Strategies for assessing the effectiveness of an online education program

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Abstract. There are a number of useful approaches that may be used to carry out a more superficial examination of skill progress. Despite the fact that assessment is a huge and rigorous topic of study as well as a possible career opportunity in and of itself, there are a number of these methods. You may want to analyze the degree of skill acquisition where training is the program input, skill attainment is a short-term consequence, and the training receivers are only a transient benefit group. This article investigates the strategies for evaluating online training efficiency by means of Kirkpatrick's approach. Methods, challenges and techniques are given in more details.

1 Introduction

When a certain form of training has been created and made accessible to the appropriate group of people, it should come as no surprise that the organization that is providing financial support needs to also be responsible for the provision of an appropriate and verifiable type of evaluation system for the training, in order for its usefulness to be evaluated [1]. A program that could be done online and is meant to train college students for jobs that are open on the job market will be evaluated using a certain evaluation method that will be proposed and debated as part of this project. Evaluating the success of the program requires meticulous planning. Kirkpatrick claims that standard methods of assessment may be used for e-learning; however, we must take into account the reality that e-learning takes place digitally, which necessitates a unique strategy [2]. The outcomes will demonstrate its usefulness and demonstrate the value of the resources spent on it. A participant's response to the training, a participant's learning from the training, a participant's behavior transformation as a training outcome, and a participant's consequent influence on the organization as a result of the participant's behavior change are all possible consequences that can be measured using Kirkpatrick's model. A participant's response to the training, a participant's learning from the training, a participant's behavior transformation as a training outcome, and a participant's consequent influence on the organization. Practitioners may utilize Kirkpatrick's model to assess not just the pleasure of participants in a training program but also the program's effectiveness, the degree to which

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trainees could use what they learned on the job, and the influence on the company as a whole. Since the advent of online education in the last several decades, many have wondered how courses and programs should be evaluated. This change in evaluation has been glacially gradual but has had far-reaching consequences [10]. According to the "conventional view of assessment," the test's principal function is to determine whether a student has grasped a body of information, nonetheless, "sees evaluation as actions geared mainly to facilitate student learning" is how modern scholars characterize the purpose of evaluation. What opportunities for improvement in assessment procedures arise as a result of the augmentation of learning provided by technology?

• More diversity and originality in the way that evaluations are designed;

• An increase in the level of involvement shown by students, for instance via the use of interactive formative exams with individualized feedback;

• Flexibility in terms of the time and location of evaluations;

• The capturing of broader abilities and traits that are difficult to evaluate using traditional methods, such as by using simulations, electronic portfolios, and interactive games;

• Procedures for the submission, scoring, moderation, and storage of data that are as effective as possible;

• Precise and reliable outcomes, with options to integrate human - computer evaluation;

• Increasing the number of possibilities for students to take action based on feedback, such as by reflecting on their work in online portfolios;

• Novel techniques centered on the utilization of creative media as well as virtual peer and self-assessment; Valid, recent, and easily available data on the efficacy of various pedagogical approaches.

2 Experimental part

We would use levels 1 and 2 of Kirkpatrick's model along with level 3 to evaluate how effective this kind of online training is because evaluating level 4 (outcome) usually takes more time and money because it is a long-term process. Let's look at levels 1, 2, and 3 of Kirkpatrick's model to see if this kind of online training works. There is a big difference between the training that was supposed to be transferred, and the training that actually happens, like how much of what was learned in the classroom is used at work [3]. As a direct result of this, it is considered that it is, in fact, difficult to provide an appropriate evaluation of level 4 (outcome) by only evaluating academic accomplishment. In light of this, we believe, it's preferable to leave the evaluation of quality at level 4 to more long-term expectations and a little longer monitoring. Even though we would like to use the Kirkpatrick method of evaluation, we also want to use some ideas from the Kaufman method.

We would implement the first step of Kaufman's evaluation technique in order to be certain that the investment of time and resources into this training will provide the results that are sought. When compared to Kirkpatrick's Four Levels, employing Kaufman's Five Levels is preferable for a number of reasons, the most important of which being Step 1a. You may determine your return on investment (ROI) by comparing the benefits gained from training to the amount of money put into that training. One of the many advantages of using the Return on Investment (ROI) is that it can be a very persuasive tool when requesting additional resources for training. This is just one of the many advantages of utilizing the ROI.

According to Kirkpatrick, his model has a systematic framework that can be used for assessing training, and the four steps of his methodology make it feasible for this to happen. Kirkpatrick is of the belief that each level should be given due consideration and should not

be ignored in an endeavor to forecast more significant outcomes that will become apparent in the future (for instance, Level 4: the consequences and repercussions for the company) [2]. Because the data needed for the evaluation are not gathered at each of the levels, in his opinion, the evaluator is missing out on essential information. For instance, if an evaluator were unable to collect data relevant to Level 2 (that is, the participants' learning), then the evaluator would be constrained in their interpretation of the findings that were null at Level 3. (that is, the amount to which participants utilized what they learned in training on the job). Either the participants learned nothing at all throughout the training, or they did learn something, but the skills related to this learning did not cross over to the job setting. Either way, the training was ineffective. Either outcome is a distinct possibility.

