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talking point

Going undercover: Monitoring and measuring the effectiveness of online learning

by Alan Nelson

I love to spy on people. In my old life as a publisher, I would publish a book and watch it sell (or not). If we sold lots, then we would likely as not invest in new enhanced editions. I wouldn't know whether people liked the book or found it useful. I just knew that they had bought a copy. With online learning, I can check to see whether they ever take it down from the shelf, and watch how they use it.

There are two reasons for my covert behaviour:

- An enthusiasm for making what we do better
- A desire to check whether we have achieved our objectives

In both areas the key to success is taking a flexible approach. Different types of content require a different approach, as do different organisational objectives and we should apply different measurement criteria in each case. But before you can decide what approach you should take you need to understand what is possible.

What can we measure?

We can and do measure pretty much everything. We do this in a range of ways

1. Usage tracking

A good online learning system should track what learners do. You can see every screen they have visited and how long they spent there. You know what order they did things in and over how many sessions. By categorising the activities in our courses we can even tell you what an individual's learning style preferences are on the basis of what sort of activity they tend to complete.

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3. Informal assessment

People enjoy doing quizzes and tests. We use informal assessment both to reinforce learning and to help learners to monitor their own progress. They also help us to monitor progress. We allow learners to complete informal assessments as many times as they like and, by comparing their scores the first time they took the tests with the most recent, we get a crude measure of the progress they have made.

2. Training needs assessments

We use assessments at the start of courses as a form of mini training needs analysis. They raise learners' awareness of their needs and help them to plan their learning. Of course they help us tool..

When we design a course we start by trying to identify the learning outcomes most relevant to a particular group of learners. Monitoring the results of an opening assessment tells us whether we have got this right and gives us an early warning if we have got the emphasis wrong.

4. Formal assessment

Where our courses are designed to help a group of learners to acquire knowledge, a formal assessment is often a key part. The results of the assessment can be used to produce league tables, to compare learners' scores with those of their colleagues, to analyse the range of results from a particular group. Comparing end of course results with those from an initial assessment highlights the progress they have made as a direct result of completing the course.

5. Qualitative measurement

Many of our clients and partners find the qualitative side of what we do the most valuable. Learners like completing our scenario based activities because in return for their contribution we share with them what other learners have said. It makes them feel part of a community and, much as often happens in the classroom, we are frequently told how much they enjoyed the opportunity to learn from the other participants.

And it doesn't just help the learner. Managers use the feature to understand how members of their team might react to various situations, and to guide their coaching. Trainers use it to tailor their face-to-face courses, adapting to the apparent strengths of participants and using their answers to enrich face-to-face discussion.

6. Questionnaires

Finally, we can measure the impact of a learning resource by asking learners. We can ask them what they are looking for as they register and then later we can ask them whether they found it. We can contact them at a suitable time afterwards to ask whether it has made any difference to their behaviour and what impact that has had on their organisation. In short we can do everything Kirkpatrick would have us do.

Level 1: Reaction – how do learners respond to the course?

Level 2: Learning – what did they learn?

Level 3: Transfer – what changes do they make when they return to their job?

Level 4: Results – what are the business outcomes of them doing their jobs differently?

We can gather information at all four levels using the survey tools incorporated within the learning environment and analyse them quickly and cheaply.

Deciding on your approach

In practice a combination of several of the techniques described above can be the most powerful. In order to select an appropriate approach, you'll need to answer some questions about what you are trying to achieve.

1. What are you trying to change?

We think of this in terms of changes in attitudes, skills and knowledge. Where we see a lot of learning outcomes that focus on an attitudinal change, there is little point in trying to measure results with an assessment (Question 1: Have you changed your attitude?). More useful is a series of scenarios where we ask people for their views on the best way to tackle a tricky situation, or a set of exercises where we get people to focus on the consequences of not changing or the practical barriers to implementing an idea. Reviewing the way people interact with this type of material will tell you whether they are taking the ideas on board. But when we see knowledge based learning outcomes we know that an assessment will be more useful.

