaged in the forum questions.

If all of these interaction strategies were actually employed during the weekly discussion forums, then planning decisions in this ID would contribute to the encouragement of student interaction.

From analyses of the two interviews, John had determined or recognized a number of interaction strategies. The first two left hand columns of Table 3 indicate the anticipated strategies. The right hand column compares these against the observed strategies, which will be discussed in the next section.

**Table 3**  
Types Of Interaction Strategies Anticipated And Observed.

The table depicts which strategies John anticipated during design and development, and which strategies he observed during the trial course.

<b>ANTICIPATED</b>	<b>INTERACTION STRATEGY</b>	<b>OBSERVED</b>
✓	Participation	✓
✓	Communication	✓
✓	Feedback	✓
✓	Elaboration	✓
✓	Learner Control	✓
✓	Motivation	✓
✓	Negotiation	✓
	Team Building	
✓	Discovery	
✓	Exploration	✓
✓	Clarification	✓
	Closure	

### Interaction, As It Actually Unfolded

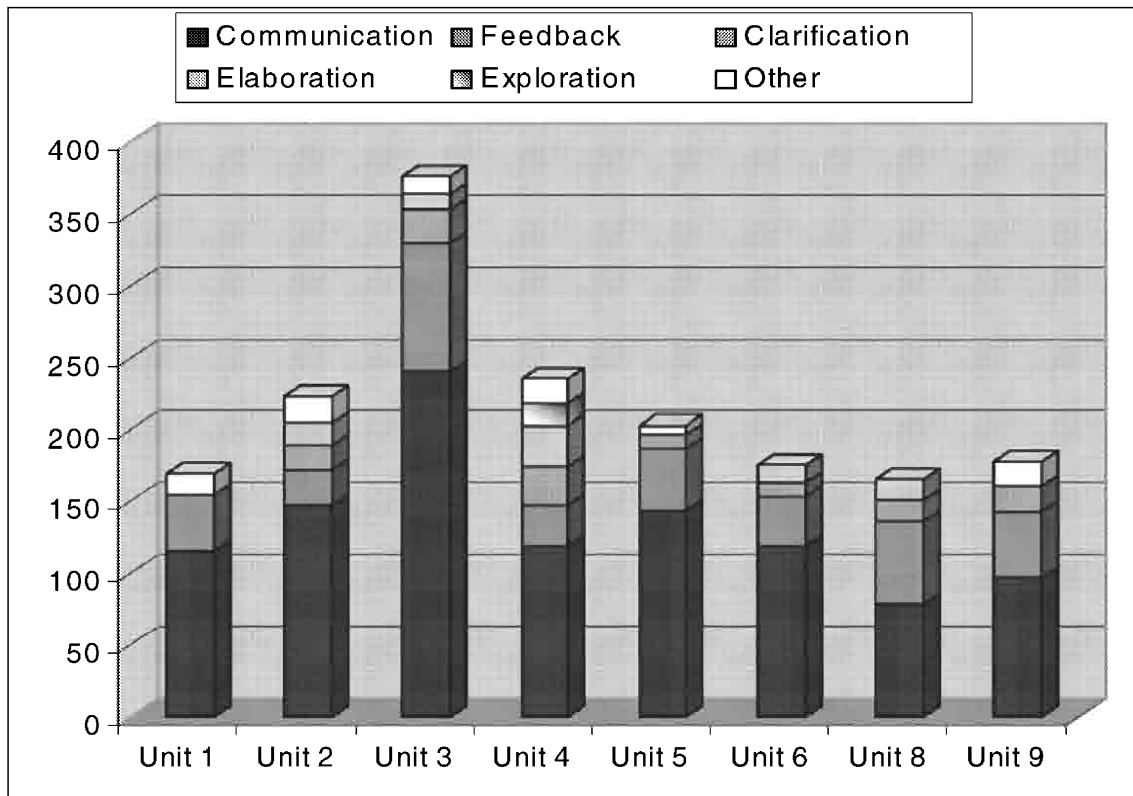
During weekly discussion forums, Moore's three types of interaction (student–teacher interaction, student–student interaction, and student–content interaction, as described in Chapter I) became quite apparent. A frequency distribution was built to show the number of sentences, reflecting each type of observed interaction strategies in the weekly discussion forums for Units 1 to 9 (excluding Unit 7 in which a discussion was NOT held). This frequency distribution and an associated bar chart are presented in Figure 2 as shown on the next page.

Figure 2

Interaction Strategies Observed In Weekly Discussion Forums.

The frequency distribution and bar chart below depict the number of sentences, by type of interaction strategy, found in each unit's weekly discussion forum. In the bar chart, interaction strategies used for less than ten sentences during a unit were grouped as 'Other'.

	Communication	Feedback	Clarification	Elaboration	Learner Control	Negotiation	Exploration	Participation	Closure	Motivation	Discovery	Team Building	Total
Unit 1	116	39	2	2	8				2				169
Unit 2	147	25	17	16	6			3	4	5			223
Unit 3	240	90	23	11	3	6		3					376
Unit 4	119	28	27	29	6	9	15	2					235
Unit 5	144	42	10		1		6						203
Unit 6	119	34	10	13									176
Unit 8	79	57	15	15									166
Unit 9	97	46	18	5		7							173
<b>Total</b>	<b>1061</b>	<b>361</b>	<b>122</b>	<b>91</b>	<b>24</b>	<b>22</b>	<b>21</b>	<b>8</b>	<b>6</b>	<b>5</b>			<b>1721</b>





The use of interaction strategies depicted in the bar chart will now be supplemented with a discussion of the patterns found in this interaction. Patterns of interaction will be described and then excerpts from weekly discussion forums will be presented to illustrate this summary.

Student–Teacher Interaction. John had provided learner control for the purpose of encouraging student–student interaction. The instances of learner control were reduced as students' sharing of information developed during the computer conferencing.

In the other interaction strategy that was primarily employed John provided feedback of a constructivist nature to the majority of students' postings. This strategy was employed consistently throughout the course. As reported in the summative course evaluation, many students were positive about their online interaction, and especially John's promptness in responding and enthusiasm. He also occasionally posted entries to the discussion intended to encourage participation and motivation.

Student–Content Interaction. Every unit included assigned readings from specified sections and sub-sections of the textbook that related to unit-level learning outcomes. Further, some units suggested supportive websites as part of the question for that week's discussion forum. Three of the topics for weekly discussion forums were taken from case studies that were included at the end of respective chapters. Finally, all units included an optional 15-item multiple-choice quiz, which many students used for practice with feedback.

Student–Student Interaction. This interaction primarily involved three interaction strategies of communication, clarification and elaboration. To a much lesser extent, there were occasional entries posted for exploration, negotiation and participation.

Sixteen students were active in the Weekly Discussion Forum; this left five students who either participated very infrequently or rarely. Eight of 16 students were active in the Automotive Marketers' Café. NO students, however, posted an entry in the Marketing Strategy Think-Tank. On three separate occasions, John did post supplemental guidance to the assignment in the Think-Tank, as learning process reminders. It is possible that student–student interaction took place offline in developing ideas for an individual course assignment; all students were located on-campus.

In response to a summative course evaluation questionnaire, many students commented positively about the opportunity for flexible learning. Students gave examples of working on learning activities for this online course, either during evenings or mornings. Thus, time became available for completing additional activities during the normal school day.

Weekly Discussion Forums. The observed interaction found in the trial of this online course, as briefly summarized above, was also described in greater detail at Appendix 6. Examples are now provided in the use of interaction strategies and have been taken from transcripts of the weekly discussion forums and teacher's announcements. Examples have been sequenced here to aid readability of the analysis. This sequence neither represents the original

interaction nor partiality for any interaction strategy. Examples are intended to illustrate the above summary of Moore's three types of interaction.

Unit 1 discussion forum's topic was intended to start students thinking about themselves as the product in their development of a personal marketing plan.

*Interaction Strategy for COMMUNICATION* – In this strategy, students shared facts and opinions about the topic. As an example, one student wrote in response to the first forum's question:

The skills that I believe I will get as a result of this course is I will be able to learn how to run a successful business as well as have a successful career as marketer.

In an announcement near the end of the first week's discussion, John emphasized the importance of contributing to the computer conference, while downplaying effects of any spelling or grammatical errors in student inputs.

*Interaction Strategy for LEARNER CONTROL* – In this strategy, John was seeking to encourage students to make replies to others' contributions. He included prompts such as:

- Can anyone suggest some other things that might help Student L run a dealership?
- What do the rest of you think about this student's idea?

- Do any of the rest of you have trouble keeping motivated?  
If and when you do, what kinds of things do you do to “tweak” your interest level?
- Don’t forget that there could be some ideas put forward by others that might help you do what you want to do and accomplish what you are hoping to accomplish.

*Interaction Strategy for FEEDBACK* – As an example of feedback during teacher–student interaction, John offered the following to help a student judge the quality of his or her contribution:

An individual, I feel, is just like a product or service that needs to be sold to an employer. If a product has more features (skills) over the competition, they then become more appealing.” I couldn’t agree with you more. All of you can make yourselves “marketable” by “filling your personal “basket” with as many skills as you can. How do you do that? I would think your training at the Canadian Automotive Institute should be invaluable in helping you to differentiate yourself from the competition.

*Interaction Strategy for ELABORATION* – In this strategy, students expanded on the assigned topic, going beyond the basic facts called for in the discussion.

I feel that all the mentioned courses will be assets... To successfully run a dealership you must be able to do any job there. Auto Tech will help with the parts and service aspect, math and accounting will help in those aspects of the dealership. As a

general manager, if someone from any department has a problem with something I feel that I should always know an answer and should never say I don't know what your talking about. Anyway, I plan on doing the best job I can here and out in the work force.

*Interaction Strategy for CLOSURE* – John wrote:

Many of you have expressed how this academic experience at the Canadian Automotive Institute is helping to shape the direction of what you plan to do in the years ahead.

*Interaction Strategy for MOTIVATION* – Through the interaction strategy of communication, the students' discussion clearly illustrated the authenticity and value of learning tasks. These tasks will lead to the acquisition of skills, which are valuable to their future aspirations.

Unit 2 discussion forum's topic was a case study of Polaroid Canada, taken from the textbook.

*Interaction Strategy for LEARNER CONTROL* – John wrote:

Let's join in a discussion about a successful strategy for branding, packaging and marketing Polaroid's newest product line. I would suggest that you treat this discussion just like a brain storming session; that is, every idea is welcomed and adds to the final picture. Remember, comment on your fellow students' postings, but keep your reactions positive.

*Interaction Strategy for COMMUNICATION* – In this strategy, students actively provided knowledge and their reflections with respect to two revamped Polaroid products. For example,

Polaroid has already aimed their target at the younger age group. Their cameras are small, colourful, cheap to buy, and easy to use. You can go in to a music world and you will find the Joy Cam sitting for sale right beside the counter. The younger people have more fun with the Polaroid cameras. And fun is what Polaroid is marketing.

*Interaction Strategy for CLARIFICATION* – In the second forum, students began interacting by clarifying others' inputs.

Now Student R raised a point about technology. The new digital cameras are the new things. And they really are! Instead of having instant pictures from a Polaroid, spend a little bit more money and buy digital. Digital can be just as instant. They provide the ability to "instantly" view an image you just snapped on the computer. What a great idea!

*Interaction Strategy for FEEDBACK* – John continued to offer individual feedback for most contributions. Here are two such instances:

- Good job, Student C! I couldn't have summarized feelings that many of you obviously share about Polaroid's revamping of their product to be more in line with the times. The consensus is that Polaroid is targeting youth. Perhaps they are doing this to start

building a long-term relationship with the younger set so as to keep them as customers for years to come.

- As was the case in Student K's reply, it is always interesting when someone can contribute actual experiences that have to do with the subject at hand. From your work, you say that the interest is there from the kids. It will be interesting to see how Polaroid adjusts its strategy over time (and refines the products it offers) in an attempt to keep this younger market (i.e., build brand loyalty and brand equity).

Unit 3 discussion forum's topic was a case study of NHL websites, taken from the textbook.

*Interaction Strategy for MOTIVATION* – John made this announcement early in the third week,

Hey all you sport fans—and those who aren't. Hopefully, even if you have only a mild interest in sports, you will find this week's Discussion Forum interesting from a marketing perspective, especially when it comes to marketing a service.

Even though many of the students are in fact – true sports fans – John attempted to draw others into this worthwhile discussion about marketing.

*Interaction Strategy for COMMUNICATION* – As is illustrated in the two comments that follow, students did employ this interaction strategy effectively.

- So as a *part-time* hockey fan I think it is safe to say that the product, which the NHL is currently trying to market, is the sport of

- hockey itself. Because if they can get people hooked on the product or game, they will increase everything about the NHL...ratings, ticket sales, merchandise and profit in general... The NHL has to try even harder now to market the sport, as other sports such as the NBA and World Cup Soccer, are expanding and gaining popularity.
- The NHL is, for sure, marketing entertainment. Along with that you get all the merchandise. Individual teams are selling their logos, and that's why we have had so many teams in the past years change their logos. A more eye-catching logo is going to sell more merchandise.

*Interaction Strategy for FEEDBACK* – John wrote:

You are right on when you note the product the NHL is marketing is "entertainment". As such, entertainment is an abstract idea. For some people it is exhilarating and exciting. For others, they don't want to watch it. Still the marketer has to be aware that there is certain characteristics of marketing something like entertainment that makes it different (if not more difficult) to market than something like cereal. The Four I's as mentioned in the text, are important considerations for the NHL marketers.

Unit 4 discussion forum's topic was about customers choosing to buy automobiles online. Two websites were provided as instructional resources.



*Interaction Strategy for COMMUNICATION* – Many students' postings dealt with their reflections, as depicted in this example:

I think that the reason people are using the Internet as a means of buying an automobile is because of two main reasons. Reason number one is people are very busy these days and they don't always have time to go look at the car on the lot so they just sign on to the Internet and they can research everything on the car. Reason number two is a lot of people don't like dealing with salesmen because most of them are pushy as the internet eliminates the pushy salesman and when the customer is ready they just order it and pick it up.

*Interaction Strategy for CLARIFICATION* – Some students had experiences that were very relevant to the topic and were able to add further detail for clarification.

Like other students, I attended the National Automobile Dealership (NAD) Conference in Toronto this past November. The main focus of the conference was placed on the growing use of Internet as a main source for advertising and sales, as well as the growing need for dealerships to start using the World Wide Web and how easy it can be done.

