

e-Channel

Performance Measures for Online Programs

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Report

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Executive Summary

This report provides an overview of best practices for performance measures for online programs. While the initial focus of this report was e-Channel delivery agencies, the pandemic has resulted in many other service delivery agencies across the province delivering service remotely. The report, therefore, may have wider application than originally intended.

Although a funder defined performance management system is in place for literacy and basic skills service delivery agencies, including e-Channel, and the measures reported on provide valuable information for the service delivery agency, they do not cover the breadth of evaluation information that could be available if performance measures specific to online programming are developed.

Different types of performance measures are defined in this report. Important categories of performance measures specific to online learning are expanded with best practices for integration. In addition, steps for developing performance measures are outlined.

Using a variety of different types of assessment in online programs provides additional evidence that a learner is gaining the skills and knowledge required to move along their identified goal path. Organizations offering online courses must be able to develop and use performance measures that take into consideration learners that may not have the digital competence to access additional software or login to separate platforms.

Four broad categories describe the most suitable performance measures for evaluating online programs: engagement measures, learning experience measures, assessment measures, and outcomes. Developing and implementing performance measures across the four categories could help all organizations delivering online programs know if the content being delivered meets the needs of the learners, make decisions on how to revise programming to improve learner engagement and experience, increase learner outcomes, improve internal efficiencies, and provide measured evidence of program value for stakeholders.

Introduction

In 2020-2021 Contact North | Contact Nord (Contact North) was funded to research and prepare a report outlining best practices for performance measures for online learning. This report provides a brief e-Channel overview and a review of best practices for performance measures in online programs. When this research was initially planned in early 2020, the primary purpose was to address the needs of the current e-Channel service providers. With the spread of the pandemic and subsequent increased scale of remote LBS delivery across the province to meet the needs of learners, the research may now have wider application.

The views expressed in this report are the views of Contact North and do not necessarily reflect those of the province. The Government of Ontario is in no way bound by any recommendations contained in this document.

e-Channel Background

e-Channel was originally initiated through Ministry of Training Colleges and Universities' (now the Ministry of Labour, Training and Skills Development) project funding. Organizations were funded to develop online Literacy and Basic Skills (LBS) courses that met the specific needs of the learners in the sector or cultural stream they supported or were affiliated with. Eventually, agencies were identified and funded as e-Channel service delivery organizations. The current structure continues to provide one e-Channel organization to focus on meeting the needs of a specific sector or stream's learners, with Contact North being the e-Channel support organization.

There are currently 5 e-Channel LBS service delivery organizations funded by Employment Ontario. The e-Channel delivery organizations are listed below by organizational name followed by program name:

- Avon Maitland District School Board Centres for Employment and Learning; the LearningHUB (the LearningHUB)
- Sioux-Hudson Literacy Council; Good Learning Anywhere (GLA)
- College Sector Committee for Academic Upgrading; ACE Distance Delivery (ACE)
- Coalition ontarienne de formation des adultes (COFA); Le service de formation à distance pour adultes Programme F@D (F@D)
- George Brown College; Deaf Learn Now (DLN)

Performance Measures for Online Programs

What are Performance Measures?

There isn't a single standard definition of the term "performance measure". The term performance measure is used interchangeably with many other terms including performance, metric, key performance indicator (KPI), core indicator, and benchmark.

Stacey Barr, a performance management specialist, provides the following definition: *"A performance measure is a comparison or quantification that provides objective evidence of the degree to which a performance result is occurring over time."*

Why Develop Performance Measures?

Literacy and basic skills service delivery agencies, including e-Channel, are funded with the expectation of meeting a minimum standard for the defined performance management dimensions of effectiveness, customer service, and efficiency. The five performance measures reported on are:

- Suitability
- Learner progress
- Customer satisfaction
- Service coordination
- Number of learners served

While the measures reported on provide valuable information for the service delivery agency, they do not cover the breadth of evaluation information that could be available if performance measures specific to online programming are developed. Measures could also be developed from the perspective of collecting the data in a completely digital environment. The design of some current measures, which are more conducive to face-to-face delivery, make the data collection challenging for e-Channel organizations.

Additional performance measures could help organizations validate current good practice as well as provide informed data to continuously improve programming. The information performance measures provide ensure an organization knows whether the online program they are delivering is doing what is was intended to do. If performance

measures aren't in place, the value and impact of the program can't be measured properly. Performance measures can help an organization:

- Know if the content being developed and delivered meets the needs of the learners
- Review, revise, and fine tune programming to improve learner engagement and experience
- Increase learner outcomes
- Improve internal efficiencies (e.g. use of staff time and resources)
- Provide evidence to stakeholders regarding the value of the program (e.g. funders, referral partners)

Different Types of Performance Measures and Indicators

Performance measures are usually broadly defined as quantitative or qualitative.

