The Effectiveness of Using Pre- and Post-Training Self-Assessment with Behavioral-Based eLearning Modules

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Introduction

As an Instructional Designer for the customer service support center of an online retailer, I created a series of courses designed to improve the performance of our phone support agents. To help reinforce the learning happening in the courses and provide additional data on the effectiveness of the training, I recommended to the company management that the agents participating in the courses complete pre- and post-training assessments. Because company management was unfamiliar with using assessments in this way, I was asked to justify why qualitative assessments would be a valuable use our agents' time. In October 2017, I proposed an action research inquiry project using a sample population to demonstrate the impact of using the assessments versus not using the assessments. I asked to use two teams of customer service agents and have them complete one eLearning training module, Call Control and Call Flow, designed to shorten overall customer call interaction time by teaching agents some best practices for controlling the content of customer service calls and following a pattern to complete all call steps in a timely manner. After submitting my proposal to company leadership, I received approval to conduct my research project over the space of three weeks starting in mid-October 2017.

Research Questions

This inquiry project hypothesized that it was possible to demonstrate the impact that formative self-assessments can have to reinforce behavioral-based learning in an eLearning course and use these self-assessments as an additional form of learning to reinforce this primary learning activity. I designed and completed the inquiry project considering the following research questions:

1. What impact will the behavioral-based eLearning module have on the call control practices of customer service agents?

2. What impact will the use of formative self-assessments have on the reinforcement of a behavioral-based eLearning module?

3. What impact will the use of formative self-assessments have on the retention of information shared in a behavioral-based eLearning module?

4. Will the use of self-assessments help customer service agents change key metrics such as call length and customer service scores?

I predicted that the use of the self-assessments would help participants in the experimental group reduce their average handle time by 5-10% over the control group and either maintain their current customer service rating average or improve their average by 5-10%.

Literature Review

Using formative self-assessments in combination with eLearning for behavioral-based learning has had limited success because of the lack detailed study on the efficacy of combining both formative assessment and eLearning as a form of summative assessment. Sitzmann, Ely, Brown, and Bauer (2010) stated that self-assessments are learners' estimates of how much they know or have learned and offer the potential to reduce the burden of developing tests to determine whether the desired knowledge has been gained as a result of participation in a course or training intervention (p. 169). Determining how the burden of producing summative assessments could be achieved by using formative assessments was a concept that needed further exploration and definitive finding of fact.

Search Questions

1. How does the use of formative assessments help determine the effectiveness of training via eLearning by serving as an additional form of learning?

2. Does combining formative and summative assessments provide a more accurate measure of overall learning?

3. Do formative assessments provide an unbiased and accurate picture of learners' post-learning performance?

This literature review examined these questions at a deeper level to explore how practitioners in the workplace can use formative and summative assessments to reinforce behavioral-based learning in eLearning modules.

Search Procedures

To conduct my research, I used the University of Colorado Denver Auraria online library, Google, and Google Scholar with the following search terms: Formative Assessment, eLearning, Formative versus Summative Assessment, Behavioral Based Training, and Assessment as Learning. I also sourced articles from industry and online journals such as *Research in Learning Technology*, *Academy of Management Learning & Education*, and *Educational Technology and Society*. Findings from the literature search and review are presented below.

Formative vs. Summative Assessments

While many learning practitioners have primarily relied on summative assessments to measure the transfer of knowledge in learning, formative assessments have provided additional insight into how effective this transfer of knowledge has been. Dixson and Worrell (2016) cited formative assessment as being involved in gathering data for improving student learning, whereas summative assessment has used data to assess about how much a student knows or

has retained at the completion of a learning sequence (p. 153). Drouin (2010) further argued

that formative assessment, the type that engages student learners in self-evaluation of their

own learning processes, is a more effective practice for enhancing student learning (p. 114). By

measuring how learning can be improved, teachers and instructional designers have been able

to identify learning mechanisms that are less effective than required and find means to improve

the rate or degree of knowledge transferred or to reinforce knowledge transfer. Sitzmann, Ely,

Brown, and Bauer (2010), noted that in order for learners to build lifelong learning habits, they

must be able to critically evaluate their own knowledge and skill levels (p. 181). Formative and

summative assessments have been viewed as an "either/or" option in the past, but both have

provided valuable information on the learning of process and result. Summative data, while

providing information on the rate and transfer of knowledge, failed to capture information on

the quality of the learning process and the learner's reaction to the learning object. Formative

assessment has been used to help instructional designers and teachers understand how

learners relate to a learning object and how the learner's reaction influences the ability of each

learner to recall and apply the lessons learned.