*Interaction Strategy for ELABORATION* – This example provides new information about Internet selling:

One of the marketing strategies that stick out in my mind about cars being sold over the Internet is Volkswagen using the Internet to sell two new colours for their recent Beetles. The colours, Reflex Yellow and Vapour Blue, were only to be sold over the Internet, and having only 2000 of each colour available created a huge demand. I think that the marketing strategy of Volkswagen for the Beetle, over the Internet worked very well in increasing over-the-Internet buying.

*Interaction Strategy for EXPLORATION* – Finally, students began to reveal ways in which certain knowledge can affect previously held concepts.

With the ever-increasing technology we all could've predicted that eventually all of our purchases would be able to be made over the Internet. But the real question will be if we actually let this take over our society. I think that there are many positives and negatives that go along with online shopping.

Unit 5 discussion forum's topic was about the efficacy of buyer reward or continuity programs, such as the Air Miles program.

*Interaction Strategy for LEARNER CONTROL* – To emphasize the importance of the planned student-content interaction, John urged students to include relevant information in their contributions, in the announcement:

This week's effort deals specifically with Sales Promotion.

Please read the text and wherever possible, make references using the proper terminology. Your input is important and we need to hear from everyone.

And in the discussion forum itself, John further encouraged students by saying,

Join in the discussion group. Feel free to comment positively on comments made by other group members.

*Interaction Strategy for FEEDBACK* – John expressed the validity of student experience as part of their contributions.

I would say from your personal experience, you too believe such reward or continuity programs to be of value. It seems like most everyone who responded believes in this kind of thing, which reinforces yet another reason why the use sales promotion has grown in the past few years--the fact that so many business offer these programs as part of their normal *competitive strategy*.

*Interaction Strategy for EXPLORATION* – In their discussion, students apply prior learning in constructing their responses, such as:

- I agree with Student B that both GM and Visa are benefiting from each other. But I'm wondering why other companies don't do the same thing? Just a question, if anyone knows the answer...
- I agree with Student F that it is cheaper to keep a customer than attracting a new one. But I also believe that the reward programs such as Visa/GM and Shell/Air miles are used to not only keep

customers but also attract new ones at the same time. That's why I think these programs are so important to companies and their piece of the market.

Unit 6 discussion forum's topic was about the evolving job of the car salesperson, in light of the recent advent of online selling.

*Interaction Strategy for COMMUNICATION* – Student J, in this strategy, effectively began with a small role-play to humorously relate this view of some of today's trends, along with some long-held beliefs about car salespeople.

Hello and welcome to every car salesperson on the planet. We have a short meeting this morning regarding you future, and then you can be on your way. Okay, just one short message to you all, and that is... ah...oh yes! You're all fired. Clean out your desks, and have a good day!

*Interaction Strategy for ELABORATION* – Another example of this strategy is:

For today's salesperson, I think that one of their most important jobs is being able to communicate and listen to potential buyers and helping them choose the right vehicle. If a salesperson listens to the customer, it is easy to figure out what type of car they are looking for. I learned at my product training for the CAI Auto Show, that after just three certain questions a salesperson asks, they should be able to depict what type of car is suitable for the

customer, like exactly what their needs and wants are. I think that customers sometimes need that little bit of help.

*Interaction Strategy for FEEDBACK* – As usual, John provided detailed feedback for the previous week's discussion, including many *gems* contributed by students, but then added in an announcement,

For the most part, I am very pleased with the way in which many of you are contributing to the weekly discussions. I think we are all benefiting and learning from these weekly discussions.

This announcement was obviously intended to signal to students that the level of interaction was acceptable and in fact, supporting their learning.

Unit 8 discussion forum's topic was to compare policies for Flexible Pricing versus that of One Price. Two websites were provided as instructional resources.

*Interaction Strategy for COMMUNICATION* – John provided two excellent learning resources, articles about automotive pricing, in support of this discussion. Students actively employed these resources in their reflection and contributions.

*Interaction Strategy for ELABORATION* – Two students chose to elaborate on the communication strategy. One, on reflection, clearly demonstrated the each automotive pricing option has its own merits; the other presented a realistic comparison in the pricing the sale of new and used cars.

*Interaction Strategy for LEARNER CONTROL* – John began to withdraw from directly controlling the discussion, as students were now effectively interacting.

Summary. The examples above, extracted from transcripts of weekly discussion forums, were intended to highlight types of interaction strategies used during the trial online course. Several interaction strategies were in evidence that were envisaged during the ID.

Interaction strategies employed by John were that of:

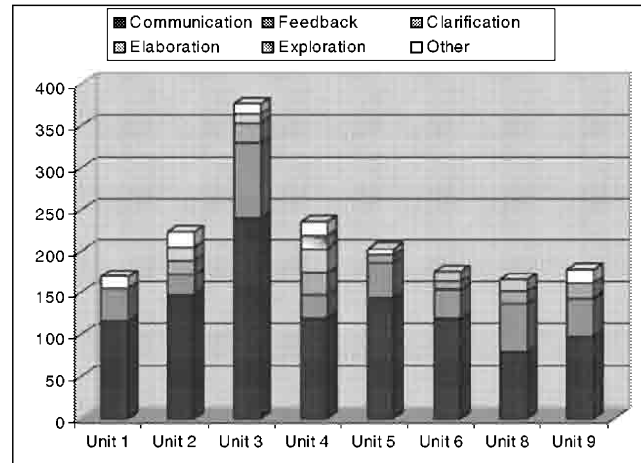
- Communication,
- Learner Control, and
- Feedback.

These three interaction strategies were the focus of the coaching sessions. As this was his first experience in both facilitating an online course and moderating computer conferences, John followed the *game plan* for interaction strategies that we had devised together during the coaching sessions. This coaching focused on the substance of the interaction strategies.

The students' primary interaction strategies comprised:

- Communication,
- Clarification, and
- Elaboration.

As was depicted in Figure 2 (and again shown at right), the interaction strategy of communication was used predominately throughout the



conferences, right from Unit 1. Starting in Unit 2, students began to employ interaction strategies of clarification and elaboration, but to a somewhat lesser degree. The topic for Unit 4 appeared to generate the most diverse usage of interaction strategies; buying automobiles over the Internet certainly evoked a great deal of interaction amongst these automotive marketing students!

A number of Wagner's interaction strategies (negotiation, exploration and participation) were used less frequently and some (discovery and team building) not at all. As the participants were described earlier, they were post-secondary students who were preparing for their first vocation and just in their first year of the program. Part of the explanation, as to why only students only employed a few interaction strategies, might be due to their immaturity both from a perspective of vocational experience and academic development within the program. The range of interaction strategies displayed in this case study likely will vary from that of other online courses such as those at the graduate level, for which students have greater academic and vocational experience.

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

The research problem, posed in Chapter I, involved the conversion of a post-secondary on-campus course to online delivery. The question was, what decisions in the instructional design processes affected the interaction students ultimately experienced? Eleven TIP processes were undertaken in this instructional design (ID), as shown in Chapter III, Table 1. In the discussion below six of these planning decisions yielded expected strategies, which affected the interaction.

Conclusions Relating To Study Questions. With respect to the six study questions, posed in Chapter I, the following conclusions have been drawn from various analyses conducted as part of this qualitative research:

- a. *Effects of planning decisions in encouraging interaction for online delivery*
  - In this case study, the participant observer urged the teacher to employ ID for online learning that relied on tenets of active learning. Interaction is an essential part of the learning strategy for any online course *wrapping around a textbook*. In addition to using a textbook, Rowntree (1995) had suggested several items be incorporated in ID, including learning outcomes, overviews, discussion, contrasting viewpoints, alternative examples, and feedback. Computer conferencing offered a venue for these interactions and learning activities; it provided an environment for



students and teacher where they shared and built meanings as part of constructivist learning. To more effectively deliver an online course, the participant observer persuaded John to follow TIP processes in making planning decisions related to the design and development for interaction.

- b. *Effects attributed to use of an offline textbook and course assignment in encouraging interaction for online delivery* – Student–content interaction depended on the adjunct use of both the textbook and course assignment in developing personal marketing plans. This interaction was prompted by assigned readings and some selected case studies from the textbook for online discussion. The course assignment permitted students further interaction in developing personal marketing plans while they employed concepts from the textbook, gained in mastering unit learning outcomes.
- c. *Interaction strategies anticipated by TIP planning decisions* – In taking planning decisions specified in Table 4 on the next page, John considered respective interaction strategies (Wagner, 1997) that could be employed by students or by him, while participating in and moderating computer conferences. These planning decisions were almost indistinguishable from selecting interaction strategies to be used during the online course.

**Table 4****Summary Of Planning Decisions And Interaction Strategies.**

From analyses of conversation with John during the two interviews, as discussed in the section Planning For Interaction, references to interaction strategies were connected to these six planning decisions.

<b>PLANNING DECISION</b>	<b>INTERACTION STRATEGY</b>
Perform Instructional Analysis – i.e. valid learning outcomes for weekly units	Learner Control Communication Motivation
Develop Performance Measures – i.e. personal marketing plan and practice quizzes	Elaboration Feedback
Develop A Media Mix – i.e. computer conferencing with online and offline instructional resources	Learner Control Communication Clarification Discovery
Develop Forum Topics – i.e. a welcoming environment and thought-provoking forum questions	Participation Communication Elaboration Negotiation
Develop Principal Components Of Instruction – i.e. instructional methodology	Communication Feedback
Develop Instructional Resources – i.e. suggested alternative readings and website resources	Elaboration Discovery

d. *Help provided by the teacher so students could quickly master skills needed for interaction* – John provided learner support early in the online course to help students adopt skills needed for interaction. Through his guidance given in online instructional materials, direction given in the discussion forum as part of the interaction strategy of learner control, and reinforcement and further guidance offered in the discussion forum as part of feedback, John prompted students to use learning tasks and activities appropriate to effective online interaction. As was also discussed in the findings of this study, students needed little assistance in navigating the learning management system. From observations of students' posting of responses in the first weekly forum, it was evident that they had gained generalizable skills during the prior semester in using the Blackboard CourseInfo learning management system.

e. *Teacher interaction strategies in computer conferencing and announcements* – John employed three interaction strategies:

- Communication (e.g. John posed topics and questions in weekly discussion forums, and see p. 85),
- Learner Control (e.g. see pp. 75-77 & 82-83), and
- Feedback (e.g. see pp. 76, 78-80, 83 & 85).

John initiated communication in the weekly forums through a combination of approaches that included posing a question, providing additional learning resources, informing students of appropriate learning tasks, and providing feedback. This feedback comprised responses to individual student postings, and weekly summaries of content that highlighted

students' contributions. Also, in just a few postings, John used strategies of motivation and participation to encourage interaction.

f. *Student interaction strategies observed in computer conferencing –*

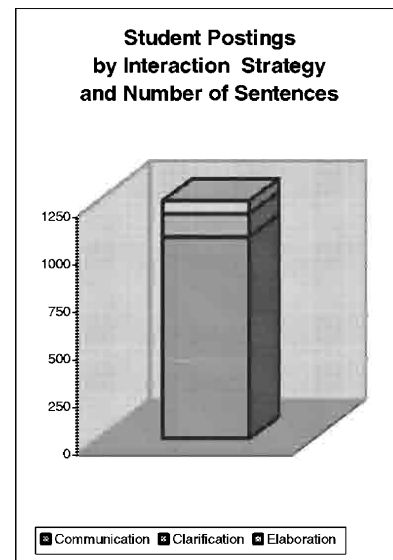
Students employed three interaction strategies to a greater extent than others during weekly discussion forums in computer conferencing:

- Communication (e.g. see pp. 75, 77-81 & 84),
- Clarification (e.g. see pp. 78 & 81), and
- Elaboration (e.g. see pp. 76-77, 82 & 84-85).

From the first forum, students shared ideas and experiences relating to concepts presented in the readings. In response to John's prompting and feedback in the first three forums, postings by students accumulated over eight units (as shown at the right)

comprised communication of shared ideas with some clarification of other students' contributions and elaboration beyond initial contributions. This involved relating relevant experiences and expanding ideas through other learning resources. In the opinion of the researcher, these three strategies characterized *constructivist learning* in that

students shared information in building meanings, and then they examined how any previous or new information affected these meanings. In a limited number of sentences, students also employed interaction strategies of



exploration, negotiation, exploration and participation. Discovery, which had been anticipated, was in fact NOT observed.

Use Of Wagner's Interaction Strategies. Comments about the usage of interaction strategies to analyze computer conferencing transcripts are provided here. The basis for these comments comes from Fahy's (2001) discussion of two common problems in transcript analysis, discriminant capability and reliability. In identifying these problems, he pointed to two causes: an excessive number of categories and a lack of mutual exclusiveness between these categories.

Wagner proposed 12 interaction strategies. (e.g. Fahy recommended the use of the Transcript Analysis Tool, which has just five categories.) As discussed in Chapter III, considerable practice over two days was required to gain proficiency and confidence in using this large number of strategies to code sentences in the transcript analysis. This practice was necessary for this author to gain familiarity with Wagner's (1997) descriptions of 12 strategies. About three days worth of work was required over several weeks to appropriately code 1,721 sentences comprising transcripts for the eight weekly forums. In this research, the concordant reliability of the researcher's coding was verified.

The decision to undertake this effort in coding as part of the method was consciously taken during the determination of the research method. Although this method of transcript analysis required considerable effort, it appeared that the quality of the data obtained determined that the effort was worthwhile.

The advantage in using Wagner's interaction strategies was in the identification of the kinds of online interaction or outcomes supported in the

application of the instructional design. Wagner's strategies categorized interaction, that of students actively engaging in learning. In the opinion of the author, these interaction strategies were useful in designing and developing constructivist-learning activities. For example, in constructivist-learning computer conferencing afforded a supportive environment for personal meaning making, and in developing forum topics, questions were determined to encourage interaction – communicating, clarifying, elaborating, exploring, negotiating and discovering (i.e. interaction strategies as defined by Wagner). It is my belief that the usefulness of this analysis tool was in identifying interaction strategies that are necessary to constructivist-learning activities.

Relationship Between The Participant Observer And Teacher (the *teacher*, personal communication, June 13, 2001). Initially, the participant observer was very committed to the notion that there should be interactive discussion forums for the online learners. The participant observer's background was in dealing with the involvement of adult learners in general, as opposed to the post-secondary students whom the teacher was accustomed to teaching.

At the outset the teacher had been somewhat reluctant to develop a great number of discussion forums, as he believed it would be far too time consuming and would have to spend an inordinate amount of time *pulling* contributions from the students. The participant observer was very patient in listening to the teacher but he was also convinced that effective discussion forums were possible in spite of the teacher's personal reservations. The participant observer's ability to design and develop sound learning objectives was much more critical in achieving the

desired results than the teacher had expected. This led to the blueprint on which the instructional materials and discussion forums were developed. In the formative trial of the course, the teacher was amazed at how eagerly, earnestly, and completely most of his students responded to the first discussion forum.

