Articles

Affective Learning Outcomes in Workplace Training: A Test of Synchronous vs. Asynchronous Online Learning Environments

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ABSTRACT

Research employing an experimental design pilot-tested two delivery platforms, WebCT™ and vClass™, for the generation of affective learning outcomes in the workplace. Using a sample of volunteer participants in the help-desk industry, participants were randomly assigned to one of the two types of delivery software. Thirty-eight subjects participated from 10 different corporations across Western

RÉSUMÉ

La recherche utilisant un schéma expérimental a fait l'essai pilote de WebCT™ et de vClass™, deux modes de livraison, afin de produire des résultats en apprentissage affectif dans le milieu de travail. Cette recherche a fait l'utilisation d'un groupe-échantillon de bénévoles provenant du secteur de service de dépannage. Les participants furent affectés au hasard à un des deux logiciels de livraison. Trente-huit

Canada. Course-delivery observations suggested greater engagement and more interaction among participants in the WebCT™ group. Exam scores showed a higher mean for the WebCT™ group, but differences between means were not statistically significant.

personnes, venant de 10 différentes sociétés dans l'Ouest du Canada, ont participé à l'essai pilote. Des observations sur la présentation des cours semblaient suggérer qu'il y eût une plus grande participation ainsi que plus grande interaction parmi les participants du groupe affecté au logiciel WebCT™. Les résultats des examens ont démontré une moyenne plus élevée pour le groupe WebCT™, mais les différences entre les critères n'étaient guère statistiquement significatives.

INTRODUCTION

Interest in affective learning outcomes rests on many factors, but the most significant relate, first, to distance education delivery and, second, to a skill shortage in the Canadian workplace. The first factor is that the value of distance education for outcomes in the cognitive domain has been established, and outcomes in the psychomotor domain are now under scrutiny. However, there is less evidence of the value of distance education in the generation of affective outcomes.

The second factor, according to Human Resources Development Canada (HRDC), is that soft skills are in short supply in the Canadian workforce. A recent report entitled *The Importance of Soft Skills in the Current Canadian Labor Market* (MacLeod, 2000), outlined a lack of soft-skills development across many occupational sectors. Why do these skills matter? According to Goleman (1995), employees with appropriate soft skills demonstrate higher levels of competency. In a social justice, more humanitarian argument, soft skills provide the capacity for smooth-running human relations—a benefit in the lives of each individual on many fronts. Soft-skills development occurs primarily, but not exclusively, in the affective domain. The report singles out the high-tech industry as most in need of soft skills training (SST). How does SST compare to other types of training? The report notes:

> … hard skills training is easier to define, and the paybacks of technical training are perhaps more immediately apparent as a result—it is much easier to ascertain whether someone has mastered a software program

> than ascertaining whether they have learnt appropriate listening skills. Soft skills' training is generally more nebulous, and requires the passage of time to take hold. Soft skills are basically learned patterns of behavior and, as such, are difficult to "unlearn" and replace with new patterns of behavior. (MacLeod, 2000, p. 7)

In summary, we are interested in required instructional design in synchronous and asynchronous learning environments for the generation of affective learning outcomes through online delivery, theoretically, for its own sake. In addition, understanding this may contribute to the resolution of an important social and economic issue—the soft-skills shortage in the Canadian workplace.

Background Information

Affective Learning Outcomes

The human experience of "affect" is an area often ignored in human social interaction and not often specifically addressed in education (Vinson, 2002). At the same time, affect is a central part of living and learning. It is defined as "emotion, feeling, desire leading to action; the conscious subjective aspect of an emotion and embedded in a complex of experiences including cognition and context" (*Webster's Collegiate Dictionary*, 1999).

In an educational context, affective learning outcomes are related to, but exist outside of, cognitive development. Learning outcomes in the affective domain are concerned with the external expression of internalized emotion through attitudes and values (Gagne, Briggs, & Wagner, 1992; Krathwohl, Bloom, & Masia, 1964). By virtue of the very personal and intrinsic nature of the states achieved in this domain, they are difficult to measure.

In a formal education setting, attributes that represent specific attitudinal and behavioural outcomes are fostered. According to Krathwohl et al. (1964), the affective domain is represented by the external expression of affect through the following stages: receiving (demonstrating the willingness to listen), responding (demonstrating active involvement), valuing (demonstrating choice in involvement), organizing (demonstrating willingness to advocate), and characterization (demonstrating willingness to change one's behaviour, lifestyle, or way of life).