Combining Formative and Summative Assessments

Combining formative and summative assessment had the potential to provide a broader

picture of student performance, which enabled greater learning. According to Voelkel (2013),

summative assessments, usually in the form of end of course tests, the summative part of the

measured a completion rate of courses, whereas a formative assessment gave students

prompt, detailed feedback that gave students information on what they needed to do to

improve their performance (p. 13). Voelkel further asserted that prompt, specific feedback after

the formative part of the online tests enabled the students to see exactly what they needed to

do in order to improve their performance (p.16). Droiun (2010) also found that with regard to

retention of concepts, when students participated in formative and summative activities, they

performed significantly better (on average) on individual retests of the same material weeks

later than they did on the initial test (p.117). This demonstrated the potential of using both

formative and summative assessments to provide a more accurate measure of learning and to

improve the quality of the learner's recall. Improvement of recall and more accurate measured

created an opportunity to lessen the need for additional re-training and provide quality data on

the areas where learning was strongest and where reinforcement was needed.

Formative Self-Assessments as Learning

He and Canty (2013) found that self-assessment is a potentially powerful technique

because of its impact on student performance through enhanced self-efficacy and increased

intrinsic motivation (p. 111). They also found that, with self-assessment, students do not just

learn the answers to the questions, they put the information into a larger context, making sure

that they understand the connection between self-assessment and the goal of better learning

and retention of course material (p. 114). Similarly, Sitzmann, Ely, Brown, and Bauer (2010)

found that is possible that self-assessments may have large relationships with cognitive learning

under certain learning conditions (p. 170). Armstrong and Fukami (2010) argued that self-

assessment, as a form of declarative knowledge, is consciously formed, controlled, and

articulable, while tacit knowledge is identified as unconscious with automatic learning, which

guides actions and decisions without being in our field of consciousness (p. 339). Spector et al

(2016) declared that formative assessments can motivate individual learners, help teachers

adjust individual learning paths, and inform parents and others of progress (p. 60). Using

formative self-assessments required learners to recall what was learned in order to respond to

the assessment, reinforcing what was learned and building neuroplasticity in recall pathways.

By reinforcing the channels that transmit information, learners experienced faster recall which

allowed them to use the information in constructive ways.

Formative Self-Assessments and Performance

Sitzman and Johnson (2011) also examined whether the interaction between trainees'

self-assessments of knowledge and actual performance predicted subsequent performance and

attrition in courses that provided frequent performance feedback and found that trainees' self-

assessments are not always consistent with their actual performance (p. 194). Their study also

suggested that providing trainees with repeated opportunities to self-assess their knowledge

along with performance feedback increases the strength of the self-assessment/performance

relationship (p. 205). The implications of these findings were that formative self-assessments

may not be a valuable tool for estimating the degree to which learner performance may be

impacted by training. This potentially illustrated that self-assessments had limited potential as a

reinforcement tool for performance or behavioral-based learning when used independently

with a learning module. When combined with direct performance feedback, the potential for

self-assessment to serve as a reinforcement tool for performance or behavioral change was

improved. Because this study used an eLearning module as the basis for training prior to self-

assessment, it was possible to extrapolate the potential results for this smaller scale study.

Quality of Literature

The general quality of literature was very high, with a wide range of articles and publications examining the value and processes of summative and formative assessment. The articles on summative and formative assessments provided clear descriptions of both types of assessment and how they were used. The articles demonstrated that summative assessment was more effective when measuring knowledge transfer or cognitive recall of learning. Formative assessment was differentiated as a measure of the quality of the learning process or as a measure of the how learners related what they learned to their own experience. The journal articles and research papers found were peer reviewed and provided reliable citations from well-known sources in the field of educational research.

While there was a wide range of information formative and summative assessments individually, there was not a large number of articles, journals, books, etc. that examined how these two types of assessment worked in conjunction or how formative assessment could be used with eLearning to enhance performance-based training. Only one article presented findings that had a direct relationship to this study which combined formative and summative assessments when working with a behavioral-based eLearning module. Other articles and publications provided useful supplemental information, but did not provide hypotheses or findings that directly pointed to supporting or detracting evidence for the hypothesis for this inquiry project.

Literature Review Summary

Summative and formative assessments have existed and been used in education in many forms. With both forms of assessment having the potential to measure and reinforce learning, both have continued to be used by educators and learning practitioners to obtain

valuable data on the efficacy of the learning modules they deliver. Many studies have been done to measure how summative and formative assessments work, but few studies have been done on how they can work together or how formative assessment worked with performance and behavioral-based eLearning modules. By continuing to study how formative and summative assessments can work together, it may be possible to discover additional improvement and reinforcement opportunities in learning. As eLearning has grown as a learning tool, it would be valuable to find ways to make eLearning more effective as a knowledge transfer tool and as a tool for behavioral change. The following research examined how formative self-assessments could be used as a tool to measure behavioral change from learning and how self-assessments have the potential to reinforce recent learning.