Another important factor was the concise and complete direction provided in the online instructional materials. The teacher appreciated the participant observer's faith in design and development as being paramount for student involvement. The teacher came to realize that if an online course were properly designed, students would respond and learn. From both the level of student activity during the course and their positive comments after the course was completed, interaction was the cornerstone in delivering the online course.

### Recommendations

The use of instructional systems design (ISD) in creating online instruction is a widely accepted practice. Commonly used ISD models share the characteristics of being linear, cybernetic and prescriptive (Braden, 1996). In encouraging interaction as part of an effective instructional strategy, the main recommendation falling from this research for online instructional designers and teachers is that it is advantageous to carefully consider planning decisions connected with the ISD products listed below. This consideration is meant to encourage greater interaction and improve learning during online courses.

In this case study, planning decision that were found to encourage interaction involved the development of the following outputs:

- Learning Outcomes – From The Instructional Analysis
- Performance Measures
- Media Mix
- Principal Components Of Instruction
- Instructional Resources
- Forum Topics

As a supplemental recommendation for future research, effects of planning decisions should be further investigated as to their function in encouraging interaction in online learning. Given the limited use of Wagner's interaction strategies by participants in this case study; further research is needed to determine which combination of online courses, learners, and ISD models yield the greatest variety of interaction strategies.

These future studies would consider varying learner cohorts in which work and education experience of adult learners differ. In this case study, the cohort involved young adult learners, or *postsecondary students*, who were in the midst of preparing for their first vocation. What about older adult learners who are re-entering the educational stream, after gaining some vocational experience? And coincidentally, such a study could examine the use of other linear ISD models. For models other than TIP, which processes or products would affect the encouraging of interaction in online learning?



## REFERENCES

- Athabasca University. (1990). *Training For Improved Performance Series*.  
Athabasca, Alberta.
- Bailey, M. D. & Luetkehans, L. (1998). Ten great tips for facilitating virtual learning teams. In Distance Learning '98. *Proceedings of the 14th Annual Conference on Distance Teaching & Learning*. Available from ERIC documents: ED422836.
- Berge, Z. L. (1995). *The Role of the Online Instructor/Facilitator*. Retrieved June 5, 2001, from the World Wide Web at:  
[http://jan.ucc.nau.edu/~mpc3/moderate/teach\\_online.html](http://jan.ucc.nau.edu/~mpc3/moderate/teach_online.html).
- Berge, Z. L. (1999). Interaction in post-secondary web-based learning. *Educational Technology*, January-February issue, pp. 5-11.
- Bloom, B. S., Engelhart, M. D., Furst, E.J., Hill, W.H., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives: The classification of educational goals: Handbook 1: Cognitive Domain*. New York: Longmans, Green.

Braden, R. A. (1996). The case for linear instructional design and development: A commentary of models, challenges, and myths. *Educational Technology*, March-April, pp. 5-23.

Bull, K. S., Kimball S. L. & Stansberry, S. (1998). Developing interaction in computer mediated learning. In *Coming Together: Preparing for Rural Education in the 21<sup>st</sup> Century. Proceedings of the American Council on Rural Special Education*. Available from ERIC documents: ED417902.

Canadian Automotive Institute. (2000). *CAI: A Leader in automotive education*. Retrieved June 5, 2001, from the World Wide Web at: <http://www.thecai.on.ca/proinfo.htm>.

Collins, M. & Berge, Z. L. (1996). *Facilitating interaction in computer mediated online courses*. In background paper for presentation at the FSU/AECT Distance Education Conference. Retrieved June 5, 2001, from the World Wide Web at: <http://jan.ucc.nau.edu/~mpc3/moderate/flcc.html>.

Espich, J. E. & Williams, B. (1967). *Developing programmed instructional materials: A handbook for program writers*. Belmont, California: Lear Siegler / Fearon Publishers.

Fahy, P. J. (2001). Addressing some common problems in transcript analysis.

IRRODL, 1(2). Retrieved June 5, 2001, from the World Wide Internet on  
at: <http://www.irrodl.org/>.

Gagne, R. (1985). *The conditions of learning*. (4th ed.). New York: Holt, Rinehart  
& Winston.

Georgian College. (2000). *Business Administration - Automotive Marketing (Co-  
op)*. Retrieved June 5, 2001, from the World Wide Web at:  
[http://www.georgianc.on.ca/calendar/programs/auto\\_marketing\\_co-  
op.htm](http://www.georgianc.on.ca/calendar/programs/auto_marketing_co-op.htm).

Gibert, L. & Moore, D. R. (1997). Building interactivity into web courses: Is  
commercial groupware or design with web tools the solution? In *Northern  
Arizona University / Web '97*. Retrieved June 5, 2001, from the World  
Wide Web at:  
<http://star.ucc.nau.edu/~nauweb97/papers/gilbert/gilbert.html>.

Harasim, L., Hiltz, S. R., Teles, L. & Turoff, M. (1996). *Learning networks: A field  
guide to teaching and learning online*. Cambridge, Massachusetts: The  
MIT Press.

Huebner, D. J. (1996). *Calculating Cohen's Kappa*. Retrieved June 5, 2001, from the World Wide Web at:  
<http://www.colorado.edu/geography/gcraft/notes/manerror/html/kappa.html>.

Hiltz, S. R. (1998). Collaborative learning in asynchronous learning networks: Building learning communities. In WebNet '98. *Proceedings of the 3rd World Conference of the WWW, Internet and Intranet*. Available from ERIC documents: ED427705.

Indiana University. (2000). *Effectively using electronic conferencing*. Retrieved June 5, 2001, from the World Wide Web at:  
<http://www.indiana.edu/~ecopts/ectips.html>

Jonassen, D., Davidson, M., Collins, M., Campbell, J. & Haag, B.B. (1995). Constructivism and computer-mediated communication in distance education. *The American Journal of Distance Education*, 9(2), pp. 7-26.

Kearsley, G. (1995). *The nature and value of interaction in distance learning*. A paper prepared for the Third Distance Learning Education Research Symposium. American Center for the Study of Distance Education, Pennsylvania State University.

Kearsley, G. & Shneiderman, B. (1999). *Engagement theory: A framework for technology-based teaching and learning*. Retrieved June 8, 2001, from the World Wide Web at: <http://home.sprynet.com/~gkearsley/engage.htm>.

Kirby, E. (1999). Building interaction in online and distance education courses. In SITE '99. *Proceedings of the 10th Society for Information Technology & Teacher Education International Conference*. Available from ERIC documents: ED432230.

Klemm, W. R. (1998). Eight ways to get students more engaged in on-line conferences. *The Higher Education Journal*, 26(1), pp. 62-64. Retrieved from the World Wide Web June 5, 2001 at: <http://www.cvm.tamu.edu/wklemm/Eight Ways/8waystoengage.htm>.

Knowles, M. S., Holton, E. F. & Swanson, R. A. (1998). *The adult learner: The definitive classic in adult education and human resource development*. Houston, Texas: Gulf Publishing Company.

LearnOntario. (unknown). *Instructional Design for the New Media*. Retrieved from the World Wide Web June 5, 2001 at: [http://www.rcc.ryerson.ca/learnontario/idnm/main\\_page/coursepage.htm](http://www.rcc.ryerson.ca/learnontario/idnm/main_page/coursepage.htm).

Lui, X. (1999). *Education 611: Introduction to research methods in education*.  
Charlottetown, Prince Edward Island: University of Prince Edward Island.

Retrieved June 5, 2001, from the World Wide Web at:

<http://www.upei.ca/~xliu/ed611/day6.htm>.

Makrakis, V. (1998). Guidelines for the design and development of computer-mediated collaborative open distance learning courseware. In ED-MEDIA / ED-TELECOM '98. *Proceedings of the 10<sup>th</sup> World Conference on Educational Telecommunications*. Available from ERIC documents: ED428694.

McFerrin, K. M. (1999). Incidental learning in a higher education asynchronous online distance education course. In SITE '99. *Proceedings of the 10<sup>th</sup> Society for Information Technology & Teacher Education International Conference*. Available from ERIC documents: ED432288.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, California: Jossey-Bass Publishers.

Miller, S. M. & Miller, K. L. (1999). Using instructional theory to facilitate communication in web-based courses. *Educational Technology & Society* 2(3). Retrieved June 5, 2001, from the World Wide Web at:  
[http://ifets.ieee.org/periodical/vol\\_3\\_99/v\\_3\\_99.html](http://ifets.ieee.org/periodical/vol_3_99/v_3_99.html).

Misanchuk, E. R., Morrison, D., Peterson, M. R. & Margareth, E. (1997). Exemplary practices in computer conferencing. In AECT '97. *Proceedings of the Annual Conference of the Association of Educational Communications and Technology*. Available from ERIC documents: ED411777.

Moore, M. G. (1989). Three types of interaction. *The American Journal of Distance Education*. 3(2), 1-6.

Murphy, K. L., Drabier, R. & Epps, M. (1998). Interaction and collaboration via computer conferencing. *Proceedings of Selected Research and Development Presentations at the National Convention of the Association for Education Communications and Technology (ACET)*. Available from ERIC documents: ED423852.

Roblyer, M. D. & Leticia, E. (2000). How interactive are your distance courses? A rubric for assessing interaction in distance learning. In DLA '00. *Proceedings of the Distance Learning Administration Conference*. Retrieved June 5, 2001, from the World Wide Web at: <http://www.westga.edu/~distance/roblyer32.html>.

Rowntree, D. (1995). *Preparing materials for open, distance and flexible learning: An action guide for teachers and trainers*. London, England: Kogan Page.

Rowntree, D. G. F. (2000). *Back to the future with distance learning – from independent learning to interdependence?* Retrieved June 5, 2001, from the World Wide Web at: [http://www-iet.open.ac.uk/pp/D.G.F.Rowntree/future\\_dl.htm](http://www-iet.open.ac.uk/pp/D.G.F.Rowntree/future_dl.htm).

Soo, K.S. & Bonk, C.J. (1998). Interaction: What does it mean in online distance education? In ED-MEDIA / ED-TELECOM. *Proceedings of the 10th World Conference on Educational Telecommunications*. Available from ERIC documents: ED428724.

TeleEducation NB. (2001). *Learning on the web*. Fredericton, New Brunswick. Retrieved June 5, 2001, from the World Wide Web at at: <http://teleeducation.nb.ca/content/lotw2001/>.

University of Richmond. (2000). *Blackboard CourseInfo overview*. Richmond, Virginia. Retrieved June 5, 2001, from the World Wide Web at: <http://www.richmond.edu/is/ats/courseinfo/overview.html>.

Wagner, E. D. (1997). Interactivity: From agents to outcomes. In T. E. Cyr (Ed.). *Teaching and learning at a distance: What it takes to effectively design, deliver and evaluate programs: No. 71. New directions for teaching and learning*. San Francisco, California: Jossey-Bass, pp. 19-26.



Wagner, E. D. (1998). Interaction strategies for online training designs. In  
Distance Learning '98. *Proceedings of the 14th Annual Conference on  
Distance Teaching & Learning*. Available from ERIC documents:  
ED422881.

## **APPENDIX 1**

### **PLANNING THE MARKETING STRATEGY (MAR9102)**

#### **AN INVITATION TO PARTICIPATE IN A DISTANCE EDUCATION RESEARCH STUDY**

Larry Murphy (Murph) is enrolled in the Master of Distance Education (MDE) program with Athabasca University. He is a student who is completing this research study as partial fulfillment of his MDE. As Murph lives in the Barrie area, he has chosen to participate in implementing a Canadian Automotive Institute online course. His research interests lie in the interaction that you will be experiencing in your online learning.

In designing the online version of MAR9102 the teacher, [John], has had considerable assistance from Murph. Together as a team they have spent considerable time in developing the web-based teaching materials and learning activities. Key decisions included the planning of interaction that you will have with fellow students, your teacher and instructional materials.

In collecting data for this study, Murph will interview [John] and analyze the types of interaction that are observed in online discussions within the Blackboard discussion forums. Analysis of forums will look at patterns of interaction in the between students and the teacher, and between students. References made by you to the use of instructional materials will also be observed. Murph will NOT participate in the delivery of this online course or in the forum discussions.

In participating in this study, you will NOT be required to complete any interviews or questionnaires. ONLY transcripts of the forum discussions will be used for research purposes. Student names will NOT be used in reporting data from these transcripts. Copies of the study report will be provided ONLY as required in preparing an unpublished thesis to meet the requirements for Murph's postgraduate training.

Your participation or non-participation in this study will not affect your final grade in any way. If you feel it is necessary at the conclusion of this pilot online course, you can withdraw from the study. That is, you will be given the opportunity to decline use of any of your comments from the transcripts of the discussion forums for any and all research purposes.

Should you have any further questions about this study, please contact either Murph at 737-2734, or his MDE thesis supervisor, Dr. Patrick J. Fahy at 800-788-9041 ext. 6216.

Having read this invitation to participate in the study (during the scheduled orientation for this online version of MAR9102), you are asked to GIVE YOUR CONSENT TO TAKE PART IN THE STUDY BY SIGNING BELOW. This form is to be returned to [John].

Signed:

Name:

Dated:

## APPENDIX 2

### INTERVIEW PROTOCOL FOR THE FIRST INTERVIEW WITH JOHN, PRIOR TO THE RUNNING OF THE TRIAL COURSE

Item	Question
1.a.(1)	Having worked through the nine TIP processes shown in the table supplied, what effects are expected for student-teacher interaction in the online course?
1.a.(2)	How will these same TIP processes affect student-student interaction?
1.b.(1)	How will the textbook, <u>Marketing</u> , affect the planned interaction?
1.b.(2)	Will students be expected to interact in completing the course assignment?
2.a.	What actions do you plan to take in the first few discussion forums, so that your students quickly master the skills necessary to interact with one another?
2.b.	How will you guide students in the completion of learning or evaluation activities, to name just one form of learner support?
3.a.	In implementing this online course, what types of student interaction do you generally expect to observe?
3.b.(1)	Specifically, what types of interaction are anticipated in using Blackboard's discussion forums?
3.b.(2)	And finally, what types of interaction are anticipated in using Blackboard's e-mail?