In workplace training, affective learning emerges as so-called "soft skills" training. The definition of soft skills is yet unclear, but MacLeod (2000) identifies the following skills: ability to communicate effectively, creativity, the process of analytical thinking, problem-solving processes, leadership skills, team-building skills, listening skills, diplomacy, flexibility, change-readiness, and

self-awareness. These soft skills are deemed to be behaviours critical to effective performance in the workforce and are suggested to be in short supply.

Combining Krathwohl et al.'s affective domain with MacLeod's list of soft skills, the following chart emerged.

Affective Domain Stage	Soft Skill Requirement
Receiving	• Listening skills • Analytical thinking
Responding	• Ability to communicate effectively • Leadership skills • Problem-solving
Valuing	• Diplomacy • Flexibility
Organizing	• Change-readiness • Team-building skills
Characterization	• Self-awareness • Creativity

The conceptualization of soft skills in the workforce rests logically in the stages of the affective learning domain.

Facilitating Affective Learning Outcomes/ Soft-skills Development

In less-formal learning settings, characteristics like attitudes, values, motivation, discipline, and thinking and communication skills are effectively learned through a process called *socialization*. The process occurs when agents of socialization (parents, teachers, peers, significant others, mass media) provide models, examples, suggestions, and context for appropriate social development (Shaffir & Turowetz, 1983). This provision is made most readily through social interaction, defined as mutual or reciprocal action with "others" in a social environment.

In order to facilitate learning in the affective domain, we suggest that education must look more carefully at processes of interaction with others to foster learning outcomes. There is much evidence of the impact of academic and social interaction on learning outcomes (Pascarella & Terenzini, 1991,

1998), particularly values' adjustment. Just like the more-informal socialization process, affective learning is dependent upon interaction, reflection, and feedback from others.

A number of essential contextual features and learning activities come together to facilitate affective learning outcomes (Gronlund, 1999). Key facilitation strategies are identified as: the presence of emotional and psychological safety; the opportunity for interaction; observation of the demonstration of new and appropriate models of behaviour; activities that promote self-awareness; activities that promote self-reflection; and the opportunity for the application of new behaviour.

Synchronous vs. Asynchronous Online Learning Environments

Moving these facilitation strategies to online learning environments requires careful translation of key requirements. Given the requirement for a "socialization effect" as part of the required learning activities, interaction opportunities are paramount. The most-notable distinction between types of interaction in online environments is that of synchronous vs. asynchronous engagement with other participants in the online learning activity.

The distinction between audio and text-based online interaction must be identified first. The indelible characteristic of the written word adds an intensity and thought pattern different from audio conversation. It is suggested that this difference adds to reflection, the amount of cognition (Garrison, Anderson, & Archer, 1999), and, in turn, the embedding of new learning (Walberg, 1988). "Written communication in an online context provides for a systematic approach to constructing meaning, particularly in difficult and ill-defined content areas" (Garrison, 2002, p. 10). Work in the affective domain, as a difficult and ill-conceived subject area, may benefit from the reflection and time invested in text-based communication environments.

Differences between synchronous and asynchronous interaction have to do with the time available for response. Synchronous interaction of any kind requires high engagement, with faster processing and response time. Conversely, "the use of asynchronous learning requires planning, structure" (Garrison, 2002, p. 10), both of which require additional time and thought. The properties of engagement, reflection, and time invested all lead to learning outcomes, suggesting that asynchronous environments may foster more-salient affective learning outcomes.

However, in reference to affective outcomes, the socialization process is likely influenced by what Moore (1993) called "transactional distance." The type of dialogue and the amount and nature of structure characterize distance education. The combination of these factors yields a level of transactional distance: high structure and low dialogue yield remote transactional

distance; low structure and high dialogue yield close transactional distance. Juggling of structure and dialogue to manage transactional distance results in differences in learner experience and, in turn, learning outcomes. The precise impact on learning outcomes of close vs. remote transactional distance is unclear. However, assuming the need for a socialization effect to support affective learning outcomes, close transactional distance would be indicated.

Research Design

This study employed a two-group experimental design, with variation of the treatment variable, that is, the type of online interaction. A course in customer service, with soft-skills outcomes, acted as the education intervention. Two platforms familiar to the researchers, with sound evaluation from a community of peers, were chosen. These online instructional platforms served as the background in support, separately, of synchronous and asynchronous interaction. WebCT™ provided an asynchronous communication mode, and vClass™ was used for a collaborative online working environment for synchronous engagement of participants.