Research Method

This project was an action research study design. My data collection methods included self-assessment surveys, a purpose-built eLearning module, and collecting participant call data and customer service metrics.

Table 1

Questions and Methods

Research Question	Data Collection Method
What impact will the use of formative self-assessments have on the reinforcement of a behavioral-based eLearning module?	Self-assessment surveys via Survey Monkey Participant call metrics Participant customer service ratings
What impact will the use of formative self-assessments have on the retention of information shared in a behavioral-based eLearning module?	
Will the use of self-assessments help customer service agents change key metrics such as call length and customer service scores?	

What impact will the behavioral-based eLearning module have on the call control practices of customer service agents?	eLearning Module

Participants

I selected 36 participants from two customer service agent teams and randomly divided them into two groups of 18. Two participants from Group 1 (control group) were later dropped because they failed to complete the required eLearning course and finished with 16 participants aged 21-32 equally divided between males and females. Group 2 consisted of 18 participants aged 23-29 with a division of 56% female and 44% male respectively. All participants in both groups had completed a minimum education of high school graduation and four participants were currently pursuing their Associate's degree. Participants had an average of 11 months experience working in a call center environment. Before starting the study, I collected 60-day data on their average handle time (AHT) and customer service ratings (CSR) as a baseline for comparison to post-study results.

Procedures & Data Collection

Participants from both groups were assigned a 20-minute eLearning module to complete on improving call control and call flow to help them better regulate the pattern of incoming customer service calls and reduce the amount of time handling each call. Group 1 was assigned only the course while Group 2 completed a seven-question self-assessment via Survey Monkey prior to being assigned the training(Appendix A). Once participants in Group 2 completed the self-assessment, they were auto-assigned the eLearning course. Both groups were given one week in which to complete the course. One week after completing the course,

Group 2 participants were asked to retake the self-assessment to measure the impact of the

learning and their perception of their behavior post-training.

To measure the effect of the eLearning module and the eLearning module combined

with the self-assessments, I selected two standard customer service reporting metrics that

would be most impacted by the training topic: average call handle time and customer service

ratings. I obtained the AHT metrics from the company Workforce Management team and the

customer service ratings from the Quality Assurance team. I then assigned participants in both

groups unique identifiers to reduce the potential for bias.

Schedule

| Date	Actions
October 12-13	Collect pre-training baseline call metrics for all participants
October 16-22	Group 2 completed pre-training self-assessments
October 23-29	Groups 1 and 2 complete Call Control and Call Flow eLearning course
October 30-November 5	Group 2 completed post-training self-assessments
November 14	Collect post-training call metrics for all participants
November 15-17	Analyze data

Data Analysis
Self-Assessment Responses

Participants in the experimental group completed a seven-question five-point Likert

scale pre-training behavioral assessment with 1 equal to *Strongly Disagree* and 5 equal to

Strongly Agree (Appendix B and C). For the pre-training assessments, participants rated their