Table Supplied To John For The First And Second Interviews

<b>TRAINING FOR IMPROVED PERFORMANCE (TIP)</b>	
<b>Phases</b>	<b>Processes</b>
<b>Analysis</b>	<b>Write instructional goals</b> (or learning outcomes)
	<b>Perform an instructional analysis</b> (including looking at the performance or knowledge gap)
<b>Design</b>	<b>Develop the performance objective</b> (or course objective), Develop a basic marketing plan
	<b>Develop performance measures</b> (plan for course assignment, write a personal marketing plan, and three 25 multiple-choice item tests)
	<b>Sequence learning outcomes</b>
	<b>Develop the mix of media</b> (textbook, web-based material and computer conferences)
	<b>Develop principal components of instruction</b> (preparation, presentation, participation, practice with feedback, and performance assessment)
<b>Development</b>	<b>Select instructional materials</b> (readings and Web resources)
	<b>Develop course documents</b> (directions, overview, introduction, learning outcomes, things to do)

**Note:** During the writing of the thesis report, a tenth process –  
**Develop forum topics** – was recognized in the analysis.

### APPENDIX 3

#### INTERVIEW PROTOCOL FOR THE SECOND INTERVIEW WITH JOHN, AFTER THE RUNNING OF THE TRIAL COURSE

Item	Question
1.	Based on outputs from the nine TIP processes completed for analysis, design and development; what types of Wagner's interaction strategies did you hope to see in the online discussion?
2.a.	What actions did you take in the first few discussion forums that were successful in helping your students to quickly master the skills necessary to interact with one another?
2.b.	How did you guide students in the completion of learning or evaluation activities?
3.a.	In implementing this online course, which interaction strategies do you recall being used?
3.b.	And finally, what types of interaction were observed in using Blackboard's announcements (or broadcasts)?

## APPENDIX 4

### EXPLANATION OF WAGNER'S INTERACTION STRATEGIES AND WEEKLY SUMMARY FORM

#### Interaction Strategies

<b>Strategies: Interaction for ...</b>	<b>Descriptions of Strategies: Conference posts of this nature ...</b>
Participation	help learners in getting acquainted with fellow learners or volunteering to form or lead cohort groups in a learning activity.
Communication	involve sharing information and discussions that focus on the learning outcomes, or advocating a particular viewpoint.
Feedback	offer feedback that the learner can use in judging the quality of his or her performance. This aids in ensuring that the correct information is transferred to long-term memory.
Elaboration	expand on information, either providing alternative examples to explain a new idea, or developing alternative explanations for thinking about a new idea.
Learner Control	help the learner in staying on task, choosing what and how to study, seeking additional information, and realizing when learning has been successful.
Motivation	challenge the learner in tackling the authentic instructional tasks and determining what must be learned through a variety of sources.
Negotiation	reflect the learner's effort in determining others' willingness to engage in dialogue, reaching a consensus, or conforming to an agreement.
Team Building	support the formation and production of learning cohorts. Group attributes such as tolerance, respect and cooperation are expressed.
Discovery	involve sharing ideas, which leads to a group synergy in determining new knowledge.
Exploration	provide discussion as the scope, depth and breadth of a new idea, and determine its difference from prior learning.
Clarification	paraphrase other's expectations to confirm their meanings or intentions.
Closure	signal that one has reached the end of the learning activity, and that the announced learning outcomes have been achieved.

Weekly Summary Form For Interaction Strategies Observed

<b>Interactions for ...</b>	<b>Summary of observations for the week of:</b>
Participation	
Communication	
Feedback	
Elaboration	
Learner Control	
Motivation	
Negotiation	
Team Building	
Discovery	
Exploration	
Clarification	
Closure	



## APPENDIX 5

### UNIT-LEVEL AND COURSE-LEVEL LEARNING OUTCOMES, AND COURSE PERFORMANCE OBJECTIVE

#### Unit-Level Learning Outcomes

<b>Intermediary Learning Outcome</b>	<b>Unit-Level Learning Outcome</b>	<b>TIP Taxonomy Skill<sup>1</sup></b>
Identify consumer goods, products and service components of the marketing mix	Classify consumer goods by how people think about and shop for the wide variety of products and services	Application
	Recognize stages or steps in the new product development process	
	Contrast the unique elements of providing a service to those of providing a product or good	
	Apply marketing mix strategies to the peculiarities of marketing a service	
Describe how product life cycle, branding and packaging influence management / marketing decisions	Identify the common stages in the management of the product life cycle	Information
	Explain the importance of branding strategies in the marketplace	
	Discuss examples of the roles that packaging and warranty play in providing customer value	
Explain the methods of price determination and strategies used to achieve pricing goals and objectives	Identify elements of the pricing process	Application
	Distinguish between pricing alternatives used by firms to reach their corporate objectives	
	Contrast the components of demand in the setting of price for goods and services	
	Distinguish between initial price alternatives for a good or a service	
	Identify factors in setting the final (selling) price of a good or service	
	Identify adjustments made to price	
	Describe the principal laws and regulations affecting pricing procedures	Information
Explain the promotional element of the marketing mix in applying communication theory	Describe how individual elements of the communications process affect receivers in a given target market segment	Application
	Explain how to use promotional mix elements to communicate features and benefits of products and services	
	Differentiate between a PUSH promotional strategy and a PULL promotional strategy	
	Explain benefits of a direct channel of communication with target audiences	

<b>Intermediary Learning Outcome</b>	<b>Unit-Level Learning Outcome</b>	<b>TIP Taxonomy Skill<sup>1</sup></b>
Differentiate among advertising, personal selling, sales promotion, publicity and public relation variables	Identify various forms of product and institutional advertising	Application
	Describe the steps involved in developing an effective advertising program	Information
	Contrast consumer sales promotion and trade sales promotion	Application
	Explain the importance of public relations as a marketing communication tool	
	Describe the various types of personal selling	Information
	Recognize the steps in the sales process	Application
	Describe sales managers' responsibilities in supervising the sales force	Information
Explain physical distribution and the two major elements of channels of distribution	Explain what makes up a channel of distribution and why they are needed	Application
	Differentiate between channels of distribution for consumer goods and industrial goods	
	Identify the various channels of distribution configurations	
	Describe retailers in terms of ownership, service and the merchandise line	Information
	Identify forms of non-store retailing	Application
	Identify the positioning of a retail organization using the breadth of the product line and value added	
Explain supply chain and logistics management	Define supply chain and logistics management	Information
	Describe how components of the supply chain and logistics management impact on the other marketing mix variables	Application
	Identify the customer service components of a value laden logistics management system	

**Note 1:** Here are definitions of three TIP Taxonomy skills, adapted from Athabasca University (1990):

○ Information Skill

This type of learned capability is demonstrated in the learner's ability to recall information and state it, either orally or in writing. Information skills enable learners to do things like list names or facts, describe how to do something, explain why a particular is important to complete, or summarize information in the own words.

○ Application Skill

Learners demonstrate this type of learned capability by discriminating among and / or classifying objects, events and so forth, as well as by applying principles. Application skills enable learners to do things like differentiating and identifying things or stimuli in a given scenario, or from a list of examples and non-examples.

○ Procedural Skill

A procedure consists of a series of step for performing an activity. It includes assessing each step's completion and making adjustments depending on how the proceeding step turned out. Procedural skills usually require prior information and application skills.

## Course-Level Learning Outcome

For the procedural skill **Developing a marketing plan**

the following performance objective was produced:

Given a format for the personal marketing plan and information sources such as recent news articles, organization publications, personal interviews, annual reports and trade publication articles the student shall develop a basic marketing plan by:

- a. selecting a target company for possible employment;
- b. completing an analysis of strengths, weaknesses, opportunities and threats;
- c. incorporating the four elements – product, promotion, price and place – of the marketing mix; and
- d. writing the personal marketing plan to include:
  - (1) information about the firm, situational analysis, personal marketing objectives, and the strategy for the marketing mix;
  - (2) a resume and letter of application; and
  - (3) appropriate appendixes, including classified advertisements, letters soliciting assistance from a friend, acquaintance or associate, company background material, “Thank you” letters, etc.

## APPENDIX 6

### SUMMARIES OF INTERACTION IN WEEKLY DISCUSSION FORUMS

In interpreting summaries of weekly discussion forums, please use the following descriptions of Wagner's (1998) interaction strategies:

<b>STRATEGIES: Interaction For ...</b>	<b>DESCRIPTIONS OF INTERACTION STRATEGIES: Conference Posts Of This Nature ...</b>
Participation	help learners in getting acquainted with fellow learners or volunteering to form or lead cohort groups in a learning activity.
Communication	involve sharing information and discussions that focus on the learning outcomes, or advocating a particular viewpoint.
Feedback	offer feedback that the learner can use in judging the quality of his or her performance. This aids in ensuring that the correct information is transferred to long-term memory.
Elaboration	expand on information, either providing alternative examples to explain a new idea, or developing alternative explanations for thinking about a new idea.
Learner Control	help the learner in staying on task, choosing what and how to study, seeking additional information, and realizing when learning has been successful.
Motivation	challenge the learner in tackling the authentic instructional tasks and determining what must be learned through a variety of sources.
Negotiation	reflect the learner's effort in determining others' willingness to engage in dialogue, reaching a consensus, or conforming to an agreement.
Team Building	support the formation and production of learning cohorts. Group attributes such as tolerance, respect and cooperation are expressed.
Discovery	involve sharing ideas, which leads to a group synergy in determining new knowledge.
Exploration	provide discussion as the scope, depth and breadth of a new idea, and determine its difference from prior learning.
Clarification	paraphrase other's expectations to confirm their meanings or intentions.
Closure	signal that one has reached the end of the learning activity, and that the announced learning outcomes have been achieved.

<b>Interactions for ...</b>	<b>Summary of observations of Unit 1, Week of 6-12 January 2001</b>
Participation	Not Observed
Communication	The topic prompted students to share their career aspirations. Examples were given as to how generic business and automotive specific skills acquired in the CAI program will prepare them for these careers. Many recognized the credibility and uniqueness of the CAI in the automotive industry as a teaching institution for automotive marketing.
Feedback	John agreed with students gaining skills to enhance their value as products for future employers. He pointed out that students had illustrated certain skills, which would be valuable, and observed on their motivation toward completing the program.
Elaboration	Experience in related employment, and the CAI Auto Show and coops help in improving marketability of students to future employers. A strategy of selling them self and marketing one's positive attributes was described. Auto Tech was also highlighted as an example of knowledge that supports the application of many skills.
Learner Control	John encouraged students to comment on and contribute related ideas to fellow students. This acknowledged the interaction expected in the discussion forums. In an announcement John emphasized the importance of participation while down playing the effect of any spelling or grammatical errors in student inputs.
Motivation	Note: Through the interaction strategy of communication, discussion illustrated the authenticity and value of learning tasks. These tasks led to the acquisition of skills, which are valuable to their future aspirations.
Negotiation	Not Observed
Team Building	Not Observed
Discovery	Not Observed
Exploration	Not Observed
Clarification	Not Observed
Closure	John said, "Many of you have expressed how this academic experience is helping to shape the direction of what you plan to do in the years ahead."

<b>Interactions for ...</b>	<b>Summary of observations of Unit 2, Week of 13-19 January 2001</b>
Participation	Student E encouraged others to join him in the <i>Automotive Marketers' Café</i> , a forum set aside for discussion other than that related to learning outcomes. John endorsed students participating in this activity.
Communication	They illustrated how Polaroid, in this case study, has revamped its products and repositioned for a younger segment of the market.
Feedback	John emphasized the appropriateness of students' contributions to the discussion. He continued in the approach of replying to individual students, instead of weaving several responses together.
Elaboration	Students compared the market for Polaroid's cameras, which provide instant pictures, with that of digital cameras. They point out that Polaroid has also entered this market, on a worldwide scale. Other students looked at related sales experience in selling these products.
Learner Control	John suggested participating in the discussion as well as commenting on other's contributions. He suggested that they should treat this as brainstorming. He also prompted students to complete other suggested learning activities, listed under Course Documents.
Motivation	John told students that during this semester they are developing as a product in preparing for their first coop experience.
Negotiation	Not Observed
Team Building	Not Observed
Discovery	Students are beginning to reflect on others' contributions and comment on similar thoughts.
Exploration	Not Observed
Clarification	Students refer to others' contributions in which they are agreement.
Closure	In remarking on last week's discussion in a summary, John said, "most of you agree the CAI is a place where you can develop the skills needed for a variety of careers in the auto market".

<b>Interactions for ...</b>	<b>Summary of observations of Unit 3, Week of 20-26 January 2001</b>
Participation	Student E tried again to entice others into the Café for discussion other than that for one of the learning outcomes, but it maybe related to automotive marketing in general. John echoed Student E's invitation encouraging informally participating in the Café.
Communication	Students' contributions compared team websites and associated merchandise. Some students commented specifically that this is a service being marketed as <i>entertainment</i> . This topic evoked a great deal of personal reflections from students, in addition to reporting on content.
Feedback	John provided detailed feedback for the previous week's discussion, including many <i>gems</i> contributed by students. This week, John continued to respond individually to students, by showing them how their comments were indicative of concepts in marketing services. Lots of positive reinforcement was also offered.
Elaboration	Students made comparisons in marketing other professional and amateur sports.
Learner Control	John again encouraged students to read and (at least one) respond to others' contribution.
Motivation	John announced early in the week, "Hey all you sport fans--and those who aren't. Hopefully, even if you have only a mild interest in sports, you will find this week's Discussion Forum interesting from a marketing perspective, especially when it comes to marketing a service."
Negotiation	Student M indicated that students had largely reached a consensus about the marketing on hockey team websites.
Team Building	Not Observed
Discovery	Note: This strategy was implied by the great deal of interaction realized in this forum, and the increasing amount of clarification being offered.
Exploration	Not Observed
Clarification	Students are beginning to use this strategy more to comment on others' contributions.
Closure	Not Observed



<b>Interactions for ...</b>	<b>Summary of observations of Unit 4, Week of 27 January – 2 February 2001</b>
Participation	Student E invited students to help each other prepare for an upcoming offline test. John set up a temporary <i>test forum</i> for this discussion.
Communication	The topic again sparked a lively discussion in which information and views were shared about the pros and cons of Internet marketing. John announced early in the week, "For the purposes of your course assignment, product and promotion are the two marketing mix variables that should receive the most attention, so we cover them first and second respectively [in the sequence of units]."
Feedback	John provided detailed feedback for the previous week's discussion, including many <i>gems</i> contributed by students.
Elaboration	Student E and Student K shared information with the forum's participants obtained from a trade conference. Student B illustrated a specific example of how the Internet was creatively used to market automobiles. Student F indicated that other industries are considering online shopping.
Learner Control	Encouragement was given to contribute and respond to another's contribution.
Motivation	Not Observed
Negotiation	Student C illustrated how in the discussion students were reaching a consensus.
Team Building	Not Observed
Discovery	Not Observed
Exploration	Student V asked rhetorically how online shopping would change our society in terms of its personal buying and car dealerships.
Clarification	Six students offered clarifications in support of other students' contributions.
Closure	Not Observed

