L&D
Best Practice Guide

# System Selection

## A method to assist in selecting a computer based system for supporting staff learning and development goals

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Paul Matthews

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## A method to assist in selecting a computer based system for supporting staff learning and development goals

Successfully selecting a computer based system to assist with achieving staff learning and development (L&D) goals is not a simple process, and yet many treat it as such, leading to failed implementations and the inevitable recriminations.

The factors involved are usually complex, and there are often many people involved, each of whom can have their own ideas on what should be happening.

The method we describe here helps break down this complexity into simple steps, and provides a framework and process within which to work so you can make a robust decision that minimises risk.

Following a robust process is a far cry from the risky way that many systems are selected on the basis of supplier reputation, or internal politics, or the fact that a system already enjoys success with your competitors.

This method is generic as the needs of each organisation will be different and unique. We have also simplified the process somewhat compared with the more detailed and rigorous process that would typically be used for larger scale selection processes. We would be happy to consult further on the details of the method, or recommend an independent expert in the field of system selection.

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Following this process does not guarantee a successful selection, but it will mean that you will likely make the best choice you can with the information you have available. In effect, following this process will greatly reduce risk. This method is proven, avoids the pitfalls that organisations often make and has delivered success on scores of projects involving system selection.

## Key points

The method

- is driven by outcomes which give rise to system requirements
- follows good formal decision making practices where the basis of the decision is first agreed, and only then is a decision made
- provides a quantitative analysis of the fit of a system using scores
- is tiered so that only a few systems are examined in detail
- is resistant to factional interest and organisational politics
- provides an audit trail so the decision made can be justified
- supplies a framework and process so those involved know their role and know what happens next
- involves end users

## Outcomes

Your first step will always be outcomes simply because you would not be reading this if there were not already some level of dissatisfaction with the status quo and a desire for things to be different.

The status quo is where you are at present, and your outcome is where you would like to be instead. There is a gap between the two and you have come to the conclusion that some kind of computer based system will help you bridge that gap.

It is likely that you will be looking at a number of inputs into a change process, and a system is just one of them. This means it needs to align with and probably support the other inputs. The inputs together will create change leading to an outcome. The outcome obviously needs to be measurable in some way so that you can assess whether your change programme has been successful.

The steps to design change and create a measurable outcome from a larger vision are not the subject of this paper, but we do have other material which covers this in detail.

## Executive sponsor

Who are the senior people who have the most to gain or lose if the project outcomes are achieved or not?

These are the people who are driving the larger organisational vision, and the success of that vision depends on the

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component parts, of which your change project is one. This is where you must find your executive sponsor. A project without the backing of a senior figure within the organisation has a great handicap, especially when there are squeezes on budgets and resources. You *must* have an executive champion who will fight for the life of the project should this become necessary.

Make sure that your executive sponsor fully understands and agrees with the project outcomes. Document the outcomes, budget, resources required, process and any other relevant information and get this signed off by the executive sponsor. You now have a firm foundation on which to proceed. It is time to start thinking about requirements for the new system.

## Requirements definition

All systems being considered should be systematically compared to the same yardstick, and that must be a list of system requirements. The typical mistake in system selection is to compare packages *with each other*. This usually breaks down in fruitless argument. Instead, use a method which manages the process of comparing them all to the same thing – the yardstick of business requirements.

Given the specific outcomes the system is expected to achieve, what are the features it must have? Answering this question will allow you to compile a Requirements Definition Document (RDD).

Gathering a comprehensive and accurate set of requirements will require the input of many people, including a selection of the eventual end users. Remember that the requirements arise from an understanding of the project outcomes so for anybody to effectively contribute to the requirements gathering process, they must be aware of the greater project and what it is designed to achieve.

You will find that brainstorming with different groups of stakeholders will yield good results and give you a rich array of what people think 'should' be the requirements. A bonus is that it can also start to create a level of buy-in to the project even before implementation has started; provided that the vision and outcomes will generate direct benefits to the recipients of the change.

A word of caution here: you are advocating change, and many people in organisations will seek to maintain the status quo, or will seek to limit change to small incremental steps that won't affect their own areas of responsibility. Henry Ford is famously quoted as saying

> "If I had asked people what they wanted, they would have said a faster horse."

Another way to gather requirements is to look at websites or trials of some of the possible systems in the market place, even ones that you know you won't buy because they are missing some essential feature. In this way you can learn about the range of

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features that are available. You can even invite sales visits to leverage the knowledge and experience of various system suppliers. Remember that at this stage you are *not* evaluating these systems for fit, you are simply learning about the genre of system, and what they generally have to offer. As you come across new features, decide if they are relevant to your outcomes.

Whizzo features and wonderful sounding benefits are all well and good, but you are after results, so always keep focussed on your outcomes and relate any feature or benefit to your outcomes. When you have gathered a large number of requirements from groups and colleagues, you will need to render these down into a manageable list.