Quantitative Measures

Quantitative measures are the simplest to understand and measure a value or number. Examples might include time or money. Quantitative measures can be used for statistical analysis.

Qualitative Measures

Qualitative measures are not numerical. Qualitative measures describe qualities and may include opinions, properties, comparisons, or traits.

Although measures are either quantitative or qualitative, they can be further defined into many different types of indicators that may be applied to online programs. Using a variety of performance measures can provide more robust data and support a more well-rounded approach to program improvement. Some of the most common types of indicators are defined below.

Input Indicators

Input indicators are used to measure resources used during a process or project. Examples might include staff time or equipment needed. Input indicators can be useful for tracking resource efficiency in projects such as the development of a new online course (McCluney).

Process Indicators

Process indicators are used specifically to gauge the efficiency of a process and facilitate helpful changes. For example, learner support tickets related to technical issues in accessing or participating in an online course. The number of tickets opened, the number of tickets resolved, and the average resolution time provide information on the efficacy of learner support. The data can be used to identify changes that need to take place in the process and improve performance (McCluney).

Output Indicators

Output indicators measure the success or failure of a process or project and are one of the most used indicators. An example in online learning is the number of learners that successfully complete a course (McCluney).

Directional Indicators

Directional indicators evaluate specific trends within an organization. Where are the metrics moving? Are they improving, declining, or maintaining? For example, the number of learners accessing service in a blended model. Ideally, an organization would want to see an increase in the number of learners accessing service in a blended model. Directional indicators can be used to evaluate the organization's position relative to other similar organizations (McCluney).

Actionable Indicators

Actionable indicators measure and reflect an organization's commitment and effectiveness in implementing changes. These metrics are used to determine how well an organization can enact their desired changes within specified timeframes (McCluney).

Performance Measures Specific to Online Learning

Four categories of key performance measures specific to online learning are engagement measures, experience measures, assessment measures, and outcome measures.

Engagement measures are the most common metrics used in the evaluation of online learning. The following questions can support the development of engagement measures (Andriotis):

1. How long did it take the learners to complete the course?

2. Are all the learners who enroll in the course completing the course?
3. If learners aren't completing the course, at what point are they dropping off?
4. Are there particular activities within the course that are taking learners too long to complete or that learners are not completing at all?

Engagement metrics are primarily quantitative and are easy to track either manually or electronically. If an organization is using a learning management system, the data may be tracked automatically. If the organization has access to the data or puts a process in place to collect it, it can be used to form the basis of performance measures for learner engagement.

If learners are taking too long to complete the course, is it an indication that the content is too long or too hard? This information can inform how long a course should be. If learners aren't completing the course, what is causing them to drop out? What measures can be put in place to find out? What communications are put in place when there are signs a learner may drop off? Does the material match the goals of the learners? Completion rates are typically an indicator of the learners' engagement and can signal an issue with the content or the delivery method (Memari). If learners drop off at a certain point in the course, what is causing this drop-off? Is there a problem with the flow or design of the course? If learners aren't completing certain activities, are they too challenging, do learners require additional supports?

In determining the cause of engagement issues, qualitative data from learners will likely need to be collected. Asking learners why they didn't complete a course or an activity within the course gives the organization the additional information it needs to make improvements.

Learning experience measures are also critical for evaluation in online programs. Surveys and feedback tools can be used to rate a variety of elements such as (Adriotis):

- quality of learning materials and content
- the relevance of the training
- quality of facilitation in a synchronous course
- ease of navigation through the course
- appropriateness of assessments
- quality of feedback
- overall experience

Currently, organizations report on customer satisfaction by having learners answer the following question at exit: “On a scale of 1 to 5, how likely are you to recommend the LBS Program to someone looking for similar services?” This implicitly speaks to overall experience if you assume that recommending someone to the program means your experience was good. Additional customer satisfaction questions are asked and reported on but do not count towards performance management.

Assessment measures provide information on how well learners are understanding the content and how effective the training is. If learners are not passing assessments or have low scores it could indicate the content is too hard to understand or the delivery is not clear (Memari). Assessment methods help the instructor answer the questions “How do I know the required learning has taken place? And what do I need to change in the course to support learners” (Cornell). There are two main categories of assessment: summative and formative.

Summative assessments are usually tests, exams, or standardized tools to measure performance. They are often integrated at the end of a module or end of a course with a value or grade assigned. Formative assessments are used to measure learner progress on an ongoing basis. Feedback from formative assessment is meant to provide input and feedback on relative performance and informs the next steps in learning (Cornell).

Currently organizations report on learner progress but only as it relates to the completion of the Literacy and Basic Skills standardized Milestones assessments.