The help-desk industry was identified as the population for this study because it falls into the high-needs area identified by HRDC in terms of required soft-skills development and because the researchers have experience training help-desk analysts in a face-to-face environment. Organizations belonging to the Help Desk Institute (HDI) of Canada were recruited through a membership newsletter. Training was offered without cost, but organizations were required to commit the technology, employees, and required time to participate in the project.

Ten organizations volunteered to participate in the study. The sample of respondents was comprised of help-desk analysts who either volunteered or were mandated to take the program. From this convenience sample of 44, participants were randomly assigned to one of two groups. vClass™ required scheduled participation at a specific time, on a specific day. Several participants were moved between groups to accommodate this schedule. There were 23 participants in the WebCT™ asynchronous group and 21 participants in the vClass™ synchronous group.

Estimates of soft-skills competency were evaluated in a self-test before training to establish an entering baseline. This self-assessment, also in the pilot stage, was completed the week prior to training via an e-mail request (see Appendix A). Nine soft-skills concepts, as identified by HRDC, were each given two items. Each item offers a statement regarding participant behaviour, to which participants responded on a Likert scale about the frequency of their own behaviour.

The education intervention, or course, was designed with reference to the generation of affective outcomes for online environments. Four modules, with three topics in each module, made up the structural shell of the course (see Appendix B for a course map). Each topic followed the same instructional pattern: introduction, objectives, personal objectives, content presentation, demonstration, application, and personal reflection.

Facilitation support for affective outcomes was offered by ensuring that several events were part of the learning experience. A high-touch learning environment was created in both WebCT™ and vClass™. High-touch learning environments include facilitation that is learner-centred, with demonstrable validation and, where possible, accommodation of student needs and objectives. Facilitator immediacy in reference to requests and feedback was a critical facilitation goal. This was accomplished online through timely response to postings, e-mails, telephone calls, and questions asked in synchronous discussions. Facilitator identification of standards, requirements, customer service models, and exemplary customer service models provided external reference for individual actions. Self-awareness exercises, reflection opportunities, practice requirements, and application exercises were embedded in the instructional design.

WebCT™ offered specific instructional characteristics for the course. Asynchronous threaded discussion was part of each module, lasting one week in duration. Synchronous chat was available but not structured in any part of the course. Content presentation included text, audio clips, and video clips. Exercise sheets, including workshop directions, were available in the same Web-based location. Separate discussion areas and whiteboards provided support for group projects and their presentation. The site was available at all times, every day.

vClass™ was available once per week, for one hour. This platform offered synchronous online presentation, with audio interaction among participants and between participants and the instructor. Synchronous text chat was available for those in the vClass™ session, during the session only. Group work and application sharing were available in the platform. Collaborative assignments provided the opportunity for students to work together outside of class time.

The key treatment variable in this experiment was type of interaction. High levels of interaction between students and student-facilitators were fostered. Interaction was directed toward fostering reflection, thoughtful consideration, and examination of personal responses to events around relating to others.

Interaction in WebCT™ was solely text based and asynchronous; neither students nor the instructor employed the chat function. vClass™ students engaged in audio and text synchronous interaction once per week. Other

communication occurred through e-mail, but minimally. Content, exercises, assignments, and examinations were identical across treatment groups.

At course completion, a final exam was provided via e-mail for vClass™ participants. WebCT™ participants took the final exam online. The final exam was made up of multiple-choice and short-answer questions regarding appropriate responses, possible courses of action, and attitudes toward customers. The desired soft skills were embedded in correct answers on the final exam questions.

FINDINGS

The soft-skills self-assessment instrument was designed specifically for this project. Prior to use, a sample of three people with similar characteristics to the study participants evaluated the instrument. Wording and statement-style adjustments were made based on this feedback. Thirty-eight useable pre-tests were collected. Reliability appraisal yielded an acceptable Cronbach's Alpha of .7011.

Results of group responses for each statement in the pre-test are reported in Table 1 . Italicized numbers are items that were reverse coded. Total group scores are reported at the end of the individual item scores.