<b>Interactions for ...</b>	<b>Summary of observations of Unit 5, Week of 3-9 February 2001</b>
Participation	Not Observed
Communication	Students shared information and views about continuity programs, i.e. the Air Miles program.
Feedback	John provided detailed feedback for the previous week's discussion, including many <i>gems</i> contributed by students. This week, John continued to respond individually to students, emphasizing sales promotion's concepts.
Elaboration	Not Observed
Learner Control	John repeated his encouragement for a contribution and reply from each student. He also announced, "This week's effort deals specifically with Sales Promotion. Please read the text and wherever possible, make references using the proper terminology. Your input is important and we need to hear from everyone."
Motivation	Not Observed
Negotiation	Not Observed
Team Building	Not Observed
Discovery	Not Observed
Exploration	Student V wonders if continuity programs are so successful, why are not more companies using them? Student M believes that some companies are not only retaining customers by attracting new customers.
Clarification	Several students offered clarifications of others' contributions.
Closure	Not Observed

<b>Interactions for ...</b>	<b>Summary of observations of Unit 6, Week of 10-16 February 2001</b>
Participation	Not Observed
Communication	Students shared beliefs and information about how the role of the car salesperson will evolve in years to come.
Feedback	John provided detailed feedback for the previous week's discussion, including many <i>gems</i> contributed by students, and added in announcement, "For the most part, I am very pleased with the way in which many of you are contributing to the weekly discussions. I think we are all benefiting and learning from these weekly discussions." This week, John continued to respond individually to students, emphasizing the changing role of the car salesperson with more attention to customer relations.
Elaboration	The emphasis was on the need for the salesperson to listen more carefully to their customers. A challenge came from one of the young women in that saleswomen may have an advantage in fulfilling this need. Customers were thought to be wise to use the Internet in researching information prior to visiting a dealership
Learner Control	John repeated his encouragement for a contribution and reply from each student, and added in his announcement, "I would like to hear from every one of you."
Motivation	This was quite a passionate exchanged, as it involves the chosen profession they are all preparing for.
Negotiation	Not Observed
Team Building	Not Observed
Discovery	Not Observed
Exploration	Student J, in his communication strategy, used a small role-play to humorously relate some of today's trends with long held beliefs about car salespeople.
Clarification	Three students used the strategy of clarification.
Closure	Not Observed

Interactions for ...	Summary of observations of Unit 8, Week of 3-9 March 2001
Participation	Not Observed
Communication	Students took part in a lively discussion sharing views that truly demonstrate that there is varied support for both of the options of fixed pricing and flexible pricing.
Feedback	Detailed feedback was provided for the previous week's discussion, including many <i>gems</i> contributed by students emphasizing relationship selling and creating customer value. This week, John continued to respond individually to students in acknowledging their individual contributions.
Elaboration	Two students effectively elaborated on the communication. One, on reflection clearly demonstrated the each option has its merits; the other made a realistic comparison between the pricing the sale of new and used cars.
Learner Control	John seemed to withdraw from directly controlling the discussion, as students were now effectively interacting.
Motivation	John provided two excellent learning resources in support of this discussion. Students actively employed these resources in their reflection and discussion.
Negotiation	Not Observed
Team Building	Not Observed
Discovery	Not Observed
Exploration	Not Observed
Clarification	Several students clarified points that had been made in the discussion thus reinforcing others' contributions.
Closure	Not Observed

**Note: A Discussion Forum was not held for Unit 7.**

## APPENDIX 7

### TRANSCRIPT OF THE FIRST INTERVIEW WITH JOHN

The one-hour interview was completed on December 21, 2000. The participant observer (PO) conducted this interview with the teacher (T), who will be referred to by the pseudonym “John.” Reference is also made to another community college teacher, “Tim,” who provides assistance to teachers in the using Blackboard discussion forums. The interview occurred after the online course had been designed and developed, but prior to conducting the trial online course.

The PO transcribed the Narrative from an audiotape of the interview. The column, “Anticipated Interaction – and TIP Processes,” depicts planned interaction strategies and instructional design processes that were undertaken. It flags adjacent passages in the narrative by coding them using Wagner’s (1998) ‘interaction strategies’. The associated passages in the narrative for the coding are clearly shown by the use of alternating single-underlined text and double-underlined text. Associated TIP processes are also flagged in the right hand column by the use of dotted-underlined text. Additionally, in the left-hand column, single or double underlining took precedence over dotted-underlining, and in the right-hand column the symbol & indicated the presence of two labels.

<b>Narrative</b>	<b>Anticipated Interaction and TIP Processes</b>
PO: We’re ready to start. T: I don’t know if I am ready to start, but let’s see if I	

<p>can make some sense of your question, “Having worked through the nine TIP processes shown in the table supplied, what effects are expected for student-teacher interaction in the online course? I would have to say that the processes tie together the course objective with all the unit objectives. <u>What we have to do is help students understand through the interaction on this online course that unit objectives have a part to play in the development of the marketing plan [the course objective].</u> It’s no longer ... OK, that’s the end of the unit, forget it, throw it away. <u>The units are all tied in together; they’re part of a whole marketing strategy mix that we’re using, and now what students are asked to do is to take those different elements of the marketing strategy and apply them to themselves in developing a personal marketing plan.</u> And I guess in terms of the hope for interaction, the students and teacher are all in it together. <u>One of the things that I can do as the course leader or course instructor is to set the level of expectation above just regurgitating things on a test.</u> They now actually have to act it out; they have to use this information.</p>	<p><u>Communication – sharing ideas about unit and course learning outcomes &amp; Performing an instructional analysis</u></p> <p><u>Elaboration – applying elements to themselves as the product &amp; Determining performance measures</u></p> <p><u>Learner Control – set the skill level (TIP taxonomy) &amp; Performing an instructional analysis</u></p>
<p>PO: OK, if we can paraphrase off the list of TIP processes, from the instructional goals we found a relationship between the course objective [procedural skill] – developing a marketing plan – and unit objectives [information and application skills]...</p> <p>T: They’re all part of the marketing plan. You’ve got walk before you can run. <u>Without understanding the particular elements of the marketing mix – product, place, promotion and price – students can never hope to put a cohesive plan of their own personal marketing objective together.</u></p>	<p><u>Performing an instructional analysis</u></p>
<p>PO: So, interactions at the unit level bring together applying this knowledge.</p> <p>T: Yes, and that will be part of the discussion forums because <u>those are designed to help students see: does this fit, how does this work, how is each element important? And then hopefully when I do the weekly summaries of those units, they will look upon them and say OK this makes sense.</u> This is why we separate the elements out. We don’t just look at the whole thing and say there’s a product for sale. We</p>	<p><u>Determining discussion forum topics</u></p> <p><u>Feedback – summarizing what makes sense for the students</u></p>

<p>look at the elements that are around the product. <u>Students look at the particular aspects of a product and how does it make sense, and how I am a product when I'm trying to market myself.</u></p>	<p><u>Elaboration – applying it to marketing themselves</u></p>
<p>PO: So in addition to summarizing their discussions from each unit, what other interaction do you see between yourself and the students.</p> <p>T: I think that it isn't just <u>summarizing</u>, but probably what will also happen, they come with the seed of an idea. <u>Perhaps because of my experience, my expertise, and my background in having taught this course for a number of years, I will say that you've got a good idea but have you thought about ... And maybe what this will enable the students to do is take those basic ideas that they get from the course and build on them, and build them into an interesting marketing plan.</u></p>	<p><u>Feedback – judging ideas on which to build on</u></p> <p><u>Communication – sharing ideas to focus on the learning outcome &amp; Developing the performance objective</u></p>
<p>PO: And this happens in the discussion forum.</p> <p>T: The discussion forum is really important. <u>I am a believer that socialization is important too in terms of their learning.</u> In the traditional class, I would stand up and spew it out. We might do a little activity to try to apply it, but it was very limited because of time. There's a time constraint, because in a class you only have 50 minutes and you know that you got to be moving on because somebody else will be coming into the classroom. Where as in online learning, they do it now in a less threatening kind of environment. They have time to think about it before they respond. <u>They can respond and then I can respond back, and we can take the time to think things through. Digest ... Is that they right word? They can look at it and say that this makes sense.</u> And think here's how I can use this when it comes to my marketing plan. I think that I've always done this, but in leaving out presenting information, there's time for more interaction back and forth. I had been making the point in front of the class that this is how it applies. <u>Now in their discussions, the students can see how this would be important to 'me' if I were trying to market myself.</u></p>	<p><u>Participation – contributing ideas within a supportive environment &amp; Selecting the media mix</u></p> <p><u>Feedback – judging their answers</u></p> <p><u>Motivation – determining relevance of elements in formulating a personal plan &amp; Developing the performance objective</u></p>
<p>PO: OK, you have been covering some of what I was anticipating that you would talk about, in relation to interaction that you have with your students. I would like you to get more specific here. In the steps that</p>	

<p>we followed in the TIP Model, which ones have led you to this interaction? Why don't we just go through them one at a time?</p> <p>T: We did decide the main learning outcomes, the instructional goals and do an analysis. This is where you asked, what things are important in instruction? Instead of just regurgitating information about the objectives from the book, <u>what are they going to develop in their own marketing plan; what are they going to need to do?</u> Look at what happens here in context; here is the goal. Why are those elements important? These elements are important because without each particular aspect of this marketing mix, the plan's going to be missing something. <u>They're going to concentrate on emphasizing themselves as a product.</u> The performance objective is where they want to go ...</p>	<p><u>Performing an instructional analysis</u></p> <p><u>Communication – sharing information in considering themselves as products for the marketing plan &amp; Developing the performance objective</u></p>
<p>T: Performance measures are a way of knowing, some way of reassuring myself as the teacher that the students do understand. One of the problems that I have found, and <u>one of the things that this whole exercise of working through the TIP processes has opened up to me, is this notion of testing to criteria.</u> I think that one of the things that we teachers do is that we have a tendency to think that we're content experts, we spew the content out and then we test, and we may or may not have any rationale or reasoning for testing the right kinds of things. What TIP has done is taught me that everything is related to everything. <u>I have a course goal because this is what the students need to know to help them with this overall objective.</u> So how does the teacher know what the students have understood? Rather than just testing for the sake of testing, which is often done I think, testing measures how well do they know these different objectives that we set for them?</p>	<p><u>Developing performance measures</u></p> <p><u>Communication – sharing information between teacher and students &amp; Developing the performance objective</u></p>
<p>PO: You have just related the importance of doing an instructional analysis to designing a test, but what about the importance of sequencing objectives?</p> <p>T: I don't think that the sequencing of information is all that important in this kind of course. It's not a build on course. It's not something like where you have this level of knowledge before you can proceed. It doesn't really matter if we do product first, or promotion first when it comes to marketing. I think</p>	



<p>that they can do any of those. It's not a build on thing. So sequencing is not a real important issue in this course.</p>	
<p>PO: In fact the order you suggested, if I remember, is to do the two P's [product and promotion] first, which are most important for completing the final project.</p> <p>T: In terms of a personal marketing plan, they have to look at themselves as the product and they have to look at how they can best promote them. Pricing and distribution, when it comes personal marketing, are very limited. Students are limited with what they can do with those. <u>That's why I changed the order from that of the textbook. I do product first and promotion second. It's out of line with the textbook, but it makes more sense in what I'm trying to do.</u> So, I guess there would be sequencing decisions in order for the students to have more of an understanding of where they're going with the project. I don't want to say that any one of the P's is more important, but in terms of the personal marketing plan some are more applicable than others. I think that product and promotion are the two most applicable to a personal marketing plan, so we cover them first.</p>	<p><u>Sequencing units</u></p>
<p>PO: Having talked about the principal components of instruction, I suggested that they would be the same as in your regular face-to-face teaching. Did you find a difference?</p> <p>T: In my own presentation, I will be a little less intrusive. I will be building online components. This is an integral part of the course, building in the technology, if you will.</p>	
<p>PO: Actually, I'm talking about the preparation, presentation, participation, practice with feedback, and performance assessment. You've gone to relying on the textbook for presenting information. Participation, how did it change from your traditional course to the online course? Practice with feedback, once again, has that led to a change with your interaction with the students?</p> <p>T: The presentation of course, there's very little of my actual presentation of content, which I would do in a normal setting in the classroom. [Information is presented primarily through readings.] To me that</p>	

<p>presentation has got to be lessened, but what's going to happen is that I'm going to be more actively participating. <u>Even though it's not one-on-one, it's almost seems like that because the discussion will be back and forth – one-to-many and many-to-one.</u> I will be interacting much more often than in the classroom situation, and part of that is a function of time. Learning in the classroom is in 50 minutes whereas online learning spreads it out. My understanding is that discussions will be over two or three days. You can only do so much in 50 minutes, and then they're on to the next thing. In online learning, students get to allocate and dedicate their time. As far as feedback goes, I don't normally provide that in the classroom unless I give oral review questions at the beginning of the class, whereas the online learning has actual online self-quizzes and the final performance assessment. <u>Some of that is still carried over in self-quizzes [online multiple-choice tests for practice with feedback], which are similar to what done in class.</u> The discussion forums are also something that's going to be assessed. Feedback is in the interaction with the content, in the quizzes that you get online.</p>	<p><u>Communication – sharing ideas amongst all the students &amp; Determining discussion forum topics and selecting the media mix</u></p> <p><u>Feedback – interaction with content in quizzes &amp; Determining the principal components of instruction</u></p>
<p>PO: Now, there are two more processes in the development phase. What about the selection of web resources? Here, I'm talking about for the discussions; you have picked out certain websites.</p> <p>T: Yes, that's a bit of an unknown, I don't know how well I'll be able to incorporate this or what other sites there are. The problem is that the sites are always changing and there's more propriety ownership concerns. Like when we went to the Toronto Star website for an article. The next time we tried to access the site, you had to get permission and you had to pay money. So, the Internet is a very dynamic tool. The Internet is going to continue to be dynamic as new sites develop and our knowledge increases. <u>I expect students will go to sites that I don't know of, but are very applicable to this course.</u></p>	<p><u>Elaboration – sharing alternate learning resources &amp; Identifying instructional resources</u></p>
<p>PO: So you're expecting that interaction will bring attention to new information on the Internet.</p> <p>T: Sure, and I would hope to that right at the outset, I would say that there may be some sites that students think are applicable. <u>I may have say</u></p>	<p><u>Feedback – helping to judge worthwhile websites</u></p>