There has been a shift in education towards increased emphasis on formative assessment where the focus is on assessment for learning instead of the assessment of learning (Goble). Frequent formative assessments using a variety of different methods to address different learning needs and styles help identify the learners’ level of understanding and can also help inform the evaluation of instructional practices (Goble).

Using a variety of different types of assessment in online programs provides additional evidence that a learner is gaining the skills and knowledge required to move along their identified goal path. The standard learner plan document used in LBS records milestones and learning activities but does not capture information about additional assessments that take place during the learning.

Assessment Example in Online Programs

Type of Assessment	Best Practices
<i>Peer Assessment</i>	<ul style="list-style-type: none"> • Provide exemplars of feedback that is specific, constructive, and detailed. • Partner learners carefully and only if they are comfortable doing so. • Make sure peer feedback is in written form so that you can access it and learners commit to it. • Use the feedback itself as a formative assessment of the learner providing that feedback. If they struggle to articulate their thoughts or identify significant aspects of a peer's work, then they are likely to have their own gaps in understanding. <p>(Best)</p>

Type of Assessment	Best Practices
<i>Independent Projects</i>	<ul style="list-style-type: none"> • Use real world problems linked to the course content • Scaffold each section of the task (e.g. brainstorming, researching, creating) with clear a clear model. • Set aside plenty of time. Project-based learning requires adequate time, so learners aren't rushed • Use this as an opportunity to teach learners web research skills: searching, finding credible sources, and referencing. • Schedule regular check-ins where learners provide a progress update but step out of the way to allow for independent learning. • Set clear submission requirements: deadline, file type, and destination. <p>(Best)</p>

Type of Assessment	Best Practices
<i>Self-Assessments</i>	<ul style="list-style-type: none"> • Ease learners into the process of self-assessment with a simple Google Forms survey or questionnaire. Extend later into written reflections or the use of a self-assessment rubric. • Learners could record verbal statements or include reflective captions as part of a portfolio. • Productive self-assessment takes time to master. Make it a regular activity. • Model the language and self-questioning used to generate productive reflection. • Use self-assessments to inform one-on-one discussion with a learner. • Keep a record of learner self-assessments. These can be used to help learners chart their own progress. • Scaffold the process. Provide a structured resource with prompts if learners are writing an extended reflection. <p>(Best)</p>

Type of Assessment	Best Practices
<i>Journals or Reflections</i>	<ul style="list-style-type: none"> • Online learning journals can be as simple as a Word document. Free blogging platforms (e.g. Live Journal or Blogger), video diaries or voice recordings for greater interactivity and engagement can also be used • Learning journals can be freeform and might reflect on specific aspects of their progress. For example: <ul style="list-style-type: none"> ○ Challenge journals: Reflect on any challenges experienced during the week's learning and plan strategies for improvement. ○ Success journals: Reflect on the high points of the week's learning. New concepts understood, interesting pieces of knowledge gained, and problems overcome. ○ Visual diaries: Learners can use a simple digital illustrator like Paint or Inkscape to draw or doodle something inspired by the week's learning. ○ Question journals: Learners write three questions each day to inform future learning or independent inquiry. • Use a platform where learning journals are visible to only the instructor if learners are reluctant to share these with peers. • Use journal entries to inform future learning activities for individuals. • Model the reflection process for journal writing. For example-self-questioning ("What interested me most?", "What part did I find hardest?") <p>(Best)</p>

Type of Assessment	Best Practices
<i>Online Portfolios</i>	<ul style="list-style-type: none"> • Use your LMS to set up a designated portfolio space for each learner. • Alternatively, you could use cloud software such as OneNote or Google Classroom. • The ongoing nature of a portfolio means that it can be used as both a formative and summative assessment. You can check learner progress at any time by accessing their portfolio work and formally assess the final product at the conclusion of a learning unit. • Set a goal for the portfolios. What specific learning do you want to see displayed? • Decide whether portfolios are to demonstrate mastery or progress. This will determine what pieces of work should be included. • Have learners include set pieces of work, but also let them choose some of their own. This will give them ownership over their portfolio and prompt self-reflection. • Encourage reflection as part of the portfolio. For example, each work piece could be accompanied by a caption where the learner explains why they chose to include it. <p>(Best)</p>