So what is a requirement? It might be something like these. . .

- Ability to print any page
- Access must be possible from smart phones
- Content must come from credible sources
- Navigation should be intuitive
- System must be secure
- Content must be hyperlinked

Actually, these are rather woolly requirements as they are stated. They are difficult to measure, but when looking for a L&D system, you will find many of the requirements will be this way. For example, one person's idea of an intuitive interface may differ markedly from another's.

Because of this, you need to add a couple of sentences to each requirement so they are better defined and relevant to your situation.

As you go through the requirements list . . .

- Look for and remove duplication.
- Look for and remove ambiguity. This can be done with colleagues. Ask them to explain in their own words what each requirement means to them, then define it better so it has the 'same' meaning to all who read it.
- Find and remove 'doubles'. By this I mean requirements that refer to more than one thing, and so will be impossible to apply a score to. An example might be 'easy and intuitive to use'. These attributes often go together, but a system could be very counterintuitive, and yet easy to use once you know how. This requirement needs to be split to remove the 'double'.

Anybody picking up the RDD should be able to understand what each requirement means. You will probably find that you are able to further tighten up the requirements when you are doing the weighting process which comes next.

## Weighting the requirements

Depending on the size of the project, you may do this on your own, though we would recommend it is done with a small project team, typically two to five people.

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Go through each of the requirements and weight them from 0 to 5. These weightings are based on the idea that some requirements will be more important than others in terms of achieving the outcomes. This is often expressed as 'must-haves' and 'nice-to-haves', though using a number scale allows a better range and feeds the scoring process you will use later.

Weight 5 means the requirement is mandatory, and any system that cannot satisfy this requirement is rejected immediately.

Weight 1 means that the requirement is trivial and should have only a slight influence on system selection.

Weight 0 means that the requirement is actually not relevant to achieving the project outcomes, and so can be removed from the RDD or moved to a notes section to show it has been considered and discarded.

You will find as you discuss weightings with your colleagues, that you will need to tighten up the requirement definitions in order to assign a weight, and this is good practice.

It is also good practice to get the RDD with weightings passed around to the core project stakeholders for feedback. This document will now include an overview of the project outcomes, and a description of what the weightings mean. Take account of any feedback you get, but given the subjective nature of what you are doing, you will wait forever if you wait for complete consensus.

Make sure that you get the RDD understood, and then signed off by the project executive sponsor.

## Going to the market

In parallel with the above activities, you have probably been looking around the market to see what systems are available. It is important to trawl the market widely for candidates to develop a 'longlist' as it would be embarrassing to find shortly after a purchase that you had missed an excellent system that never made the longlist.

There are many sources for potential suppliers which include searching the web, asking colleagues, finding out what competitors are using, attending exhibitions, industry magazines and getting recommendations from professional bodies.

The next step is to approach the vendors on the longlist with a simple Request For Information (RFI). This is sometimes also called a Pre-Qualifying Questionnaire (PQQ). You can use a list of the higher weighted requirements in the RDD as a basis for this. The vendors then have a very good idea of what you are wanting, and can decide whether to respond. Their response should include the list of higher weighted requirements and an indication of whether they can meet them or not.

You will then evaluate the RFI responses and arrive at a shortlist. This process may require meetings or phone calls with vendors for clarification.

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Clearly, if a system cannot satisfy any of the 5-weighted mandatory requirements, it should be immediately rejected.

If this means that all systems within the RFI responses are rejected, then you need to backtrack through the process and see what has caused this. Is it a specific mandatory requirement? Perhaps it cannot be done and you are asking too much. Perhaps you will need to pay for this as a bespoke extra feature. How come you are asking for this feature, but vendors are not supplying it? Do they have another way of achieving the outcome that you have missed?

Ideally you want to get the shortlist down to three or four vendors at the most. At this stage you may even have a clear winner, and thus further selection is unnecessary.

## Scoring the shortlist

Score each of the systems for fit against each of the requirements. A scale of 0 – 3 works well where 0 indicates a minimal fit and 3 indicates a 100% fit or ability to fulfil the requirement.

Note that this is NOT a ranking of the systems. Each is scored against the requirement. What this means is if the requirement is to have basic printing functionality, and the system has this, then it is 100% fit. Another system may well have a much fancier and more flexible printing function, but it is does not score higher because the extra printing features are not useful in your context. 'Golden features', if not directly relevant to the project outcomes, should be ignored.

Create a simple spreadsheet for each system as above where the weight is multiplied by the score for fit. Notice how this magnifies the difference between the systems and 'rewards' the systems with a good fit in the most important requirements.

It is good to score the same feature on different systems at the same time if you can, even though you are not ranking the systems. This will give you more consistency than if you score one system today and another next week.

Compare the scores for the short listed systems.