agreement with key call control and call flow behaviors such as following the call flow steps, recognizing when they have lost control of the call, redirecting the call back on topic, and multi-tasking reading/writing notes at a cumulative average of 2.52 out of 5 (Figure 1). After completing the eLearning module, participants rated their behaviors at a cumulative average of 3.35 out of 5. This indicated an increase of 32.41% agreement with the statements in the self-assessment. Some questions showed a higher percentage change such as Question 2 (63.16%) while Question 7 demonstrated a lower percentage change (8.36%).
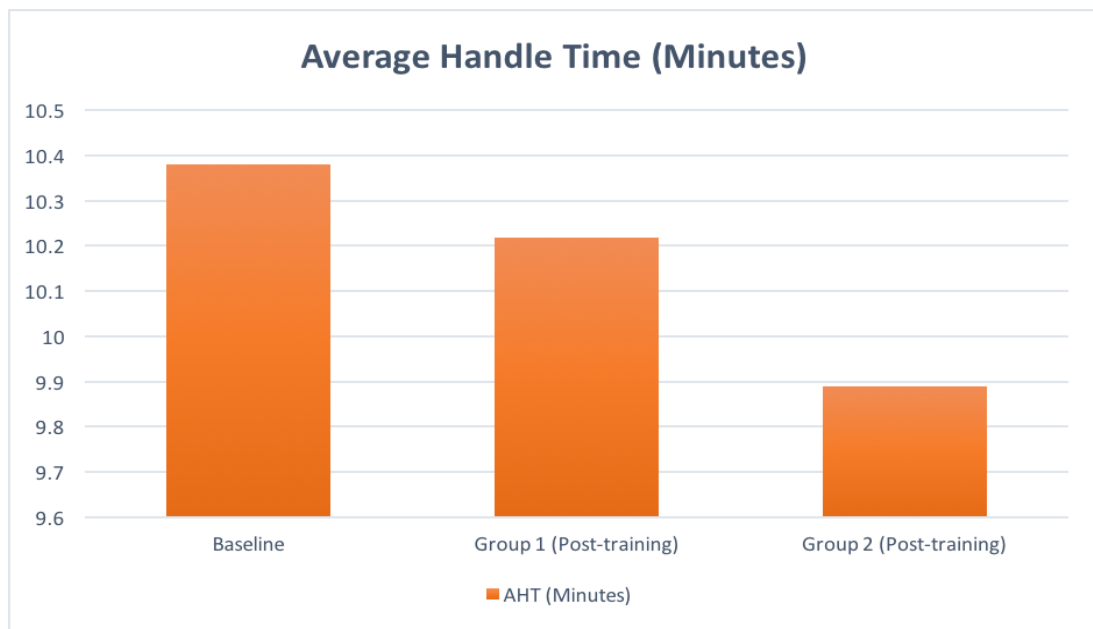
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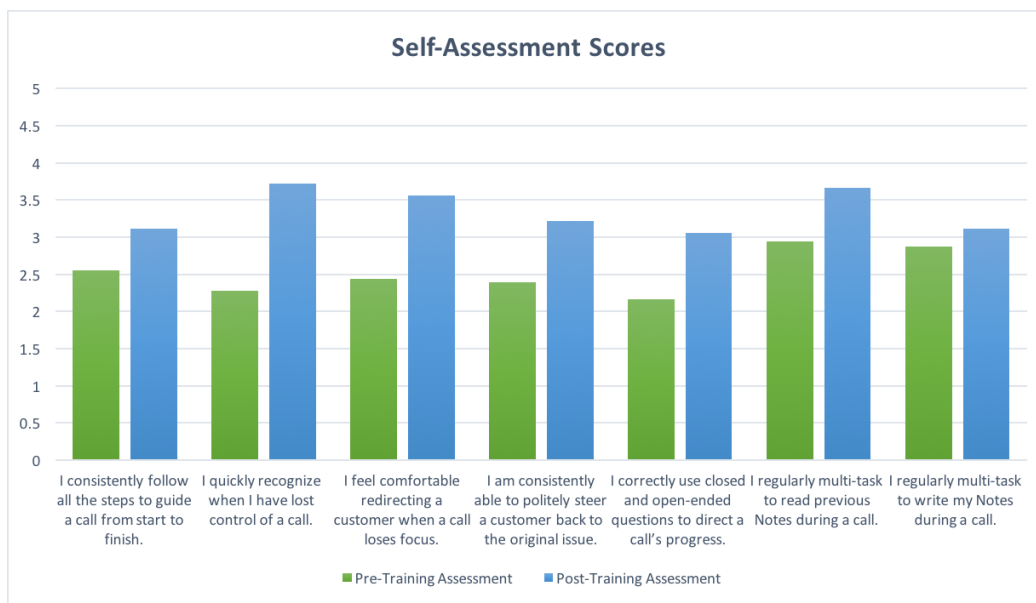
Average Handle Time

Call metrics for participants in the control and experimental groups were recorded for the two weeks before they completed the eLearning module for call control and call flow (Appendix D). Call metrics were recorded for Group 1 post-training and, for Group 2, after completing both the training and the follow-up self-assessment (Appendix E). Prior to training,

all participants spent an average 10.37 minutes per call or 10 minutes and 22 seconds per call.

One week after completing training, Group 1 call average handle time dropped to 10.21

minutes (10 minutes, 12 seconds) per call for a decrease of 1.47% (Figure 2). One week after

completing training and the second self-assessment, the average handle time for Group 2

dropped to 9.89 minutes (9 minutes, 53 seconds) for a decrease of 4.63%.