Before trying to implement the techniques of evaluation that were suggested, there are a few concerns and factors that need to be thought through first. This is because traditional training programs and online learning can be very different, and the mode of instruction can also affect the results [7]. When assessing the efficacy of an online learning program, it is more likely, that the following list of the most important aspects should be taken into consideration:

• The aesthetic appeal of a virtual learning program is essential for attracting the attention of the target demographic, which allows for an accurate assessment of the extent to which individuals are participating in the training.

• Adaptability to different cultural contexts, irrespective of whether or not the students come from a similar ethnic or cultural background.

• It is the responsibility of the teachers to inspire a thirst for knowledge in their pupils since online classes need a higher level of self-discipline and dedication than traditional ones do. Problems with motivation may be traced to a variety of causes, but in most cases, the problem can be traced back to a lack of participation.

• The number of pupils, which will help assess whether or not there are too numerous for online training.

• How readily available are the resources and the information that are going to be covered in training?

• When do you think we may expect the final result, and how long do you think it will take?

• Do pupils have the adaptability necessary to get value from this kind of learning delivered online?

• Which party, students, instructors, or administrators, bears the ultimate responsibility for the outcome?

The system developed by Kirkpatrick, which uses the four levels as criteria, has become the most well-known and sought-after method for measuring the effectiveness of corporate training programs. The Kirkpatrick model has been the industry standard for evaluating the effectiveness of employee education and development for close to 30 years. It is clear that the foresight shown by Kirkpatrick has led to improvements in the manner in which training evaluations are often carried out [2].

Level 1 – Evaluation of reaction. While the training is being provided, it is useful to have a framework to evaluate how the participants are reacting to what is being taught. One observation framework or feedback form that inquires about the participant's degree of engagement and the training's relevance to the participant's life is an example of a useful tool. Because the training is delivered online, the evaluation tools may also be made accessible in this format. This makes it easy to measure the students' first reactions to the content by using techniques such as instant messaging for target groups and online polling at the basic level [2].

Level 2 – Evaluation of learning. At this stage, the goal is to ascertain whether or not the abilities have been learned by the individual. Is it possible for the participant to get the required knowledge and experience? Is there any indication that both their self-confidence

and their attitude toward the task where they put their talents to use have increased? Specifically, is there any evidence that their self-confidence has increased? The most accurate approach for evaluating one's degree of competence at this level is to conduct an examination of one's existing talents. In order to make things as easy as it is physically possible for humans to make them, it is beneficial to have an uncomplicated inspection that can be carried out both before and after the training. It is expected that the distinctions will provide evidence that the requisite skills have been acquired. In contrast to traditional trainings, evaluating level 2 in e-learning is a straightforward process thanks to web-based technology. For example, we can utilize online quizzes or surveys to determine the degree to which the target audience has assimilated the information being presented.

Level 3 – Evaluation of behavior. At this level, attention is placed on the execution of skills, which is a key component in deciding whether or not the desired outcome of the training has been obtained. The process of evaluating training consists of a number of phases, one of the most important of which is the observation of changes in behavior. These alterations need to provide the impression that not only has the skill been learned, but that it is also being used. When carrying out certain guided observation-based assessments of practice, it is feasible that other team members or program implementers may be required to assist in the process. For level 3 assessments, we suggest utilizing summative assessment rather than formative assessment, which is based on ad hoc observations. Formative assessment depends on informal observations. As a consequence of this, it would be more beneficial for us to personally consult with other employees or, to put it another way, administrators who have been participating in the program, and it would be better to take their opinions into account [2]. As a result, it would be more beneficial for us to personally consult with other employees or, to put it another way, administrators who have been participating in the program, and to take their opinions into account. In addition, in order to protect the secrecy of the replies that are provided by trainees, surveys and questionnaires may be given out utilizing an online format such as Google Docs.

3 Results and discussion

The methodology of data collecting. To get things started, let's talk about how important it is to gather data. The process of answering questions, expressing research subjects, putting hypotheses to the test, and evaluating the findings is referred to as "data collecting," and the word "data collection" refers to the mechanism by which information is obtained and assessed [6]. It is an excellent instrument for acquiring demographic facts about the audience that you have in mind. It enables you to see recurring patterns in the manner in which the perspectives and behaviors of individuals change over time or in reaction to a variety of stimuli. It makes better judgements possible for individuals and makes it simpler for them to make such judgments. In this class, open-ended polls and quizzes will be used to collect quantitative data from participants, with the results of those polls and quizzes being used for further analysis. Open-ended surveys and questionnaires are the opposite of their transparent counterparts, which are known as closed-ended. Closed-ended questions offer respondents a choice between a set of predetermined response options, which they are required to pick from. On the other hand, open-ended surveys give respondents a great deal more leeway and versatility in the way that they provide their responses to the questions. This is the primary distinction between the two types of questions.