Table 1: *Pre-test Results*

Statements	**WebCT™ Group Mean**	**vClass™ Group Mean**	**Mean Difference**	**Significance of Difference**
I use a model of problem resolution or trouble-shooting when reviewing caller information.	3.31	3.88	-.56	.159
I seek to understand customer expectations through careful listening.	4.63	4.41	.22	.364
I reflect on my behavior as I proceed through the call.	3.54	3.81	-.26	.362
I look for multiple responses to caller requests.	3.80	3.64	.16	.570
I adjust my method and response according to customer needs.	4.28	4.64	-.36	.148

Statements	**WebCT™ Group Mean**	**vClass™ Group Mean**	**Mean Difference**	**Significance of Difference**
I demonstrate frustration at times during the call process.	3.68	3.76	-.08	.815
I uniformly follow the same call process for each call.	2.95	2.70	.24	.487
I recognize my strengths and weaknesses in serving customers.	4.00	3.94	.05	.800
I thoroughly review information presented to me.	3.63	3.52	.10	.743
I have no opportunity to change company procedure or policy to better support customers.	3.18	3.29	-.11	.736
I clarify that callers have understood what I have said.	4.18	4.17	.01	.977
I represent my company in positive terms.	4.77	4.70	.07	.646
I understand the problem-solving process.	4.50	4.41	.09	.629
I divide complex problems into workable, understandable units.	4.00	4.00	.00	1.000
I take problems that can be solved organizationally to the appropriate people.	4.18	3.76	.42	.090
I present my ideas in a way that is understandable to others.	4.18	4.18	-.00	.979
I see caller's concerns as an opportunity to problem solve.	4.45	4.50	-.05	.822
I put myself in the "shoes of the other" when listening to a caller's concern.	4.36	4.06	.30	.151
I identify cause and effect relations in my approach to problems.	4.19	4.00	.19	.357
I consider my audience when crafting a message to another person.	4.04	3.68	.36	.434

Statements	**WebCT™ Group Mean**	**vClass™ Group Mean**	**Mean Difference**	**Significance of Difference**
I use initiative to resolve complex problems, even when they fall outside my job description.	4.00	3.93	.07	.813
I process information quickly and have no need to verify my understanding when listening.	3.13	3.00	.13	.691
I brainstorm possible solutions with new ideas and insight.	3.72	3.75	-.03	.916
I speak with respect about others when conversing with customers.	4.59	4.75	-.16	.413
I accept changes in policy and procedure as a normal part of the work experience.	4.59	4.25	.34	.085
I take note of others' responses to my behavior.	4.54	4.25	.29	.164
I learn and adjust to required changes in my work life.	4.50	4.37	.13	.501
Aggregate score mean	4.03	3.97	.06	.484

In this test of differences between groups, there was no significant difference between entering soft-skills competency, as identified by the self-assessment. This was the case for each individual item in the test and for aggregate data for each group. In this unique case, no significant difference was the desired situation. Participants in both groups entered the experiment with roughly equivalent competencies.

Final exam scores, however, did indicate significant differences across groups. Results of final exam scores are reported in Table 2.

Table 2: *Final Exam Scores*

Group	N	Exam Mean	Standard Deviation
WebCT™	15	87.27	10.42
vClass™	8	77.25	13.91

Significance was set at p = .10 as acceptable for use with this pilot data. The difference between group means has a numerical score of 10.02 and a test of significance at p = .064.

Discussion

Results of this pilot study suggest that, under the conditions of asynchronous, text-based interaction (WebCT™), participants realized greater learning gains than those engaged in synchronous, primarily audio interaction (vClass™). Mean differences on the soft-skills self-assessment test between the two groups were not statistically or substantively significant. This gives us confidence that the two groups started at the same competency level. Soft-skills exam scores, taken at the end of the course, exhibited notable mean differences across groups, and the difference was statistically significant at the level of p = .06. Although this does not reach the normally ascribed significance level of p <= .05, this level of significance was deemed acceptable for this pilot.

In terms of transactional distance, both groups operated with very similar content structure. The only difference between groups in relation to content structure had to do with access to the written material for the course. WebCT™ students had material readily available, while vClass™ students had to access material through a site separate from the online interaction. Differences in dialogue support led to closer transactional distance in vClass™ and more remote transactions in WebCT™. Of the facilitation requirements for affective outcomes—the presence of emotional and psychological safety; the opportunity for interaction; observation of the demonstration of new and appropriate models of behaviour; activities that promote self-awareness; activities that promote self-reflection; and the opportunity for the application of new behaviour—two would be supported by close transactional distance. Emotional and psychological safety requires predictable and known elements in the activity, including the other people involved. Because affective change is best fostered by a socialization process, the more interaction that is taking place, the better.