Figure 2

Customer Service Rating

All customers who interacted with a customer service agent were sent a four-question

survey to measure the agent's knowledge, customer service skills, friendliness, and ability to

resolve the issue the member contacted the agent with. Customer service ratings for

participants in the control and experimental groups were recorded for the two weeks before

they completed the eLearning module for call control and call flow (Appendix D). Customer

service ratings were recorded for Group 1 post-training and, for Group 2, after completing both

the training and the follow-up self-assessment (Appendix E). Prior to training, all participants

had an average customer service rating of 4.23 out of 5 (84.6%). One week after completing

training, Group 1 customer service ratings increased to 4.29 out of 5 for an increase of 1.42% to

a total satisfaction rating of 85.8% (Figure 3). One week after completing training and the

second self-assessment, the Group 2 customer service ratings increased to 4.36 out of 5 for an

increase of 3.1% to a total satisfaction rating of 87.2%. This was interpreted as a positive result

in that customers either did not perceive the behavioral changes of the customer service agents

or did not perceive the changed behaviors in a negative fashion.

Figure 3
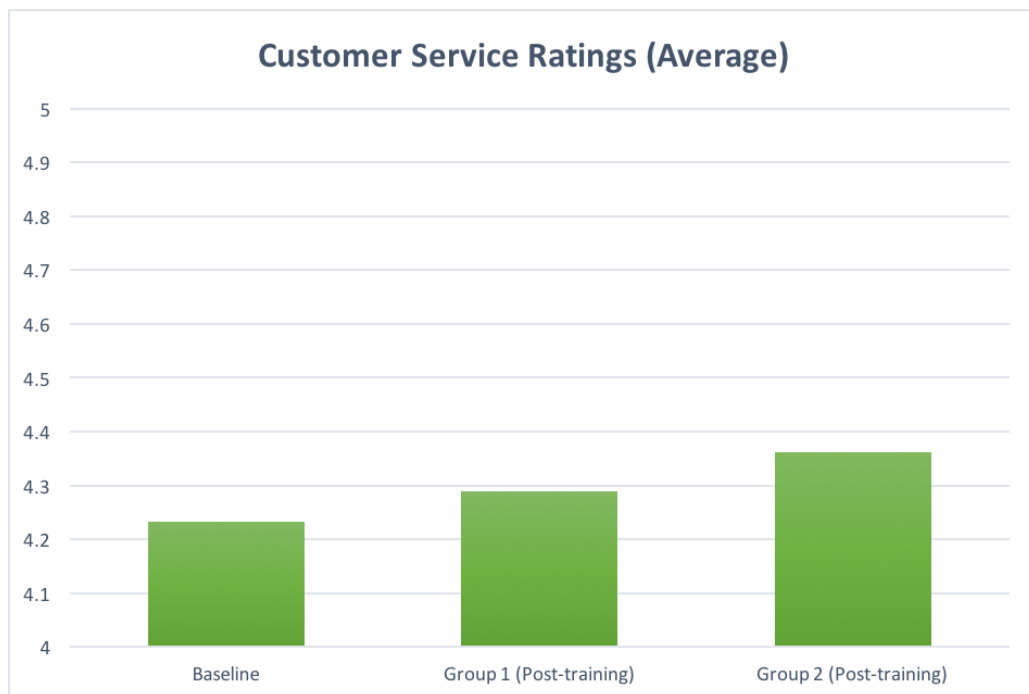
Findings

Use of Formative Self-Assessments

The use of formative self-assessments with Group 2 had mixed results, with participants

demonstrating an increased alignment with the call control and call flow behaviors but showing

only a marginal increase in performance. The pre-training self-assessment demonstrated that

participants has some knowledge of the expected behaviors. Participants struggled with recognizing when call control was lost and felt uncomfortable redirecting customers back to the original call topic when control was lost. Participants also struggled with using closed and open-ended questions to direct a call's progress. After training, participants responded that they felt more comfortable recognizing when they lost control of a call. Participants reported feeling a higher degree of comfort in redirecting a customer after they perceived that control of the call was lost. Participants also indicated that they felt they more accurately used closed and open-ended questions to direct a call.

Comparison to Control Group

The average handle time and customer service ratings of Group 2 did not indicate a significant difference in behavior based on the use of pre- and post-training self-assessments when directly compared to Group 1. Specifically, Group 2 demonstrated a decreased average handle time of 4.63% versus 1.47% for Group 1, a difference of 2.88% which is within the standard margin of error. The metrics for customer satisfaction rating presented neutral to positive results with Group 1 showing a 1.42% improvement and Group 2 showing an increase of 3.1%, indicating that customers may not have perceived a drop or decrease in the friendliness or helpfulness of the agents they interacted with. Analysis of both sets of data indicated that the benefit from completing the pre- and post-training self-assessments was not immediately evident in the length of time that agents spent per call and that agents were able to maintain comparable if not better levels of customer satisfaction.

