

Training and Development (T & D): Introduction and Overview

Recommended textbook.

- Goldstein I. L. & Ford K. (2002) Training in Organizations: Needs assessment, Development and Evaluation (4th Edn.). Belmont: Wadsworth.

Aims and objectives

- Relate concepts and principles from the psychology of training and development to real occupational issues in order to make a constructive contribution to organisations.
- Recognize the psychological assumptions made in making training and development decisions and to manage these assumptions appropriately.
- Appreciate the contextual factors of real organisations and work situations that affect decisions concerning the application of training and development concepts.
- Provide a basis for making useful training interventions within organisations and evaluating such interventions.

In doing these things, this learning material aims to enable students to develop appropriate understanding of using occupational psychology within organisations with respect to issues of training and development.

Introduction

Training and development play an important role in the effectiveness of organisations and to the experiences of people in work. Training has implications for productivity, health and safety at work and personal development. All organisations employing people need to train and develop their staff. Most organisations are cognisant of this requirement and invest effort and other resources in training and development. Such investment can take the form of employing specialist training and development staff and paying salaries to staff undergoing training and development. Investment in training and development entails obtaining and maintaining space and equipment. It also means that operational personnel, employed in the organisation's main business functions, such as production, maintenance, sales, marketing and management support, must also direct their attention and effort from time to time towards supporting training development and delivery. This means they are required to give less attention to activities that are obviously more productive in terms of the organisation's main business. However, investment in training and development is generally regarded as good management practice to maintain appropriate expertise now and in the future.

The relevance of occupational psychology to training and development

Contributing to training has long been one of the main concerns of occupational psychology – this is not surprising given that training involves *learning* and that learning is a central issue in psychology. Training is one of the core skills of occupational psychology. People with qualifications in and experience of occupational psychology have been employed in different capacities in training and development roles in government organisations, private companies and consultancy groups.

The discipline offers many benefits and perspectives to help resolve training issues and problems and has also been at the root of many methods and techniques that have now become part of the routine practices within human resource management. Training specialists must be alert to the wider issues regarding the problems presented to them and need the skills and confidence to deal with them. They must understand how training fits into the wider organisational context. An occupational psychology perspective is extremely beneficial in helping the practitioner to understand how training relates to other interventions aimed at improving job performance.

Opportunities of employment in training and development

Governments have traditionally played a significant role in the promotion and development of occupational psychology with regard to training, because of their responsibilities for employment, military, health and other services. People with an occupational psychology background have been employed directly by governments in areas such as job training, military training and health and safety. Government agencies have also been a major sponsor of training research and development; such investment has often provided the major underpinning of developments in this area.

Governments can also affect the impetus for change in organisations through legislation, taxation, and the general health of the economy, which in turn can create more disposable income to create new demands for products and services, affect the supply of raw materials and services, or put such pressure on consumers that markets are adversely affected. Also, government initiatives can affect health and safety requirements, fiscal issues, competition laws, and ecological concerns, working with new technology and employment practices. Such changes prompt new ways of organising and delivering these products and services, creating new training needs.

The other major source of employment and funding in training and development, where occupational psychology plays a specialist role, is private companies. Specialists might be employed directly within an organisation's training and development functions or in consultancy offering services to clients. Organisations often employ their own specialist training and development staff who have been recruited from the organisation's own ranks. Organisations often prefer this approach because they feel it is more appropriate for their training staff to have operational and business experience than for them to be experts in training or occupational psychology. It is often assumed that training is simply a matter of following well-established procedures and principles. This is an ill-informed view because often training cannot always proceed simply by application of

standard methods. It is often necessary to understand variations that have not been responsive to the standard procedures. This entails understanding how people learn and how training can support this learning.

Training and development staff are generally responsible for maintaining company training and development systems, to judge training needs and to organise the delivery of training and development. Practitioners with an occupational psychology background may be encountered in departments concerned with organisational development where they are engaged with the processes of organisational change of which training and development is a part. It is impossible to be more specific than this. Opportunities for occupational psychology specialists to become engaged in training arise in different contexts and circumstances. It is important to remain alert to where these opportunities might occur and be adaptive and constructive in responding to opportunities.

Research into the psychology of training and development

There is substantial literature concerned with the psychology of training and development, much of which has emerged from past government and military funding initiatives. Some has been funded from the commercial sector. Applied training and development research is less likely to have been funded by research councils, who tend to focus instead on pure rather than applied science.