What often happens at this stage, or even earlier during the scoring process, is that you will find that you are biased towards a particular system and feel like you want to go back and tweak the scores to come up with scores that more closely match your 'gut feel' on which system 'should' have won.

This is good information! Now dig into that 'gut feel' and figure out what is driving it. Is it because you like a particular vendor and it has little relation to the system? Is it because the user interface on one system is prettier to your eyes?

You need to get these intuitive and very subjective personal criteria out in the open, and either use them in the formal process, or discard them.

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| System A | Weighting | Score | Weighted |
|---|---|---|---|
| Requirement 1 | 4 | 3 | 12 |
| Requirement 2 | 2 | 3 | 6 |
| Requirement 3 | 3 | 1 | 3 |
| Requirement 4 | 1 | 0 | 0 |
| Total | | | 21 |

You may find that at this stage you want to do some redesign of the criteria and weightings. But if you do, be *very* careful. You will need to go back to the executive sponsor to get the RDD signed off again and you better have some good reasons for doing so beyond 'gut feel'.

Now with your experience of going through this scoring process yourself, get the project team to complete the same scoring exercise. These are the people who understand what the project is all about, understand the core outcomes and also the thinking behind the requirements.

## Demonstrations

Over the time of the selection process, you will have been in communication with potential suppliers. Now that you have a short list, you may ask each supplier to do a formal demonstration to the project team, the executive sponsor and other interested stakeholders. It is best to do these on the same day for consistency.

You want the demonstrations to be comparable and follow a common format. The suppliers should not only show their system, perhaps against a typical supplied scenario, but also talk about their on-going support, the future of the system and so on. Compare their story about themselves to the interactions you have already had with them. Do they 'walk their talk'? Will they be a good supplier to do business with over the long term?

You should have feedback forms for audience reaction that get filled in immediately. Compile these into summary statistics.

At this stage, you should have a clear winner.

## End user trials

Some organisations will seek to run an end user trial to test their final selection with a selected group of typical end users. Some organisations with a high consensus culture will wish to expand the scoring process for all the short listed systems to a representative group of end users.

End user trials are a double edged sword and should be undertaken with a clear purpose rather than as way to devolve the system decision to others. Saying after a failed and expensive implementation 'We

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gave the systems to 20 end users and they chose system B' does not absolve the project team of poor practice.

Where end users are involved in some kind of trial, (if they are not already part of the project team) they *must* be fully briefed with what you have already done, and the RDD should be fully explained to them, together with the project objectives. Giving them access to a new system without helping them fully understand what results and outcomes are required will be very counterproductive.

Simply asking end users if they like a system, or asking them to rank a short list of systems will *not* get you good information on how the systems will support the outcomes you are seeking from the project.

And a note of caution. It must also be borne in mind that end users will have their own agenda. For example, they may not agree with the changes being considered, and so may seek at some level to 'ruin' the trial.

One approach to trial systems with end users is to set up a different set of requirements that directly relate to the way an end user will interact with the system in their day-to-day work. For example, there is no need for the end users to score the system on features that you have already determined are satisfied.

A good away to do this is to set them a task to do or a problem to solve, and then to attempt this on the system. Even better is to get them to come up with a task or problem that they are currently grappling with, so it is real to them, and then get them to use each system on the task.

If there is more than one system they will inevitably be ranking them. This can lead to false rankings where they attribute a lot of weight in their mind to a 'golden feature', or they have a liking for the colour blue and so they like the system with the blue interface colours. The trial system they are using may be a standard system not yet customised for your specific environment, and this can also lead to false rankings.

There are many reasons why the subjective opinions of end users who have not been involved with the entire selection process should be treated with considerable caution.

If you are going to do an end user trial, be clear before you start what you want from it, and how big an influence it will have on your selection process.

- Document how users should test the system during the trial
- Set them a list of requirements to score against.
- Create a mechanism for free form feedback
- Ensure the testers understand the desired outcomes
- Select your testers carefully with both computer literate and less computer capable users.

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- Consider their attitude towards what the overall project is trying to achieve. Are they friend of foe?
- Set the expectations of the users as to what influence they will have on system selection

One of the huge potential benefits of running a user trial is that users feel involved and engaged with the project. You will probably also get good information about how the system could be customised to fit better with the local way of working.

Your mileage with end user trials will vary depending on the users chosen, how well they are briefed and a multitude of other factors. Their opinions will largely be subjective. Our best advice is simply to go very carefully.

## If we can help . . .

Feel free to give us a call if you would like to know more about running a system selection process. We would be happy to help.

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**Paul Matthews**
is the founder of People Alchemy and an internationally recognised author and speaker on L&D.

Thanks for reading this Best Practice Guide. I hope you found it useful. You picked up this Guide, which means you are keen to find new ideas and new ways of doing things to get better results. I can help you. Together we can look at what you want to achieve and then develop your strategy to make it happen. What is your L&D goal? What do you want to achieve? Let's talk about it :-)

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