2. Why are you trying to change it?

Different projects can be motivated by very different goals:

- Our sales force development work is focused on driving sales growth by making sales people more effective
- Compliance projects are motivated not by the need to avoid the consequences of not complying

These differences fundamentally affect the way in which we monitor learners' activity.

3. What sort of learning resource are you creating

We distinguish between two types of learning: focused learning, where there is a set curriculum and you can normally specify a common starting point and a fixed end point; and diffused learning, which embraces the idea that not all learners are starting from the same place; they have different experiences, skills and knowledge. Moreover, they may all have different end points that are right for them. A common approach to assessment would clearly be inappropriate.

4. Do you want to measure inputs or outcomes?

Do you want to measure the inputs (what the learner does) or the outcomes (what the learner learns)? It might appear that the outcomes approach is always better, but in many cases it is not appropriate or even possible.

A debate continues within professional associations as to whether records of CPD should detail what members have done or what they have learnt. Two very similar partners of ours have come to different conclusions:

- CPA Ireland has a system of mandatory CPD for their accountant members which involves recording all the things you have done – measuring inputs
- The Institute of Chartered Accountants in Ireland are introducing a system whereby members record what they have learnt from particular activities – measuring outcomes.

The latter maintains that their approach is better because it focuses on the impact of the CPD on professional competence. CPA Ireland don't disagree but prefer their system on the basis that it is more concrete and easier to record. It also avoids some of the more creative CPD returns. Neither is wrong.

In the compliance work we do, the concern is to ensure that the people who work for an organisation do not do things that will get the company into trouble. Companies who do face-to-face compliance training are likely to track the inputs – the attendance. This demonstrates that they have provided appropriate training so that if anything goes wrong the company will not be liable. But is that enough? We believe that what more often matters is not that you have trained someone but that you can show that they achieved the appropriate standard. A formal assessment then becomes essential and has the added benefit of not wasting the time of those who already understand their responsibilities.

Putting it into action

Figure 1 draws all this together. Plotting the two key decisions – qualitative or quantitative and inputs or outcomes – it lists some of things you can do to measure the effectiveness of online learning.

Box 1: Quantitative input measures

Our original partner for our Accounting and Finance Portfolio was CPA Ireland. They run a mandatory CPD scheme and were keen to offer accessible and flexible options for their members. Their approach to recording CPD is for members to record the activity they have undertaken – an input system. They allocated 90 minutes CPD credit to each of the courses we initially launched.

When we reviewed activity to check how long people were actually taking to work through the material we found that the average was around 75 minutes of active time online. More importantly, by comparing time spent online to screens visited we were able to identify a small number of learners who had visited every screen but taken less than ten minutes to do so, presumably in an attempt to create the impression of having completed the course.

Box 2: Quantitative outcomes measures

We have a partnership with the law firm DLA Piper which was set up to provide compliance training on competition law for their clients and prospects. Competition law is an area where a real change in behaviour is needed – there is some evidence that a cynically organised compliance programme designed only to get the company off the hook, may actually increase the size of any fine imposed should the company fall foul of the regulator.

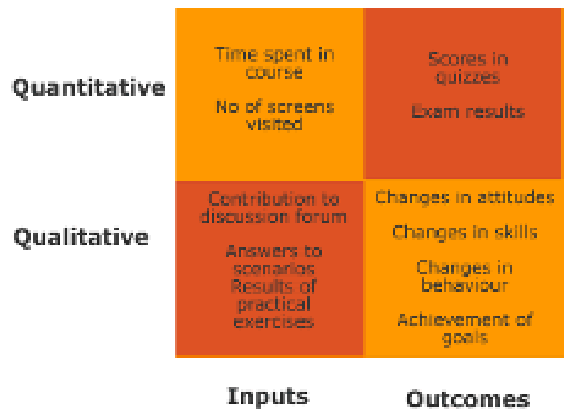

Figure 1: Measurement options

So we test that people fully understand what they need to do and the consequences of not doing so – an outcomes approach.