Research into training generally requires substantial funding and opportunity for access to real situations. Without funding or access, it is difficult for applied psychologists to contribute effectively to this area or for their findings to be accepted as credible. In university research it is possible to set up and run basic laboratory or small-scale studies in human learning and social interaction with minimal resources as a basis for publication and for theory development, but these do not match the complexity that needs to be addressed to resolve practical training issues in a rigorous way. Some comparatively inexpensive laboratory studies in areas of training and instruction have been important in clarifying issues and demonstrating the potential benefits of applying different principles to training. But laboratory studies are limited in this field because research findings may be confined to the laboratory context and not deal effectively with practical issues when the complexities of the real situation are encountered.

This means that there is no wholly reliable body of research to enable training decisions to be made with complete confidence. This may sound like a weakness, but it is a reflection of the fact that new operational contexts can change the applicability of research findings that were obtained in a different operational context. It also makes for more interesting work, because problems generally have to be investigated, solved and then outcomes tested, rather than simply following a simple recipe.

To this end, this learning material will set out the basic ideas involved in the psychology of training and development, so that it becomes clearer how work in this area can be conducted. It will introduce the main concepts and themes, with a view to providing a framework for your later work. In particular, it will present these ideas in the context of

organisations, showing how they can be applied and how they might be constrained. The material will not aim to provide a comprehensive account of all aspects of the occupational psychology of training and development. Such issues will be left for you to investigate as future requirements present themselves in your professional career. What we will focus on, however, is providing you with an overview of the main issues in the management and development of training for which a knowledge of occupational psychology can contribute towards helping solve practical problems of training in an effective way.

Characteristics of Training Research

- **Learning and training research**

Application of occupational psychology to training and development needs to relate this work to the occupational psychology literature in order to understand how this area has developed. Work that emerged from laboratory studies of learning was dominant. This involved examining training principles associated with simpler tasks, such as learning lists or learning to carry out simple judgment tasks that could be said to contain features that are present in real jobs, but at a far simpler level. This reductionist approach to psychological research is often a cause for concern when we try to apply psychology to practical things.

Many *learning* experiments can be viewed as *training* experiments. A researcher controls an independent variable that influences the conditions under which an experimental participant is able to learn a task under controlled conditions in the laboratory. From these research findings, the researcher will speculate about the processes underlying learning. But these also provide insights into training methods, because if someone learns something more effectively as a result of a different experimental condition, this experimental condition can, in principle, be offered as a training condition that might be applied in other contexts. However, when we design experiments, we know that research findings are influenced by other features of the experiment in which they are studied. This is why experimental psychologists are careful to design and specify learning conditions carefully and to use control conditions in order to make inferences about what has caused learning and what has not. Unfortunately, this need for careful control of learning conditions also means that it is difficult for us to draw generalisations about learning and training, because, when applied in a different context, these features may work differently. This is always a problem in applying psychology.

Another common approach has been to reduce complex tasks to simpler analogies so that they are easier to study. In this way we might be tempted to assume that the same

psychological components apply in these simpler versions as in the more complex version, thus findings that have emerged from studying a simpler, more controllable, version of a task may be applied to the more complex version. Again, simple generalisation is not really justified. When something is simplified, it is easier. When something is studied out of context of a real job, the pressures and complexities of events and the consequences of error are generally missing, so the person's strategy may be different. Things that have been shown to be beneficial in one context cannot automatically be assumed to benefit a new context – this makes for difficulties in applying training research. It means that every time we assert that a particular approach to training is appropriate to that new situation we need to obtain evidence that this is indeed the case - just because we think a particular training method is appropriate, it does not mean that it will work in practice.¹

That every intervention is an experiment is why it is necessary to understand something of scientific method. It is an area where an understanding of occupational psychology is invaluable to the trainer. Unfortunately clients often fail to appreciate the hypothetical nature of training - or, indeed, any organisational change - and they assume it is possible to deal in certainties. Many consultants reinforce this incorrect view by maintaining they are offering proven solutions, rather than simply working as effectively as they can in a given set of circumstances.

While simple application of training and learning research is far from straightforward, a knowledge of principles of learning and training is still useful. Learning research is generally undertaken with a view to developing theories rather than simply accumulating individual findings. As such, learning research is useful to training because it provides important pointers to how learning takes place. This enables us to generate ideas about what a person should experience in order to help them learn. Providing these opportunities for experience is what training actually is. We shall be looking at this again with regard to definitions.

¹ This means that such a training intervention is a sort of experiment and that the belief that it will work is an experimental hypothesis. Despite this formal way of presenting the problem, often in practice the evidence that we seek to test the hypothesis might simply be the line manager's satisfaction with the outcome

- **Training research**

In recent decades, learning theories became more effective in their insights and breadth of coverage, and the tasks studied both in the laboratory and in the field, have tended to be more complex. Reported research often reflects greater complexity over the years as more involved situations are examined. Added to this has been a growth in the interest of individual differences among learners reflecting either differences in ability (general or specific) or other variables such as age, sex, personality, and ethnic background.