Summary of Findings

Because the call metric comparison results for Group 1 and Group 2 were within the margin of error for both groups for average handle time, it was not possible to definitively demonstrate that the pre- and post-training self-assessments had an impact on the effectiveness of the call control and call flow training for that metric. It was possible to demonstrate that Group 2 participants who had completed the self-assessments felt more confident with call control and call flow after taking the training. Specifically, Group 2 participants felt more confident in recognizing when call control was lost and redirecting interactions when they believed call control was lost. Additionally, both groups were able to maintain the same level of customer satisfaction, but this result is unclear as it may or may not indicate an actual change in customer service behavior. Further study was needed to determine if this confidence translated to a long-term change in behavior or if Group 2 participants were reporting a greater alignment with the behaviors because, as Sitzman and Johnson observed, self-assessments are not always being consistent with actual performance (p. 193).

Reliability and Validity

The findings of the formative self-assessments presented a significant difference in Group 2's self-perception of how they were using the call control and call flow behaviors post-training. When compared to the data, Group 2 did not demonstrate a significant change in their average handle time for calls or for their customer service rating which indicated that the training was not as impactful as indicated by their self-assessments. There were additional factors not accounted for in the call metrics, average handle time and customer service rating, including (but not limited to):

- Call volume to the study participant post-training

- Complexity of customer issue

- Availability of information to resolve the issue

- Call escalation to a supervisor/manager/specialist department

Additionally, the high difference of agreement with between pre- and post-assessment behaviors could have demonstrated an example of a post-training halo effect in which participants' perception of their behavior was viewed more positively than indicated by their actual call performance. This halo effect could have been the result of the training itself or the self-assessments themselves.

Limitations of Findings

The primary limitation of these findings on the current research into the impact of formative self-assessments as a tool to reinforce learning is the small sample size used in the study. Because of business limitations, only 32 subjects were included in the study which represented approximately 5% of the customer service agent population with the company. The limited age range of workers also represented a smaller age range than that of the workforce within the company and the larger population of adult learners world-wide. This sample population also only represented one subset of customer service functions within the many customer service solutions offered within the company. Engaging longer-tenured customer service agents may also have impacted the results because their work habits and patterns are more ingrained than with newer employees. Expanding the study to include additional teams with different demographics may have demonstrated a different level of impact from the training and self-assessments than was observed.

Furthermore, a basic Likert scale assessment was employed with seven questions targeting specific behaviors for self-reflection. By expanding the survey, it would have been possible to further examine the nuances of how the customer service agents view and demonstrate the behaviors in the eLearning module. Employing a different survey design such as Yes/No or short answer may have yielded different results from participants. Employing focus groups or individual interviews instead of using an online survey tool could also have been used to capture additional formative responses.

This study was also limited by the uncertain effectiveness of using eLearning to train for behavioral change. Because of the lack of direct demonstration, observation, and feedback, using eLearning to create behavioral change was an uncertain choice as eLearning continues to be studied to understand the overall effectiveness of this mode of training for specific learning needs. As practitioners have continued to study what impact online or computer-based learning, there has not been conclusive evidence of the value of employing this method to customer service training.

Because of the short-term nature of this study, it was not possible to gather data on the long-term impact of the assessments on differences in learning retention or behavioral change between the two study groups. Long-term data may have shown the differences between the two groups narrowing or expanding over time. Repeated self-assessments over time may have also created additional reinforcement for the experimental group or demonstrated a gradual loss of behavioral change and knowledge application. A higher number of phone interactions during the study period may have generated additional metrics that reflected greater behavioral change. Additionally, a higher customer service rating survey response rate may

have provided additional feedback on the differences in customer perception of the changed

agent behavior.

Discussion

After comparing the literature findings to the results of this study, the results of using

formative self-assessments as an alternative or supplement to summative assessments were

unclear and in need of further study. While formative assessments may have provided valuable

insight into the learners' reactions to the training and their perceptions of the influence of the

training on their subsequent call control and call flow behavior, the performance results did not

indicate significant change. He and Canty (2013) postulated that students who are only

assessed via summative assessment may not develop as strong an ability as do students in the

self-assessment group in terms of analyzing knowledge learned in relation to application (p.

114). By not adding formative assessments to learning opportunities, educators have missed

opportunities to increase the application of learning in their students and to teach their

students how to self-analyze their understanding of what they have learned or should have

learned.

Dixson and Worrell (2010) argued that it may make sense to use a formative assessment

summatively or a summative assessment formatively, depending on the use of the outcome of

the assessment (p. 157). The potential of using assessments this way opened up the possibility

of creating more flexible, blended assessments that meet learning needs while reducing the

burden of creating multiple assessments for a single course or eLearning module. Educators

and learning practitioners needed to re-evaluate their practices when using summative and

formative assessments to find less restrictive definitions, usage, and analysis for the data

provided by these types of assessments.