One possible explanation for this result is students who learn in the asynchronous mode have time to reflect on the learning materials and the questions during the asynchronous discussion. They also accessed course materials directly from the WebCT™ learning system. In this particular education intervention, the participants and facilitator in WebCT™ realized greater amounts of interaction, as identified by participation levels in weekly conferences. Those who were involved in the discussion each week contributed long, meaningful messages. Group projects were successfully completed through collaborative efforts. In contrast, participation in vClass™ was hindered by scheduling difficulties, technology difficulties, and facilitator inexperience with the technology.

Although some vClass™ participants reported interest and enjoyment working with the tool, others had difficulty accessing the software online, getting microphones to work, and becoming familiar with the platform. Some participants chose not to join the vClass™ and studied independently, without "coming to class." Others merely left the course, expressing frustration with the time expended to access and use the tool. Each week, some participants were unable to leave the help desk to join in the class due to serious outages or other work-related responsibilities. Participation by those who did join vClass™ each week was active and engaged. However, facilitator inexperience with the technology led to delays and inefficient use of class time.

During the delivery process, other differences were notable and must be considered in this interpretation. vClass™ attendance was highly variable and access to content was challenging. These factors may have significant influence on learning outcomes. On balance, enthusiasm for the tool was very high and those who did participate engaged well with the vClass™ format. Students were eager to use the technology for the delivery. This was the first time most of the students had encountered online learning.

The impact of student involvement and effort has been well documented in formal education programs (Astin, 1977, 1993; Pace, 1984). WebCT™ participants had more regular, ongoing interaction with the website and the material presented. This activity is related to, but not solely dependent upon, the opportunity for asynchronous correspondence. The materials were offered in a more-accessible format that was directly linked to the opportunity for interaction. The WebCT™ software allowed for good structuring of the course and was able to provide feedback to students. These factors may have engaged students more and resulted in better course outcomes. WebCT™ participants also had access to review self-tests at the end of each module.

In this pilot study, final exam scores demonstrated significant differences across groups. One possible explanation for this result is students who learn in the asynchronous mode have time to reflect on the learning materials and

the questions during the asynchronous discussion. However, sample attrition may have influenced final results. In the WebCT™ group, 16 participants completed the final exam. In the vClass™ group, 7 participants completed the final exam. This group was a representative subset of the total group regarding self-assessment scores.

Conclusions

The research proceeded as a pilot and will be reinstituted this fall (2004) with modifications based on results from the pilot. There is enough evidence in this pilot assessment to suggest that there may be differences between synchronous and asynchronous interaction in the generation of affective learning outcomes.

This study will be replicated with some alteration to the research and instructional design. Affective outcomes are realized through the experiences of engaging in learning, but not necessarily through specific instruction. Crafting the appropriate learning environment, with required interaction to foster socialization, is essential. A larger sample with participants across occupations to factor out any systemic influence of shared occupation will be used. Participants assigned to the vClass™ program will be engaged earlier to provide technology support, where necessary, and to orient all participants equally to the platform. Now that the soft-skills self-assessment instrument reliability has been established, this instrument will be used as both a pre- and a post-test to evaluate change in soft-skills assessment, in addition to final exam scores.

Delivery adjustments will be made to shore up any differences that may affect outcomes. Access to material for vClass™ participants will be improved and self-test reviews will be created at the end of each module. Asynchronous interaction in WebCT™ will be measured to evaluate the amount of time participants engaged with others in the course; facilitation will work to equalize the amount of interaction with the hours spent interacting through vClass™.

However, online delivery in vClass™ and WebCT™ may have two irreconcilable differences that impact delivery beyond the differences of synchronous vs. asynchronous communication. First, the synchronous interaction in vClass™ is audio-based, not text-based. Audio interaction does not require the same level of reflection or thoughtful message construction that text-based communication does. This may have significant impact on learning outcomes (Wagner, 1998). Second, WebCT™ offers flexible interaction, giving students the opportunity to interact for as long as they like, whenever they like. In the generation of affective learning outcomes, this may turn out to be a critical factor. Further research needs to test this, and other, key premises about the generation of affective learning outcomes in online learning environments.

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APPENDIX A
SELF-ASSESSMENT

Please read each item carefully and place a check mark ✓ in the box that best identifies your behavior.