Training research often emerges as a by-product of investigating a real problem that an investigator has encountered. It can take different forms and provides different benefits that we can use in future applications. One approach considers training methods and

principles. The researcher demonstrates how an idea can be applied to deal with a particular type of problem. Often, ideas are tested in a controlled experiment, gaining credence if a significant difference is observed. But a significant result might only apply to that work context; a non-significant result does not logically mean that the idea would *not* work in a different context. Often such studies cannot be taken as categorical evidence for or against a particular training method investigated, but are best regarded as a demonstration of how this type of training method might be applied.

Another form of training investigation compares two or more alternative training programmes to see which is best suited to the organisation. From an applied perspective, a training 'programme' should be regarded as the sum of procedures adopted in order to achieve a desired training outcome - when we see people trained for real jobs, we generally see a sequence of training activities that build to an appropriate outcome. The training experiment is used to decide which of these should be adopted. For example, managers might be required to assimilate information about health and safety in the workplace, with a view to them making management decisions in the best interests of the workforce and also to defend the company against litigation in the event of an accident. One training method might be to provide managers with an intranet site containing information and case studies for them to study, followed by a test of their understanding. An alternative training method might be to require all managers to attend a 2-day course, followed by the test of their understanding. Such a study should provide data on which of these alternatives will be most successful in influencing the retention-test scores of participants.

Making a choice between these two training options on the basis of this criterion would be straightforward. But would the experiment prove anything? In the absence of more detail, this looks like a rather poor study because:

- We have no evidence that the two options are teaching the same thing.
- We have no evidence that the content of the training is relevant to the actual requirements of that organisation.
- We have no indication that the managers presented with the intranet took any time to study it.
- We have no evidence that simply remembering what was learned will transfer to any subsequent performance by managers that might be useful to the organisation.
- We have no evidence of the respective costs of these two training methods.

So, as a definitive study to show the relative benefits of these two methods, the experiment is unsatisfactory. This comparison could be used within an organisation to make a judgement about whether the organisation should invest its effort and other resources in an intranet. But it tells us little about training principles in general.

This section has argued that instances of published training research are limited with regard to making definitive statements about how to train or how not to train. Such studies, however, are useful in providing demonstrators for how such training might be conducted and how investigations into training within organisations might be conducted.

Efforts are periodically made to organise the very large body of research and to look for general principles of application (Patrick, 1992; Morrison, 1999). The training designer can make reference to such sources if confronted with a situation in which they are not sure of the best training principles to employ.

Conclusion

The purpose of this learning material is to explain to the reader issues and concepts that should be understood in order to think constructively about the application of the psychology of training to real work issues. It is not presented as a literature review you will need to read further for that information². Instead, the material has been written in an informal way to explain key principles and concepts and how they relate to each other in dealing with applied training issues. It does not deal in detail with the research literature underpinning these ideas. This is left for you to examine using the Readings provided as a starting point to exploring wider literature. This learning material offers one perspective with a view to providing a coordinated story, but there are other perspectives in occupational psychology that you will encounter in a professional capacity and which you must try to accommodate.

² See the readings below

Reading

The Readings included have been selected to provide more detailed explanation and illustration of concepts and approaches described in the text. Other Readings have been included to offer views that may be at variance with some points in the main notes. Indeed, when reading, you might decide that you take a different stance from the stance adopted in this learning material. This does not matter, provided you can defend the stance you take, because you may be called to do so when applying psychology to training. Many ideas in training are long-standing and have stood the test of time. Some ideas have gone in and out of fashion. Some new ideas are repackaged old ideas.

You should consider the readings provided as a general resource. They are all useful to read, but more importantly, they should be read in conjunction with the learning material as different issues arise. Indeed, training ideas are often inseparable from each other and you will find many of these readings relate to different topics.

References

- Morrison, J. E. (1991). *Training for performance*. Chichester: John Wiley and Sons Ltd.
- Patrick, J. (1992). *Training Research and Practice*. London: Academic Press.
- Warr, P. B. (2002). Learning and training. In P.B. Warr, (ed) *Psychology at Work*. London: Penguin Books.

Required Reading

- Warr, P. B. (2002). Learning and training. In P. B. Warr, (ed) *Psychology at Work* (5th Edn.) (pp. 153-177). London: Penguin Books.

Authorship

This learning material was written by Dr Andrew Shepherd.