Sampling Techniques. In order to acquire trustworthy evidence for evaluation, it is furthermore essential to sample in the appropriate manner. To put it in its most basic form, sampling is the process that scientists use in order to choose which subset of data to investigate. It is of the highest significance to choose a sample that is reflective of the whole. The word "population" refers to the whole set of things that are being sampled when

it is used in the context of sampling theory. It is reasonable to expect that these modules have certain fundamental characteristics in common. An example of a potential unit may be a person, a scenario (such as a company or organization), or a piece of data like a customer transaction. All of these are instances of possible units. In order to guarantee that everyone has an equal chance, let's use a selection method called randomization. The use of random sampling has the potential to be a very reliable form of sampling in addition to being highly fair. In order to guarantee that everyone has an equal chance, we would use a selection method called randomization. The use of random sampling has the potential to be a very reliable form of sampling in addition to being highly fair [5]. The techniques for evaluating online trainings that have been discussed here are some of the most likely successful evaluation techniques that can be used to analyze online trainings. Additionally, the elements that have been discussed here are some of the elements that should be considered when evaluating an online training.

Students are motivated to dig deeper into their studies when they are presented with authentic evaluations, which is particularly important in mixed and online learning environments, offer the essential alignment for teachers to assess students' progress, and provide institutions the data they need to stave off outside forces demanding they show how student learning has improved. Authentic assessments, such as the model of evaluation proposed by Kirkpatrick, are intended to encourage students to take an active role in their own education by making use of real-world scenarios [11], requires students to draw connections and establish ties between their existing skills and knowledge, as well as permitting a variety of approaches to problems and viewpoints, which are all viable options. In recent years, the concept of genuine evaluation using Kirkpatrick's model of assessment in online education has been given a larger amount of weight in contemporary discussions around higher education. Each stage of this paradigm requires a shift toward more genuine assessment methodologies, which are intended to improve the amount of involvement that learners have in the overall learning process, while also laying the groundwork for students to acquire higher-order cognitive abilities that are in line with the requirements set out by both students and employers [12]. Considering that evaluation is at the core of the educational experience, the methods of assessment will need to inspire students to participate with their complete selves in activities that have both purpose and relevance to get them ready for a life filled with work and education in the 21st century.

4 Conclusion

The results obtained from the survey, recorded verbal feedback and mock interviews, as well as knowledge tests, will be provided to primary stakeholders (that is, the managing personnel of the program and the Provost's Office) in the form of an assessment report with comprehensive descriptive statistics and model techniques. This will take place when it comes to the delivery of the data that has been collected. Because of the lack of interest from secondary and tertiary stakeholders, this data is intended for internal use only by primary stakeholders. Additionally, promotional materials aimed towards secondary and tertiary stakeholders will be crafted using the gathered data as well. All data, including recordings of verbal comments and the outcomes of any mock interviews, should be handed over to the course teacher in person so as not to embarrass anybody in the presence of their counterparts. Every educator must review the data collected during class observations, familiarize themselves with the findings, and then sign off on the final report before it can be submitted.

References

1. S. Neendoor, Training Evaluation – 5 Best Ways to Evaluate Training Effectiveness and Impact (2021)
2. D. L. Kirkpatrick, J. D. Kirkpatrick, Evaluation of Training Programs. Third Edition. Berrett-Koehler Publishers, Inc (2006)
3. L. M. Broad, Overview of Transfer of Training: From Learning to Performance (2008)
4. M. Berriet-Solliec, P. Labarthe, C. Laurent, Goals of evaluation and types of evidence. Evaluation, **20**, 195-213 (2014) 10.1177/1356389014529836
5. N. Andriotis, 5 Points to Consider During Your Online Course Evaluation (2018)
6. N. Andriotis, How to evaluate a training program: The definitive guide to techniques & tools (2019)
7. W. Horton, Evaluating e-Learning, VNU Business Median(2005)
8. G. Hernez-Broome, L. A. Boyce, Advancing Executive Coaching Setting the Course for Successful Leadership Coaching, Copyright, by John Wiley & Sons, Inc. All rights reserved (2011)
9. https://www.15five.com/blog/5-employee-questions/ (last accessed 21.05.2023)
10. I. E. Allen, J. Seaman, Grade level: Tracking online education in the United States. Babson Survey Research Group and Quahog Research Group, LLC (2015)
11. S. Bowness, Tracking the learning journey through e-portfolios (2014)
12. K. Ciampa, T. Gallagher, Blogging to enhance in-service teachers' professional learning and development during collaborative inquiry (2015)