		Always	Often	Occasionally	Seldom	Never	Skill Assessment*
1.	I use a model of problem resolution or trouble-shooting when reviewing caller information.	5	4	3	2	1	PS
2.	I seek to understand customer expectations through careful listening.	5	4	3	2	1	LiS
3.	I reflect on my behavior as I proceed through the call.	5	4	3	2	1	SA
4.	I look for multiple responses to caller requests.	5	4	3	2	1	C
5.	I adjust my method and response according to customer needs.	5	4	3	2	1	CR
6.	I demonstrate frustration at time during the call process.	1	2	3	4	5	-D
7.	I uniformly follow the same call process for each call.	1	2	3	4	5	-C
8.	I recognize my strengths and weaknesses in serving customers.	5	4	3	2	1	SA
9.	I thoroughly review information presented to me.	5	4	3	2	1	AT
10.	I have no opportunity to change company procedure or policy to better support customers.	1	2	3	4	5	-LS
11.	I clarify that callers have understood what I have said.	5	4	3	2	1	EC
12.	I represent my company in positive terms.	5	4	3	2	1	D

13.	I understand the problem solving process.	5	4	3	2	1	PS
14.	I divide complex problems into workable, understandable units.	5	4	3	2	1	AT
15.	I take problems that can be solved organizationally to the appropriate people.	5	4	3	2	1	LS
16.	I present my ideas in a way that is understandable to others.	5	4	3	2	1	EC
17.	I see callers' concerns as an opportunity to problem solve.	5	4	3	2	1	PS
18.	I put myself in the "shoes of the other" when listening to a caller's concern.	5	4	3	2	1	LiS
19.	I identify cause and effect relations in my approach to problems.	5	4	3	2	1	AT
20.	I consider my audience when crafting a message to another person.	5	4	3	2	1	EC
21.	I use initiative to resolve complex problems, even when they fall outside my job description.	5	4	3	2	1	LS
22.	I process information quickly and have no need to verify my understanding when listening.	1	2	3	4	5	-LiS
23.	I brainstorm possible solutions with new ideas and insight.	5	4	3	2	1	C
24.	I speak with respect about others when conversing with customers.	5	4	3	2	1	D
25.	I accept changes in policy and procedure as a normal part of the work experience.	5	4	3	2	1	CR
26.	I take note of others' responses to my behavior.	5	4	3	2	1	SA
27.	I learn and adjust to required changes in my work life.	5	4	3	2	1	CR

* *Skill Assessment Key on next page.*

Skill Assessment Key, Appendix A

Code	Skill Assessment
AT	Analytical thinking
LS	Leadership skills
SA	Self-awareness
EC	Ability to communicate effectively
C	Creativity
PS	Problem-solving skills
LiS	Listening skills
D	Diplomacy
CR	Change-readiness

APPENDIX B – COURSE MAP

Module	Week	Topic	Activities	Discussion
1. Reviewing Customer-Analyst Relationships	1	1. Documenting the call process in help desk environments	1-2-4 project developing a call process diagram	Module 1: What is your main goal as you move through the call process?
	1	2. Identifying customer needs and expectations	1-2-4 exercise Customer expectations	
	1	3. Relationship styles - you and your customer	1-2 exercise Relationship styles	
2. Customer Service in Online Environments	3	1. Customer service models	1-2 exercise Going the extra mile	Module 2: What is your applied model of customer service?
	3	2. A personal philosophy of service	1-2-1 exercise A personal philosophy of service	
	3	3. Demonstrating service orientation in online environments	1-1 exercise Memory trip	
			1-2 exercise Effective help	
3. Relationship Building in Online Environments	2	1. The relationship window	1-2-4 exercise What do customers say about you?	Module 3: What do you do to build your relationship with customers?
	2	2. Communication skills and online environments	1-2 exercise Honing Communica-tion Skills in Online Environments	
	2	3. Characteristics of an online service relationship	1-2-4 exercise The Commandments of Online Service	

continued on next page . . .

Module	Week	Topic	Activities	Discussion
4. Customer Service in the Call Process	1	1. Documenting the service side of the call process	1-2-4 exercise Finalizing the call process diagram	Module 4: How do you integrate the "human side" of the call into the work that has to be done?
	2	2. Partnering through the trouble shooting process		
	3	3. Review and concluding exercises	1-1 exercise Course Review and Action Plan 1-3 (4) exercise Improving Unit Service	

BIOGRAPHIES

Martha Cleveland-Innes is a faculty member in the Centre for Distance Education at Athabasca University. For the last 18 years, she has researched, developed, and implemented programs in workplace learning. Her current research interests are learner role adjustment in online environments, affective learning outcomes in distance education, and online learning in the workplace.

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