Implications for Practice

The key implication for practice was the inherent value of using formative self-

assessments as a tool to provide a mechanism for comparison between pre- and post-training

behavior. In addition to having summative data in the form of the course scores and call

metrics, the self-assessments provided insight into the level to which participants understood

the behaviors contained in the eLearning course. By providing an additional tool for observing

how participants reacted to the eLearning module, it should have been possible to predict the

post-training behaviors based on the difference of responses provided between the pre-

training (baseline) assessments and the post-training (results) assessments.

The self-assessments also provided greater insight into the self-perceptions of

behavioral change post-training and how they were not an accurate predictor of actual

behavior. Participants who completed the self-assessments rated their perception of how much

their behavior had changed compared to their pre-training knowledge and behavior. While

these participants consistently rated their post-training understanding of the knowledge of the

course material higher, their performance did not indicate an equally high change in their

actual performance when working with customers. In larger practice, understanding that the

gap between knowledge and performance has been an important indicator of the effectiveness

of the training or the need for additional reinforcement of the training to bring performance in

line with what learners "know." Additionally, the gap between knowledge and performance

may have required additional tools to measure the specific areas where behavior may have

been changed but the mechanisms for observation were not precise enough to provide

reportable data.

Concluding Reflection

When this study began, it was with the idea that the evidence for formative self-

assessments being beneficial for reinforcing learning short-term would be easy to demonstrate

and argue for as an ongoing practice. What was found was a relationship that was more

complex than could be measured in this inquiry project as it was designed. Summative

assessments have been valid ways of obtaining information on the efficacy of an eLearning

module, including a behavioral-based eLearning module when in the context of measuring

knowledge transfer. Formative assessments have had an unclear level of effectiveness when

used to measure the effectiveness of the learning process as translated into on-the-job

performance in the short term. For educators and learning practitioners, this called into

question reports of overall effectiveness of formative self-assessments when used to measure

post-training behavioral change for eLearning and classroom-based learning where post-

training performance is not measured via summative assessment or via quantitative data.

Using formative assessments long term may have provided additional time to build

neuroplasticity of the behaviors or additional reinforcement of what was originally learned. By

using continual summative or formative assessments as reinforcement of learning, these

assessments could have been used as additional independent learnings to offset the

Ebbinghaus forgetting curve. Long-term use of formative assessments as reinforcement would

also have helped close the learning-performance gap that has sometimes been observed with

behavioral-based training, both online and in the classroom. While adult professional learning

had placed a premium on the time involved in creating, distributing, and evaluating self-assessments, their value in closing the learning-performance gap in the workplace has shown that the time investment could be a worthwhile investment if it can improve employee on-the-job performance and reduce time spent in a classroom or online learning environment.

Overall, the results of this inquiry project were inconclusive. The inquiry project failed to demonstrate a conclusive link between formative self-assessment and short-term behavioral change after completing a behavioral-based eLearning module. This directly contradicted findings from other research studies with a similar design as reported by Susanne Voelkel (2013). The limited scope and timeframe of this inquiry project most likely worked against achieving a similar result. Continued monitoring of the customer service metrics had the potential to yield results that indicated greater behavioral change in the form of reduced average call handle time. Additional study of the use formative assessments to reinforce behavioral change post-training would be required to provide a more definitive conclusion.

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Appendix A: Group 2 Self-Assessment Survey

Call Control Self-Assessment

⊕ PAGE TITLE

*(1) I consistently follow all the steps to guide a call from start to finish.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agee
○	○	○	○	○

*(2) I quickly recognize when I have lost control of a call.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agee
○	○	○	○	○

*(3) I feel comfortable redirecting a member when a call loses focus.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agee
○	○	○	○	○

*(4) I am consistently able to politely steer a member back to the original issue.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agee
○	○	○	○	○

*(5) I correctly use closed and open-ended questions to direct a call's progress.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agee
○	○	○	○	○

*(6) I regularly multi-task to read previous Notes during a call.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agee
○	○	○	○	○

*(7) I regularly multi-task to write my Notes during a call.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agee
○	○	○	○	○