<p><u>whether it has applicability or may be it does not.</u> It's just like in class, you don't want to force the creativity, but if somebody comes up with a site and it's really not applicable, you got to get the message across that this isn't really what we had in mind. But you know, please let's us know again if something else comes along ... because you never know. <u>The Internet being such a wide array of information, you have to encourage inquisitiveness, but you have to be careful too.</u></p>	<p><u>Learner Control – encouraging use of alternative information &amp; Selecting the media mix</u></p>
<p>PO: OK, we have now gone through the nine processes from the point of view of student-teacher interaction. How do these same processes produce opportunities for interaction between the students themselves?</p> <p>T: I think one of the things again it's how I manage the course, but it goes back to the overall course objective of developing a marketing plan. <u>I think students will recognize that they are all in this together and that they're all struggling with the same kinds of issues.</u> How does this fit and how is this applicable? It is my understanding that the forums will allow them to discuss these issues. <u>They can say here's what I want to do. That might get someone else to say that I been thinking about it and didn't know how to voice it. That's how I can use that in my marketing plan. I think that interaction will be very subtle, but it will be there.</u> In the traditional class, they say, "Eureka, it's not a group project!" They like this project because it is individual in that it calls for a personal marketing plan. What's happening here with this kind of delivery format, the project is still an individual project. <u>But, along the way they will probably have a lot more input from each other.</u></p>	<p><u>Discovery – learning together within a cohort &amp; Selecting the media mix</u></p> <p><u>Clarification – paraphrasing ideas</u></p> <p><u>Communication – sharing ideas to use in their marketing plans</u></p> <p><u>Discovery – combining inputs</u></p>
<p>PO: If I can paraphrase from looking at the nine processes, I think that you have just hit on, once again, the importance of the instructional analysis, the relationship of the application skills to the procedural skill of developing a marketing plan. And, you'll be sharing that with your students, and they be talking amongst each other. The second point was the importance of choosing computer conferencing in the media mix, the reliance on this as sort of a hook. As you have said before, in individual projects, students didn't get together to produce things. Now,</p>	

<p>all of a sudden, there will be a forum for discussion about the projects.</p> <p>T: I guess here's my hope at the outset. <u>It is kind of what I call forced participation, but at some point they will see some value, they'll be ready to go and be ready to contribute.</u> And I think that, going back to the students, that's where I as the course manager have to also be sure that I encourage that. I think that a few of the tips that I got from Tim's session [at our college] on moderating discussion, especially summarizing discussions. What did Tim say about mining the discussions for gems? <u>The gems selected reinforce student participation by letting them know which points came out in the report that week and actually giving the students credit.</u> Also, it's not just the stuff the teacher wants to hear, but how so-and-so responded to so-and-so. That was a really good point for all of us, myself included. You heard what Tim said after his session; I learned something this morning too. And that sort of makes you feel good. You enter the discussion, thinking that it's going to be one-sided, we're taking from him, and yet it make you feel good as a learner that you've given something too. And I think that's one as a teacher that I can learn something. And I think that's a real benefit from the online learning; you don't get that in the classroom because it's threatening; people don't want to look stupid. There still is that possibility, but I think it's less threatening than in saying something in person.</p>	<p><u>Participation – readiness to join a learning activity &amp; Designing the discussion forums</u></p> <p><u>Feedback – mining gems from weekly discussions</u></p>
<p>PO: I think that we have done a good job in covering the first two questions. The third question, and I must warn you that this may or may not have an answer, is looking at the textbook, Marketing. Does it or does it not has any effect on the interaction you get from the students?</p> <p>T: One of the things the textbook does have a lot of Internet sites listed and some the students may take it upon themselves to explore Internet sites and they may come back to discussion. <u>I can't expect every student to go to every Internet site and make a précis or summary, but may be someone will happen to find one, and say that this is a really great site.</u> And then, what we can do is share that information. So the textbook may lead us to those kinds of things. Actually, some of the discussions forum topics are</p>	<p><u>Discovery – sharing websites &amp; Selecting instructional resources</u></p>

<p>based on information that comes from the text. So, you know, there's that side of it. They're not all from the textbook, some are. The text helps in generating the activities. There's the one about the Polaroid case as an example, and it's right out of the textbook. <u>It's a good example and it shows some of those product considerations that are important.</u> It doesn't always have to be on the teacher to make a point.</p>	<p><u>Exploration – identifying product considerations</u></p>
<p>PO: So, there are good topics for the discussion forums.</p> <p>T: One of the things I have read was about metaphors, the use of metaphors being important. And if we find what happens in the Polaroid case is a metaphor for what happens in the car business, then cases don't have to about the car business. You must understand that the students will get a diploma in business administration as well as automotive marketing. So the foundation is still business administration. <u>So it's good that there are principles that are universally applicable, whether it's the automotive industry, camera industry, film industry, or whatever it is.</u> They can use some of these principles. That's another thing about looking at applications. They learn that these things are broad principles that have broad application, and it's part of their learning process that makes sense. It makes sense for life.</p>	<p><u>Elaboration – identifying common marketing ideas among various industries &amp; Determining discussion forum topics</u></p>
<p>PO: This generalization may or may not be reflected in their discussion.</p> <p>T: It may or may not be. They may not talk about the car business. May be somebody's a camera buff? <u>And when they start talking about Polaroid, they'll bring a whole level of interest that may be wasn't pre-planned but adds to their learning.</u></p>	<p><u>Motivation – sharing other personal interests</u></p>
<p>PO: I have to tell you John; you've come up with more things than I was even thinking of.</p> <p>T: When I first looked at your questions I didn't know how to answer them. <u>But I'm looking at what this online course can do; I think I planting seeds and online learning is a new type of soil.</u> I think we have a lot of infertility in the traditional classroom, and the metaphor is the farm. I was born and raised on the farm. You take all the nutrients out the soil, and pretty soon you can't grow anything anymore. Our</p>	<p><u>Communication – sharing ideas</u></p>

<p>classroom teaching is the same as it has been for hundreds of years, and all of a sudden, there's technology. Let's not treat technology as an overthrow, like it's a blanket. Let's incorporate and bring it in. I really believe in it. It's going to make a difference. <u>You've made me realize that you have to go through and do the analysis, do the objectives, tie things in, and get the students on board too.</u></p>	<p><u>Performing an instructional analysis</u></p>
<p>PO: You've just made a good case for ISD. The last question in section one, I think that we can paraphrase because we have already talked about it a couple of times in this discussion. Will the students be expected to interact in the course assignment? By that, I am talking about the project at the end of the course.</p> <p>T: It would be very unusual if they wouldn't. With all the other stuff that has gone on, they would almost have to make themselves non-interactive. It would be very unnatural not to.</p>	
<p>PO: I guess the other question, is whether they do it online or in the hallways. As Tim reminded us this morning, these students are separated by time, but not by distance.</p> <p>T: There might not be that much online interaction because of their geographical proximity. <u>What they might do because this in an online course is arranged to get together in library on a Friday afternoon, and take all these ideas and see what they can do with them.</u> I think it will help. I really do.</p>	<p><u>Negotiation – willingness to engage in discussion</u></p>
<p>PO: OK, I think that we done the first section of the interview very nicely. Your summary of the importance of the TIP processes in designing a course for online interaction would have been my summary. So, thanks very much. The next area, what actions do you plan to take in the first few discussion forums, so that your students quickly master the skills? We already talked about this area and you have given me some examples. You already talked about the importance of introducing the subject and getting the subject rolling, and the weaving of ideas. So, I guess this question really is, are there any other actions that you see in the first few discussion forums to get them going?</p> <p>T: It's going to be difficult because, first of all, this is my first time moderating a conference. The other</p>	

<p>thing that I don't want to do is, I don't want to take the lead in the discussion. <u>It's going to be difficult to foster the interaction, without being too overbearing. Initially, my job as the moderator is to be encourager, not the enforcer, but the encourager.</u> For example, <u>that's a good point to expand, please tell us more.</u> But after a while I want less and less of 'me', and more of the students. I'll still be there; I'll be checking; and I do my odd little thing so that they know that I have a responsibility. I really don't want this to be my discussion forum; I want it to be their discussion. We have students here at the college for three years, and they develop incredibly. I don't know if I can expect that much over this four-month course. They will have to be led along. They're like the green sales force, a bunch of new sales people in a dealership. <u>The sales manager has to really watch over them, but once they start to develop and understand the system, he or she can sit back and let them managed themselves.</u> And that's what I'm hoping for the students. I see initially high interaction for myself, and then it will taper off.</p>	<p><u>Learner Control – encouraging participation in the cohort</u>  <u>Feedback – prompting further discussion on worthwhile topics</u></p> <p><u>Learner Control – a metaphor for developing self-directedness in learning</u></p>
<p>PO: And this course takes place in the second semester in a six-semester program. It's early in the process. The other fact that I would capture, we talked about earlier, was the importance of a weekly summary, and giving credit so that the students can feel good about when they made their input. The second question is about learning support, how will you guide students in the completion of learning or evaluation activities? We're talking about the changes from their traditional classes and how they're going to learn online. How you will continue to give guidance for what is essentially offline evaluation in this course?</p> <p>T: Oh, boy! I guess I going to have to think about that. I guess the lowest form of support will be in giving reminders for evaluation. I think the thing, which is happening here, is that there's greater access to 'me' as a teacher and to each other as learners. And, I think that what happens is they will be able to reinforce each other. <u>I'll want to make that clear at the outset when things are due; that's part of the collaboration with the students.</u> If someone doesn't really know how to comment and needs some help, we as a group, I as the teacher and them</p>	<p><u>Team Building – communicating need for cooperation</u></p>

<p>as students, can help.</p>	
<p>PO: We have talked before about you're using Blackboard to support your face-to-face courses. The same issues come out in how you're using Blackboard to support learners in the online course.</p> <p>T: Students have access to their marks and to weekly summaries of discussions. They'll see where they're going, whether they are on track. Often students don't know what their mark will be until they taken the final exam. <u>In this course, they can track their marks for the three multiple-choice tests and they will receive 10 percent for the outline of the course assignment.</u> This way, they will only have to wait for the last 30 percent of their mark. There evaluation feedback will be more current.</p>	<p><u>Feedback – letting students continually judge their own progress</u></p>
<p>PO: The other thing that we did in following the TIP processes was to confirm the instructions for the current course assignment in light of the performance objective. All of the instructions are available online. The students can go look at them anytime from day one of the course. At what point did you hand out the assignment in the current course?</p> <p>T: Probably, in the second or third week of the course. And then the students put them away and never looked at them again until a week before it was due. <u>The instructions are always there; they can go look at them at their leisure.</u> In Blackboard, there'll be reminders; there'll be announcements.</p>	<p><u>Feedback – giving students a tool to use in judging their performance &amp; Developing performance measures</u></p>
<p>PO: Some of these reminders will be given in the online discussions.</p> <p>T: As opposed to being a last minute thing, when they pull the assignment paperwork out, there'll be the dynamics of the Internet where they are working in this all of the time. For the test, the idea still is: here it is, sit down, and write this 50-minute offline test. This may be the downfall of the way I'm doing this course. In the security that we built into the online course, we still want to do an offline test. This is not a true online course.</p>	
<p>PO: In the design, we also confirmed that the course assignment for developing the personal marketing plan couldn't confirm all of the application skills.</p> <p>T: No, we don't have time for that, and we sort of</p>	



<p>weed a little out. Again, there is another thing about the online delivery compared to the traditional course where we are so content driven. You get an area where someone expresses an interest in the discussion, but you still want to cover the chapter. <u>You have a tendency to limit discussion because you got to move on, and you've only got 50 minutes.</u> <u>Whereas in the online course, if something good comes along you've got a little more allowance for additional discussion.</u> <u>Also, in going back to the summarizing and pulling the gems, there's more opportunity for that.</u></p>	<p><u>Communication – encouraging the sharing of ideas &amp; Selecting the media mix</u> <u>Feedback – summarizing the gems</u></p>
<p>PO: The weekly summary is a record of those points. T: And I can go back at a latter date and say do you remember in week three when we had all that discussion, and it is worth looking at again.</p>	
<p>PO: [At this point, I reassured John the interview was going well.] In implementing this online course, what types of student interaction do you generally expect to observe? [Pause] When the students contribute online, I guess that the worst-case scenario would be that they would all simply parrot back information from the textbook. That would be the worst case. This might be where you have talked beforehand about your concerns about the community college level student and this particular age cohort; and the set of skills that they possess in the second semester of the program. I am just asking you when they interact student-to-student in the discussion forums, what do you expect them to talk about? T: <u>Well I think initially, and this is where I have a task to perform, it will be a chore to get them to read what other people's comments have been.</u> But on another side, and this may or may be relevant, we're seeing more and more of these kids using ICQ, and they're use to typing back and forth responses. Here's an input; here's what the student wants to do; and I'm hoping that it isn't just a matter of either parroting or putting in a response for the sake of it. I think that's going to take a lot of work on my part. I have to draw them into the conversation like a mother hen syndrome, and pull the students together if I can. That may be too awkward for me. It depends on the group dynamics; and I don't really know: what's their</p>	<p><u>Learner Control – encouraging learning tasks</u></p>

<p>level of expertise in marketing, what's their interest level, or what's their motivational level. What's the motivational level towards the online course? Or is it so they don't have to come to class? Or, is it because they truly want to learn something? So, until I get into it. Until I start monitoring the interaction. <u>It's very hard to know what to expect ... as a bare minimum, they'll do their little bit; I don't think they'll readily interact with each other at first, they'll certainly respond to something I say.</u></p>	<p><u>Learner Control – encouraging group motivation</u></p>
<p>PO: It's an important aspect of teacher-student interaction when one student monopolizes or dominates the discussion. At some point, you'll interact with that one student to say: Yes, it's nice that you're making the contributions, but the concept is to have more than just your inputs.</p> <p>T: <u>In this situation, there may be more of a reaction from the other students than in the classroom setting... I don't see myself as a peacemaker, but I may have to be.</u></p>	<p><u>Team Building – tolerance for new ideas</u></p>
<p>PO: In this case there may be some student-student interaction, such as a negotiation...</p> <p>T: The discussion may not always be positive. There may be some friction. Somebody may say something, and there will be a negative reaction. Somebody may be completely wrong, and off track. And I am going to have to deal with that. And that's going to be tough because I've never been a real big enforcer. I compare this to the classroom, and that's all I have to compare it to. I am not a strict disciplinarian. This can sometimes be a problem in my course. <u>When I am pushed far enough, I have to moderate the discussion. You become in every sense of the word, a moderator.</u> It changes all the time, and I don't know how much transition I'll see in the four months of having the course.</p>	<p><u>Learner Control – identifying desirable behaviour</u></p>
<p>PO: I have to refer you to some of the readings that I have been sending your way about tips in conference moderation. [I pointed directly to a listing of Wagner's interaction strategies, for reference.] You've touched on a few of Wagner's interaction strategies already. We've seemed to have already covered the second last question – What types of interaction are anticipated in using Blackboard's discussion forums? We have talked a lot about</p>	

<p>discussion forums, and I think that we have largely covered these interactions. There is another communication line available through Blackboard, email. As the closing question, contrast possible e-mail interaction with what we have talked about in the discussion forum. What will you use e-mail for, and what will the students be using e-mail for, or will it be used for at all?</p> <p>T: I think that e-mail is being used more and more. At this time of year, I have received some Christmas greetings, which gives me a warm feeling. But what I think, and I going back to Tim's presentation, e-mail will be one more avenue for reminding students about the forums. I will use the announcements in Blackboard, but I will e-mail to the students so that they will know what is expected of them. I will also expect e-mail from students if they have a problem with what others have said, such as a sexist or racist remark. There will also be special requests from students. Having taught college for fifteen years, I know well enough that it's never smooth. Not all 22 students are going to be there, eager and waiting. That's where e-mail will fit in. It gives the students one more avenue to contact me.</p>	
<p>PO: Office hours play a role in your daytime classes. Will e-mail play a similar role?</p> <p>T: I anticipate that when there's a question affecting several students. I'll try and send group e-mail so that everyone knows.</p>	
<p>PO: As I have suggested, I guess you'll have to take a look at your guidelines for how soon you will be responding to e-mail. What timeframe is comfortable for you?</p> <p>T: That's tough for me to do, given that this is my first online course. I would think that I would want to provide a response within twenty-four hours at the longest.</p>	
<p>PO: Well, I would like to thank you for this interview. I would also like to remind you that I would be conducting another interview at the conclusion of the trial to get your views at that time. Thanks again.</p>	

## APPENDIX 8

### TRANSCRIPT OF THE SECOND INTERVIEW WITH JOHN

The 45-minute interview was completed on April 6, 2001. The participant observer (PO) conducted this interview with the teacher (T), who will be referred to by the pseudonym “John”. The interview occurred just after the conduct of the trial online course had been completed.