Type of Assessment	Best Practices
<i>Exit Tickets</i>	<ul style="list-style-type: none"> • Exit tickets should be short, concise, and engage learners in a review of the skills, concepts, and experiences explored during the lesson • Integrate a variety of digital tools to collect this data from learners • Google forms- set up exit tickets with varying question types and submit requests to participate via email or sharable link. Since all responses will go to one spreadsheet the instructor can review every unique exit ticket on the same document. • Hand signals- using hand signals to quickly ‘take the temperature’ of the session in a synchronous class using built in tools or actual hand signals if cameras are on. Even a basic ‘thumbs up if you get it, thumbs sideways if you’re halfway there, and thumbs down if you’re lost’ provides instant ‘formative assessment data’ • Use Kahoot to integrate a game-based assessment • Ask learner to post a 280-character summary of the lesson on Twitter with a hashtag (but take privacy issues into consideration) • Use a simple online poll (e.g. Poll Everywhere) • Use Flipgrid to have learners create short video summaries of the content (e.g. 3 things I remember, 2 questions I have, 1 thing I found interesting) <p>(Schaaf)</p>

Learning outcome measures describe what the learners do with what they learned in the course. This type of measure describes how the learner applies the learning to create a change in some way outside of the course (Weiss).

- Did the learner achieve their goal?
- Did the experience contribute in some way to their personal or professional life?
- Did they get a promotion, a job or start a new project?

Applying the Kirkpatrick Model

The Kirkpatrick model provides an alternative framework for developing performance measures for learning. The model was originally developed in 1954 by Dr. Donald Kirkpatrick for the evaluation of training in a workplace setting. Dr. Jim Kirkpatrick

carried on his work and revised the model in 2010. In theory, the results of a training program should be identified before the program itself is developed as all four levels of the model should be considered when a program is designed (Kirkpatrick Partners).

The model is comprised of four levels (Kirkpatrick Partners):

- Level 1: Reaction
- Level 2: Learning
- Level 3: Behaviour
- Level 4: Results

Level	Measures
Level 1: Reaction The degree to which learners find the training favourable, engaging, and relevant	<ul style="list-style-type: none"> • Customer Satisfaction (I was satisfied with the training I received) • Engagement (I was involved and contributed to the learning experience) • Relevance (I can apply the training I received when I leave the program – e.g., at work)
Level 2: Learning The degree to which the learners acquired the intended knowledge, skills, attitude, and confidence from the training	<ul style="list-style-type: none"> • Knowledge (I know it) • Skill (I can do it) • Attitude (I believe it will be worthwhile in my next step) • Confidence (I think I can do it outside the program- e.g. on the job)
Level 3: Behaviour The degree to which the learners apply what they learned when they move on to their next step	<ul style="list-style-type: none"> • I use what I learned • I have changed the way I do things because of what I learned • I can show others what I learned • Others notice that I am applying what I learned
Level 4: Results The degree to which specific outcomes occur because of the training	Results are the most difficult to articulate and measure. They involve how the training impacts those other than the participant such as a team being able to reach a goal or a skill gap being addressed. They occur because of the behaviours put in place by the learner in Level 3.

The performance measures specific to online programs, discussed earlier, can be aligned with the Kirkpatrick model. Engagement measures and learning experience

measures align with level 1. Assessment measures support Level 2 of the model. The learning outcomes measures match up with Level 3. Level 4 typically occurs after a learner leaves a program. Post program follow-ups could provide a mechanism to collect this data.

Steps to Consider When Developing Performance Measures

Following the suggested steps when developing performance measures can help the organization stay focused and measure the most important things (Barr):

1. Make sure you understand what a performance measure is. Create a standard definition for your organization.
2. If possible, identify and define measures before developing the online course or program.
3. If there are performance measures currently in place, review them to decide whether to keep, revise or discard.
4. Use a defined process to develop performance measures.
 - Choose what to measure by deciding what is most important for your organization
 - Identify goals that are measurable and then rephrase them as results or outcomes instead of actions. Answer the question: What is the difference you are trying to make?
 - Consider factors such as how much control or influence you have over achieving the desired result and whether there may be unintended negative consequences of measuring the result. This is a great chance to change our mind about what's most worth measuring.
 - Name your measure – keep it short, specific and ensure the description matches what you are measuring.
5. Create organizational support for the measures before they are implemented.
 - Use a team approach to develop measures
 - Document how measures were developed so others understand it and you have a process for the future
 - Get input from staff and stakeholders on your drafts

Conclusion

Although there is a performance management system in place, the measures are limited in scope and do not provide a significant amount of information specific to online programming.

Organizations offering online courses must be able to develop and use performance measures that take into consideration learners that may not have the digital competence to access additional software or login to separate platforms. Four broad categories describe the most suitable performance measures for evaluating online programs: engagement measures, learning experience measures, assessment measures, and outcomes. Developing and implementing performance measures across the four categories could help all organizations delivering online programs know if the content being delivered meets the needs of the learners, make decisions on how to revise programming to improve learner engagement and experience, increase learner outcomes, improve internal efficiencies, and provide measured evidence of program value for stakeholders.

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