Appendix B: Group 2 Pre-Training Self-Assessment Results

Agent Identifier	I consistently follow all the steps to guide a call from start to finish.	I quickly recognize when I have lost control of a call.	I feel comfortable redirecting a customer when a call loses focus.	I am consistently able to politely steer a customer back to the original issue.	I correctly use closed and open-ended questions to direct a call's progress.	I regularly multi-task to read previous Notes during a call.	I regularly multi-task to write my Notes during a call.
2A	5	5	5	4	4	5	4
2B	2	3	2	2	2	2	3
2C	3	2	2	2	3	2	3
2D	2	1	3	1	2	3	3
2E	3	3	3	3	2	3	4
2F	3	3	3	2	1	3	3
2G	1	2	2	3	2	4	2
2H	2	2	3	2	1	2	3
2I	3	2	1	3	2	3	2
2J	2	1	3	2	1	3	3
2K	4	3	2	2	3	4	2
2L	2	2	3	3	2	3	3
2M	1	2	2	3	2	2	3
2N	2	3	3	2	3	3	3
2O	4	2	2	2	2	3	3
2P	2	2	1	2	3	2	2
2Q	3	2	2	3	2	2	3
2R	2	1	2	2	2	3	3
Average	2.556	2.278	2.444	2.389	2.167	2.938	2.875

Appendix C: Group 2 Post-Training Self-Assessment Results

Agent Identifier	I consistently follow all the steps to guide a call from start to finish.	I quickly recognize when I have lost control of a call.	I feel comfortable redirecting a customer when a call loses focus.	I am consistently able to politely steer a customer back to the original issue.	I correctly use closed and open-ended questions to direct a call's progress.	I regularly multi-task to read previous Notes during a call.	I regularly multi-task to write my Notes during a call.
2A	3	5	4	3	3	4	2
2B	3	3	5	3	3	5	3
2C	3	3	5	4	4	4	3
2D	3	3	3	3	3	3	3
2E	2	4	3	3	3	4	4
2F	3	3	4	4	2	4	3
2G	3	5	3	2	3	3	3
2H	3	4	3	3	2	5	3
2I	3	3	5	5	5	4	3
2J	4	3	3	4	3	3	3
2K	3	4	3	2	3	3	2
2L	2	3	4	3	4	4	4
2M	4	4	3	3	3	3	3
2N	3	4	3	3	3	3	2
2O	4	4	4	5	4	4	5
2P	3	4	3	2	2	3	3
2Q	4	5	3	3	3	4	4
2R	3	3	3	3	2	3	3
Average	3.111	3.722	3.556	3.222	3.056	3.667	3.111

Appendix D: Groups 1 & 2 Participant Pre-Training Call Metrics

Agent Identifier	AHT	CSR
1A	9.71	4.27
1B	10.11	4.44
1C	10.23	4.15
1D	10.69	4.78
1E	10.28	4.39
1F	10.05	4.02
1G	10.83	3.97
1H	9.87	4.31
1I	9.94	4.09
1J	10.55	4.64
1K	10.23	4.56
1L	10.31	4.18
1M	10.16	4.23
1N	9.92	4.34
1O	10.02	4.17
1P	10.59	4.05
2A	11.32	4.67
2B	10.68	4.38
2C	11.13	4.01
2D	9.95	4.03
2E	11.04	4.71
2F	10.76	4.2
2G	9.96	4.26
2H	10.52	4.3
2I	10.09	4.42
2J	10.34	3.85
2K	9.93	4.13
2L	10.24	4.22
2M	11.22	3.99
2N	10.13	4.08
2O	11.11	4.01
2P	10.72	3.92
2Q	9.99	4
2R	10.29	4.14
Average	**10.379**	**4.232**

Appendix E: Groups 1 & 2 Participant Post-Training Call Metrics

Group 1

Agent Identifier	AHT	CSR
1A	9.71	4.27
1B	10.11	4.15
1C	10.23	4.44
1D	10.69	4.78
1E	10.28	4.39
1F	10.05	4.02
1G	10.83	3.97
1H	9.87	4.31
1I	9.94	4.09
1J	10.55	4.64
1K	10.23	4.56
1L	10.31	4.18
1M	10.16	4.23
1N	9.92	4.34
1O	10.02	4.21
1P	10.59	4.05
Average	**10.218**	**4.289**

Group 2

Agent Identifier	AHT	CSR
2A	10.22	4.74
2B	9.98	4.52
2C	8.87	4.33
2D	9.94	4.24
2E	10.41	4.71
2F	10.32	4.46
2G	9.81	4.26
2H	10.05	4.52
2I	9.73	4.63
2J	10.3	4.31
2K	9.56	4.27
2L	9.61	4.25
2M	10.03	4.27
2N	9.78	4.26
2O	10.02	4.09
2P	9.87	4.17
2Q	9.42	4.28
2R	10.09	4.19
Average	**9.889**	**4.361**