The PO transcribed the Narrative from an audiotape of the one-hour interview. The column, “Interaction”, depicts planned and actual interaction strategies. It flags adjacent passages in the narrative by coding them using Wagner’s (1998) ‘interaction strategies’. The associated passages in the narrative for the coding are clearly shown by the use of alternating single-underlined text and double-underlined text. In highlighting planning decisions made in relation to heightening interaction, dotted-underlined text was used.

<b>Narrative</b>	<b>Anticipated / Observed Interaction and Planning Decisions</b>
<p>PO: Well, here we are for the second interview. Let’s go back three months, to where we had just completed the nine processes for the analysis, design and development of the course. We have two sheets, in front of us, one reviewing the nine processes used and the other giving Wagner’s interaction strategies. I would like to know what you had hoped to see happen online. This is from the frame of reference at the start of the course, after having completed the design and development. I just want to know what you were hoping to see.</p> <p>T: Well I guess in terms of the things that I had hoped for ... first of all, participation. As I stated before, I thought this might be a problem.</p>	

<p><u>I was hoping that there would be communication, not just communication between me and the students.</u> I was afraid of them, being post secondary students and NOT adult learners, that there would be no participation between them.</p>	<p><u>The teacher was reticent at first about the amount of anticipated interaction</u></p>
<p>PO: By participation, you mean online interaction.  T: There's two ways to look at participation. That they would actually sign on, and do it. The worse thing that could happen was that they signed on for distance learning only to give up their classroom time. <u>Actually, they actually did take part; they did communicate.</u> 'Take part' meaning that they did the course. Communication, I was hoping that it just wouldn't be between students and myself. <u>I think they did communicate between themselves.</u> We will talk about that later. Feedback, you just don't want to say something and simply have it acknowledged. <u>I'm sure that students felt the same way; if they made a comment, they wanted feedback.</u></p> <p>I was hoping that it would work out. Of the other strategies, elaboration, I don't know if I was expecting it. I guess experience had taught me that they might not elaborate, but... <u>I hoped that they would take a concept and go beyond the initial discussion and expand it.</u></p>	<p><u>The teacher was pleasantly surprised by the actual communication</u></p> <p><u>Communication observed</u></p> <p><u>Feedback observed</u></p> <p><u>Elaboration anticipated</u></p>
<p>PO: In your in-class sections, do students bring in outside experience?  T: Not a lot. You can ask questions. It maybe that they feel intimidated in the open classroom setting. They don't want to say something that makes them sound stupid. <u>I'm thinking that technology puts up a screen, so that they are not as afraid to make a contribution.</u> This is an aside, it doesn't seem that they are afraid of online communication. The way they spell words. But it's funny that when they are doing a global response in class they are very sensitive about how they say things. They don't wish to appear stupid. But, they'll post stuff in which spelling is terrible. When I think back to my teachers using big red marks... It doesn't prevent them from getting their thoughts out.</p>	<p><u>The medium of computer conferencing was thought to welcoming for the students' contributions</u></p>
<p>PO: You did tell them directly during the first week that contributing was more important, than having correct spelling and grammar. So, you put students</p>	

<p>at ease that way.</p> <p>T: I think they felt that it was my feeling. They were more at ease in making responses, and it was less threatening than in a live situation. There may be... timidity or something, keeping them from saying something. In the classroom, I try to include discussion, I try to ask questions, but often, I get very little response. Learner control, I didn't really think of that. In terms of team building, <u>I was hoping that they would feel that they were part of the online course; that they weren't individual students doing their own thing. And I was hoping that there would be some sort of consensus.</u></p>	<p><u>Communication anticipated</u></p> <p><u>Negotiation anticipated</u></p>
<p>PO: Yes, you did include, right in the first forum, suggestions about how much to respond and how often to respond.</p> <p>T: Yes, <u>I gave them guidance in terms of that, and I think initially I wanted a minimum of two contributions per forum.</u> In their initial comments, they had made their great discovery, and initially their second comments were that they had nothing further to add. But as time went on, they read others' replies, and they would expand, or... <u>I saw a lot of things, like agreements, "That was a good point" or "I never thought of that".</u> So it made me realize that they were actually reading others' responses...</p>	<p><u>Learner Control employed</u></p> <p><u>Clarification observed</u></p>
<p>PO: But again, you saw this interaction, but you were not expecting this.</p> <p>T: Yes, I'm jumping ahead of myself in our conversation. As a matter of fact, my expectations were very, very limited; I thought that the situation would be that I would have to elicit all that. In going back to the initial position, I hoped that they would at least take part in the discussion. I didn't think they would. I remember discussing with you that I wanted to have only three or four forums because I would be doing all the work.</p>	
<p>PO: By you hoped that students would make some contributions, period.</p> <p>T: To me, the biggest thing of all was that <u>students would in fact make contributions</u> without me having to say, "Look guys, you got to do this..." And to my surprise, they ran with it a lot better than I thought they would. They exceeded my expectations for my</p>	<p><u>Communication observed</u></p>

<p>knowledge of post-secondary students, in terms of how well they handled themselves and how well they got involved.</p>	
<p>PO: From our first interview, you told me that you expected students to <i>talk</i> with you, but you weren't sure how much they would <i>talk</i> to each other.</p> <p>T: I guess, going into it, the hope was that they would contribute, but I felt that I was going to have to give an awful lot of direction in that regard. As it turned out, I didn't. <u>Students ended doing a lot more interaction than I thought they would, without my help.</u></p>	<p><u>Communication observed</u></p>
<p>PO: Staying with the same topic, we should probably focus on the output. Run your eyes down the nine processes. Do any of them suggest what interaction you thought you might see?</p> <p>T: Probably, performance objectives, as you try to decide where you want them to go. You hope that your objectives are clear and that students understand them. This process was designed to take students in that direction. We talked about this earlier. We had unit objectives and then we had the course objective. I had the official course outline, in terms of where they're going with the course objective.</p>	
<p>PO: I'll be blunt here. You have mentioned the instructional analysis where you came up with the unit-level learning outcomes (as you preferred to call them) in comparison to a single performance or course objective. So are you saying that it was the course objective, the single overall learning outcome, that led you there, or are you saying it was the unit-level learning outcomes?</p> <p>T: <u>I guess if you look at what the course learning outcome is, it really is built on all the unit-level learning outcomes. As students work together and as they understand the four P's, hopefully they will make some kind of transference. This applies to students as a product.</u> This applies to promotion (and sales promotion) in their interaction...</p>	<p><u>Interaction will build on unit-level learning outcomes</u></p> <p><u>Communication anticipated</u></p> <p><u>Elaboration anticipated</u></p>
<p>PO: It was interaction in concepts described by these unit-level learning outcomes, as opposed to that of developing the marketing plan?</p> <p>T: <u>We had a forum set up specifically for developing</u></p>	

<p><u>students' marketing plans, the Marketing Strategy Think-Tank.</u> But I don't think anybody used it. On the individual learning outcomes, they were working towards their goal, but as far as the course objective they were working independently.</p>	<p><u>Forum for student-student interaction in completing course assignment</u></p>
<p>PO: Let me clarify here. It was this generation of unit-level learning outcomes that sort of prompted in your mind where they might interact as opposed to performance objectives. But in this course, there was just one objective. Of these TIP processes, this is an important one in terms of heightening interaction. Again, you've already mentioned the four P's, which are addressed specifically in unit-level learning outcomes. All along we have been referring to objectives and learning outcomes. I just want to make sure that there was no confusion.</p> <p>T: {Nodded in agreement} When you look down at the processes of development, there are a lot of different activities. <u>We used case studies, we used websites, and we used instructional materials...</u> I think that was also an important part of determining interaction.</p>	<p><u>Selecting media mix helped determine avenues for interaction</u></p>
<p>PO: You said case studies and websites, so we're talking about choosing media. You have the textbook, websites, and computer conference where you will introduce the case studies. So it's the media mix...</p> <p>T: {Nodded in agreement} There's also the selection of the instructional materials, not just media, but also, the particular articles (instructional materials). We had articles, such as those in pricing and for the Polaroid case, that were very appropriate. It was more a media mix. We took some from the textbook, but not all.</p> <p>We should always remember that these were automotive marketing students. I was trying to choose topics that would relate to the auto industry, but would also relate to marketing. <u>They could use these concepts in developing their personal marketing plans.</u> We found specific examples that you could use in making the concepts.</p>	<p><u>Selecting topics that supported applying concepts</u></p>
<p>PO: That's what I had intended by the phrase, <i>readings and web resources</i>. You said the text for one, but you had alternate sources. This included</p>	



<p>actual websites...</p> <p>T: But keep in mind, that except for the Polaroid case, the other forum topics were automotive industry related. The Polaroid case was a good one to start with in that it had some concepts in terms of talking about <i>product</i>. I thought it would be good for them to talk about this. <u>I know they're automotive marketers, but this is related.</u> They were talking about targeting markets...</p>	<p><u>For motivation, related information from textbook and web resources to automotive marketing</u></p>
<p>PO: The other day, I specifically counted the topics taken from the textbook, and there were three of them involving Polaroid, Navistar and the NHL.</p> <p>T: Again, because of the marketing differences between all the NHL teams and how they functioned in terms of promotion, I thought it was good make the comparison. Automotive manufacturers have different ways of promoting their products.</p>	
<p>PO: So anything else looking down these nine processes... {While pointing to <i>practice with feedback</i>} I have one more to offer you to make sure you agree ...</p> <p>T: <u>As far as practice with feedback goes, we did use practice quizzes.</u> I think there was a fair bit of usage of that. I think it's funny... I don't know if this was appropriate or not to our discussion, but I was also teaching in-class sections at the same time. I also posted practice quizzes to those students, and they didn't use them to the same extent that online students did. Blackboard didn't seem to get near the usage by in-class students, and they were made aware of the materials posted to Blackboard.</p>	<p><u>Employed quizzes for practice with feedback, as part of student-content interaction</u></p>
<p>PO: Just as aside, 4 of 12 online students mentioned using the quizzes in your online evaluation... OK, I've had you in the frame of mind, back in January, when we just finish designing. The next question is, What actions did you take in the first few discussion forums that were successful in helping your students to skills necessary to interact with one another? So we're at the start of the course, and don't forget, these actions may include: what you presented on the website, something you said at your initial briefing, or whatever you did in the discussion forum.</p> <p>T: At the start, I felt that we should be concerned that this wasn't really distance learning, because most of</p>	

<p>our students came out of our program here at the CAI. We ran with kind of a pilot project. So we had the opportunity to meet physically with the students. The plan for the briefing was to guide them through Blackboard and to show them... But of course, technology let us down... This didn't seem to become a barrier because students all easily started up. We told them when the course would start, they all logged, and they didn't seem to have any problems. A couple of e-mails indicated that they had a little difficulty, but other than those it seemed to be pretty clear sailing.</p> <p>The contributions started, and they knew that I would be available. This gave them the idea that I was accessible. Although we weren't able to give a demonstration, this didn't hamper the program. They are so technically <i>savvy</i>.</p> <p>Now, in the first few discussion forums, we posted the discussion question. <u>One of the things that made a difference, and this is a mechanical thing, was the setting of the discussion forum with just the current week's forum in view.</u> This is something that you and I had learned when we talked to one of the Blackboard people around here. Instead on posting all the forum topics up front, we went in on a per week basis, and I think it helped students to focus a little bit more. They didn't become overwhelmed with it. They stuck with what was there, because that was all that was there.</p>	<p><u>Developed computer conferencing forums to focus students on current tasks</u></p>
<p>PO: From a navigational point of view, the other teacher had said that there should be one place for discussion, that week and every week.</p> <p>T: When they first accessed the weekly discussion forum, students didn't get hit by 11 units, and say, "Oh, my gosh!" and get overwhelmed. There were two other forums for discussion. We had a forum for their own discussion, and the help place for developing the marketing plan. I didn't really go in and check... we left the Automotive Marketers' Café for the students' own use. I may have checked once, but I didn't read any specifics.</p> <p>Another thing was that I like to make announcements in Blackboard. I would put an animated .gif to draw their attention to each announcement, so they would see that there had been a change.</p>	