To do this we have created an assessment. Each learner must pass the assessment and they have two attempts to do so. If they don't pass, they are referred for a one-on-one session with a member of the legal team. In the case of one client – a European pharmaceutical company – we noticed that people were spending widely varying amount of time in the course.

Boxes 1 and 2 offer precise measures. Box 3 is also relatively easy to measure. Box 4 offers the greatest potential insight but is more difficult to measure and you can end up being dependent on what learners say about their experience.

Let's look at some examples of work we have done in each area.

Although the average was close to the 3 hours we predicted, there were some who spent as much as 10 hours and one person who completed their work in less than 10 minutes. When we checked, we found that this person was a member of the in-house legal team in another area. By focusing on testing outcomes we had enabled this person to check and demonstrate their level of knowledge without wasting their time. Had the company taken a more traditional approach and arranged a series of face-to-face briefings, it would have wasted this person's time and at the same time failed to meet the needs of the slower people.

Box 3: Qualitative input measures

For four years now we have been working with the Hodder Murray schools sales team, who sell schoolbooks into secondary schools. We have created a place where they can find out the details about their publications and work through exercises designed to help them think about how they will sell them. It is called the Hodder Armoury.

One measure of success has always been the extent to which the resource is used – we can run reports showing how many people have logged in and how long they spent online – but the Hodder sales managers have always been more interested in the qualitative data. For any learner they can review the extent to which they are contributing their ideas and comments to the discussion forum and they can review their suggested answers to scenario style activities and practical exercises. The managers use these reports to conduct coaching sessions with the members of their regional teams when they visit them in the field.

Although this may seem a less scientific way of measuring the effectiveness of the resource, it has ensured that the Armoury has remained an integral part of their work over the full four years of the project's life.

Box 4: Qualitative outcomes measures

Blackwell Publishing pay a great deal of attention to the way they manage people. We have tailored a range of courses from our Publishing Portfolio to help them with this. We rolled out Conducting Performance and Development Reviews and Recruitment and Selection. In both cases the courses formed part of a blended solution. After working through the online material, participants attended a workshop. The online material introduced the concepts and processes to them and the workshop gave them a chance to practice and to work with a coach.

Blackwells monitor whether people are completing the online work and push them to do so if they are not. However they are more interested in whether people come out the end able to conduct effective reviews and recruit professionally and whether they then go on to put that into practice consistently.

They form a view about competence by the end of the face-to-face session and afterwards a member of the HR team attends the reviews and interviews a participant conducts until they are confident that that person is fully competent. It is hard work but they do consistently achieve an excellent standard in these key tasks.

Combining the boxes

Of course, many courses do not fit neatly into one of the four boxes. A balance of different types of measure is needed to assess effectiveness appropriately. The Institute of Revenues, Rating and Valuation provide a range of online courses for people in local authorities.

They use a range of devices to ensure that they meet their clients' needs: TNAs, tracking records, an online help service, local authority access to the usage records of their learners, quizzes, formal assessments and a small group of super-users all provide feedback on whether their service meets the needs of their customers. And what they are doing is clearly working; 95% of local authorities are now using these resources.

In Summary

Overall, the key is to remember to be flexible. The answers to the questions are not always the same. All of these organisations understand that measurement is important for two reasons:

1. To improve the quality of the learning resources we develop.
2. To assess whether we have achieved the objectives we set out with.

Each of them is able to answer the questions outlined above and each of them has come up with an appropriate answer.

As for me, the proximity of our offices in Vauxhall to the MI5 building has clearly taken its toll – I shall continue my undercover activities.

Alan Nelson is co-founder of Nelson Croom, which he has run for the last seven years. Before setting up Nelson Croom, he was the CEO of Thomson Learning's activities in the UK, Europe, the Middle East and Africa. Alan had spent the last 15 years in educational publishing. He has been at the forefront of the development of learning materials on the web.