<p>PO: Just to clarify, an announcement is a broadcast where you tell all the students at once.</p> <p>T: Yes, and that's a feature inherent in Blackboard. In Blackboard, you don't have e-mail students individually. They were going to find what we did, the actions we took. <u>We let them know when new Blackboard forums were available, and that Blackboard would be a major focus for the learning of the course.</u> Students had used Blackboard before on a limited basis. From doing this course, I think what happen was that these students became much more familiar with and much more willing to use Blackboard, than the general population of the college as a whole. Blackboard is in fact available to all students. Any student can log on to Blackboard.</p> <p>Now it depends. If they are taking courses in which the instructors don't use Blackboard, then there won't be anything for them except help and the general Blackboard announcements at the college. I use Blackboard for all my courses. Any student that has me as their teacher quickly learns that Blackboard is the way I communicate.</p>	<p><u>Learner Control employed</u></p>
<p>PO: Can I ask what specific messages you were sending through these announcements?</p> <p>T: The announcements were of the nature that a discussion forum has been posted. It would tell them where to go, in terms of navigational buttons. I expected them to have a response posted by a certain time, and I would also tell them when the responses were going to be cut off. There was a time span, a window of opportunity, to do these responses. <u>How discussion was to be done, as far as the mechanics.</u></p> <p>I would also use an announcement for any pertinent information ... such as a change in dates for a forum. I let them know at the outset of the course, that an announcement was the place to do this. Actually when Blackboard first opens, it opens to announcements. Students see right there what's going on. If I had to make a change for any reason, I would always post it right there.</p>	<p><u>Learner Control employed</u></p>
<p>PO: What about any actions that you were making within your replies? You were an active participant in the discussion with the students. What was your</p>	

<p>interaction?</p> <p>T: I tried to respond often. I know that the frequency of my replies was high. I think it is natural. <u>When students had made a response, I felt compelled that I had to say something.</u> That's part of my nature. I wasn't good at grouping the responses. I would usually reply individually.</p>	<p><u>Feedback employed</u></p>
<p>PO: So, you were acknowledging responses. Were you doing anything else besides acknowledging?</p> <p>T: Yes, I acknowledged and <u>I also tried to inform.</u> I know in the early stages, I also offered my own opinions. These were case studies where they would bring up something, and if it was something that I had not thought of, I had no problem with saying, "That was a really interesting point, I hadn't thought of." I also said what others were saying. A couple of times I put a question out to the group. I'm not so sure that they responded particularly to these group questions, but they would respond if I asked them individually a question. So it was more of a rhetorical question. I don't recall getting much of a response. I guess they felt they didn't need to respond back. I did this throughout the whole course. Maybe that's where, this being my first course, I would learn that you don't need to do that.</p> <p>And maybe, I still was carrying most of the baggage. I think what I did do... <u>It was less of my thoughts, it was more of, "That was a good response and this sort of thing, and did you think about this?"</u></p>	<p><u>Communication employed</u></p> <p><u>Feedback employed</u></p>
<p>PO: So you were trying to prompt them to expand on their answers a little more?</p> <p>T: And give less of my opinions. That was very hard. You got to understand that this was my first online experience and I'm still trying to discover how to do this.</p>	
<p>PO: At the same time, you also encouraged them to talk amongst themselves.</p> <p>T: Yes, it's funny. That was one of my feelings going in that I wouldn't get the interaction. I'm entitled to make some mistakes. I wondered, had I not made the responses quite as often as I did, I don't think there would have been the same interaction, because there was a lot of <u>"I agree with so and so."</u> I remember that at one point late in the course two</p>	<p><u>Clarification observed</u></p>

<p>students made a cooperative response. They were working together offline. If you think of it, that's kind of the epitome of working together. It was kind of odd, but it was OK. And, I remarked that it was great to see this. They were talking together about the discussion forum. They were probably talking about a lot more than they should put on the screen!</p>	
<p>PO: You assume that as these students met each other in the hallways; they would actually share ideas verbally.</p> <p>T: This is an unusual situation in which they were not true <i>distance learners</i>, and they do take other courses together. I think it was kind of neat that they got together physically to make a joint response. And I remarked about that. For me, it was unexpected. For me, it was a good feeling!</p>	
<p>PO: I know that I've offered a few prompts, but you filled in nicely. Aside from my prompts, are there any other aspects?</p> <p>T: The course was set up in different units that they had to do. Course Documents led them to these units. <u>I think that they received pretty good instructions along the way.</u> I'm not talking about the announcements that I gave. I think that the course is designed pretty well. Students always had instructions about what they were to do. You know, this is the unit you are working on and they would learn very quickly to go to the instructional material.</p>	<p><u>Learner Control employed</u></p>
<p>PO: So, principal components of instruction were already built into the website, which they started with reading each week?</p> <p>T: There wasn't a lot of, "So, what are we going to do this week?" I think it was a lot of your work, setting up the course online resources within the different units.</p>	
<p>PO: That's an excellent point. I totally forgot about written direction, which is another form of interaction, student-content interaction.</p> <p>T: <u>And the way the course lent itself to the four P's in marketing (product, promotion, price and place).</u> We introduced each element, and we had more than one unit for each. We had two or three units per element. And I think that level of organization helped students get through the course. The organization was very</p>	<p><u>Designing principal components of instruction to communicate unit-level learning outcomes, application skills from the instructional analysis</u></p>

<p>consistent. That pattern for navigating through the course developed very quickly, and it didn't take them long to get up to speed. That was one of the things you impressed upon me, the whole notion of consistency in the design. Even to the point, if you're using bold letters for this, use bolding consistently. Students being creatures of habit got very comfortable with it.</p>	
<p>PO: {Several teachers that we had contacted had made the point while reviewing our design; always making it easy to find for the student, so they'll always know where to go to find the instructions.} That's an excellent point!</p> <p>T: There's a lot of other stuff here on Blackboard, a lot of features that we didn't use. <u>Communications and Course Documents were the two buttons most often used. Announcements came up automatically.</u> If students wanted to check back on previous announcements, that's up to them.</p>	<p><u>Designed interaction using computer conferencing (under Communications) and principal components (under Course Documents)</u></p>
<p>PO: As I have said to you before, announcements serve a similar purpose to e-mail in a distance-learning course.</p> <p>T: I have a lot of use for e-mail, but I'm not good at e-mail. You do a broad posting. The other thing about e-mail is that sometimes students feel compelled to respond, and I'm not saying that's bad. But with announcements, I didn't know if they had read them or not.</p>	
<p>PO: It was a great way to provide information to all students, but you as the teacher didn't receive any feedback.</p> <p>T: Sure, if there had been some particular thing that I actually felt that they had to respond to when they read this, I still had the opportunity within Blackboard to send e-mail. I could have sent students e-mail after the briefing asking for feedback.</p> <p>In fact I did use e-mail once. The very first thing we did was to ask them to respond that they got the e-mail, after opening it up. And I wanted to make sure that they were out there. "Please let us know that you're online!"</p>	
<p>PO: One feature that comes to my mind that provided a clue as to how many had read individual contributions was when you went back and looked at</p>	

<p>the posting. Blackboard reports, "Read 8 times." You then know that a number of students had been in there. At this point I will move you on to the second half of question 2, what actions did you provide in helping students with learning and evaluation activities? You've already mentioned the Think-Tank, and how they didn't respond. But you made several inputs to that forum, which I know were read because of that little feature in Blackboard. That would be one area. Anything else you can think of that directed them towards the instructions?</p> <p>T: One of my announcements talked about the practice quizzes. They're quick studies; you tell them once, and you don't have to do it again. There was a consistent pattern; they kind of almost knew what to do.</p>	
<p>PO: Of course each week in the Course Documents, they were always reminded that a quiz was there. What were you doing in the Think-Tank? You did make three or four entries.</p> <p>T: <u>As part of the course assignment, we had specific guidelines.</u> There's always a lot of anxiety around a major assignment. And I find that in-class students have a lot of questions and I try to take some time to explain it. And that's basically what we tried. What we're doing here. In setting aside a forum to give them some specifics, it was to get them started. Because that's always most difficult anyway. First of all, lower the anxiety level and secondly read the instructions. So here's what they have to start to working at little chunks. This is so they can put together, and come up with a personal marketing plan. Instructions were looked at for guidance.</p>	<p><u>Learner Control employed</u></p>
<p>PO: May I also suggest that you were amplifying these instructions or reiterating what they would find in the assignment?</p> <p>T: Yes, and clarifying. Students were here at the college. They could come in and see me, and a few of them did, to ask a specific question, or they phoned me. These were other means of interaction available because we were all here on campus. It's part of how I guided them by using the other means of communication. I would see them in the hall, they would ask a question, and I could quickly answer it. Or, they could come into my office about a specific</p>	

<p>question. And again, not all of my in-class students do this either!</p>	
<p>PO: OK, that's great! We are actually into the last section now. We are now thinking about what actually happened during the course. And the first question is to look at the interaction strategies. {Looking at the strategies listed on the sheet} Tell me which ones you think were used, and don't forget which <i>you</i> used and <i>they</i> used.</p> <p>T: The strategies, communication and feedback, were both there. Both students and myself, I think, were using these. From the outset everyone was participating {i.e. contributing information}. I was trying to give announcements, get them hooked in. Then there's communication. <u>Well, that meant that they made responses. There was feedback.</u> The interesting thing was, it wasn't just my feedback, but their clarification of each other's <u>comments. They would make comments like, "I agree", "So and so made a good point", and that kind of thing.</u> There was some elaboration. <u>There was also when someone would take a point and say, "I agree with him or her, but I also think that..."</u></p>	<p><u>Communication observed</u></p> <p><u>Feedback observed</u></p> <p><u>Clarification observed</u></p> <p><u>Elaboration observed</u></p>
<p>PO: Do you have any other examples that come to mind?</p> <p>T: One student made a comment about marketing hockey, "Some hockey fans were more interested in the OHL than the NHL." <u>They took all the ideas expressed and built on them.</u> They perceive ideas differently. One student thought the OHL was more interesting than the AHL or NHL for his reasons. Someone else went on to agree, but probably his or her perception was different. They may have never seen an AHL or OHL game. They really have taken a little different angle on it.</p> <p>For some of them, even though they didn't follow hockey per se, they could relate to concepts in marketing using hockey. Even though they didn't know a lot about hockey, they could make a fairly sensible conclusion about marketing hockey.</p>	<p><u>Elaboration observed</u></p>
<p>PO: I also remember several students talking about marketing hockey versus marketing the NBA.</p> <p>I know we're getting short on time for this interview. Maybe I'll just offer you a couple of examples that</p>	



<p>come to my mind. When they are talking about online marketing, two students refer to the tradeshow from the previous fall.</p> <p>T: Yes, there's an NAD conference, which is actually sponsored by the CAI. Students get to go, which is great. And they were exposed to e-retailing and e-commerce, which have become a very big part of the auto industry. <u>Obviously, it made a mark, and they were able to relate back to that concept.</u></p>	<p><u>Elaboration observed</u></p>
<p>PO: And the second one, which comes to mind, is one of your students had been working in a retail store. For the case study in Polaroid, he brought in sales experience with the youth market purchasing Polaroid's Izone and Joy cam. So is this a relative example of the student elaborating on a case study?</p> <p>T: Oh sure, and if you want to go further with the Polaroid example, I remember one student saying that there was time he was the pub and there was somebody there, a brewer's representative, and how incredible the experience was in talking about Polaroid. He had knowledge and contributed on the spot. He was able to relate the discussion to the experience he had in the local community college pub, The Last Class.</p>	
<p>PO: So let's recap here. You've mentioned communication very strongly. You've mentioned elaboration, and you have touched on clarification. The only other strategy you've mentioned is that in the group sharing of ideas, new ideas came out of sort of a group synergy. Would that be the odd example of discovery?</p> <p>T: Yes, because I think that they went beyond the discussion... <u>They would use their experience, other people's experience and some of their own, such as going to the NAD conference.</u></p>	<p><u>Elaboration observed</u></p>
<p>PO: From the definition shown for the strategy of motivation, there was an authenticity of these actual experiences that the students had had and they were relating them to the discussion. That's an excellent point. What about yourself? Which strategies had you been using?</p> <p>T: <u>As an instructor, I provide feedback to communication and elaboration.</u> That's part of what a teacher does to try to pull out more. And in many</p>	<p><u>Feedback employed</u></p>

<p>instances, I didn't have to do that because students were doing it on their own. But I think that those old habits die-hard. Of course motivation is always part of an instructor's job. We want to motivate students, so we try to do it however we think best.</p> <p>We're looking at all the <i>mom and apple pie kinds of issues</i> in teaching. I think that elaboration, motivation and discovery are important. <u>If you can create the ah-ha! If you can create an environment, which students can say that's a really good thing.</u></p>	<p><u>Learner Control employed</u></p>
<p>PO: From what you're say about elaboration, you gave a lot of examples, examples in your feedback so that they could your examples compare to their ideas as being just a worthwhile.</p> <p>T: They were giving a lot of examples too. <u>I guess because the style of my teaching in the classroom, I use a lot of examples.</u> And I think they felt comfortable in doing it.</p>	<p><u>Communication, Elaboration and Feedback employed</u></p>
<p>PO: Your examples gave them something to compare their examples with, and they then knew that they had made a worthwhile contribution.</p> <p>T: It's funny. At times I had to stop myself. I didn't want to do too much of "John", and there was that temptation to say, "That was great, and by the way..." Sometimes if I did that, students actually gave more. On the other hand, students my feel, "It doesn't matter what I say, John is going to one up me." And, I didn't want to do that.</p>	
<p>PO: But, you could limit the amount of feedback that you gave to encourage greater communication.</p> <p>T: That's right. Not to show them that I'm a smart guy. I didn't want to do that. I wanted them to be creative and to contribute.</p>	
<p>PO: So that opens up the question, was there any other interaction than in the discussion forum? You've already mentioned your occasional interaction in the hallway, office times...</p> <p>T: And there are Blackboard announcements. I use announcements for a variety of things, in terms of reassurances. <u>After reading through the first few responses during the first forum, I tried to give some encouragement.</u></p> <p>I would tell them when the tests were. I give</p>	<p><u>Learner Control employed</u></p>

<p>feedback, motivation... I would try to keep it light. I tried to make sure that there was some variety in the announcements.</p>	
<p>PO: And of course, you were the one that emphasized that contributions were important, not spelling and grammar. It is more important that students contribute than worrying about these types of mistakes?</p> <p>T: And here's an example when the course changed direction, I would talk about the four P's. <u>So we summarized, "We've finished the first P, product, and now we're moving on."</u> This let them know where we were in the course.</p>	<p><u>Closure</u> <u>employed</u></p>
<p>PO: Your Course Documents included the traditional linking, objectives and motivation for the next week's topic?</p> <p>T: Yes, and also test reminders. At one point I made a test review, for my in-class course, available to my online students. I hoped by giving this test review that this might also help with the interaction.</p>	
<p>PO: That's where Student E tried to negotiate a small group activity. You encouraged this, in an announcement, and actually provided a forum for this discussion.</p> <p>Well, we have run out of time and you must be off to your next appointment. I would just like to thank you for your time. The time for this interview certainly has gone by quickly. Thanks again, John.</p>	