Flexibility and complexity:
opening the black box of training package implementation

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Abstract

Almost a decade since the introduction of Training Packages, vocational education and training (VET) providers are still struggling to implement them effectively. Many of the difficulties that providers are experiencing can be traced to two problems: the inconsistencies in the structure of different Training Packages, and the impact that flexible delivery has on their management. Structural differences of Training Packages, such as the size and complexity of competencies and the construction of a qualification under the packaging rules, create problems for the administrative processes and procedures required to manage the delivery. Such problems are exacerbated by national policy for Training Package implementation that requires providers to offer maximum flexibility. Yet policy makers appear to be unaware of the manifold implications for providers, who must adopt very different methods of delivery in order to cater for the diverse nature of client demands. When delivery models are dissected, such as RPL/RCC, workplace training and off-the-job training, it becomes clear that they require distinctly different implementation and administration systems, skills and support to ensure they are effective. The structural differences between Training Packages for various industries, and the degree of flexibility expected of Training Packages, confuse implementers and create complexities that are difficult to manage. Frequent changes to the regulation of training delivery serve only to exacerbate the complexities of an already over-regulated training system. This paper reports on research into the implementation of Training Packages. The analogy of the 'Black Box' test has been used to identify key issues for implementation of Training Packages with the degree of flexibility and responsiveness required by national policies and to help understand the compromises and multiplicity of administrative complexities faced by training providers.

Introduction

Competency-based training (CBT) has been an integral part of vocational education and training (VET) delivery for many industries for the past decade. It has been implemented in two very different ways. In the late 1980s, it was introduced as a competency-based curriculum model and later in the 1990s along came the introduction of Training Packages. While the Australian National Training Authority (ANTA) promoted the benefits of Training Packages to industry, VET providers have been struggling to successfully implement them. Part of the problem has been centred on the debate around the legitimacy of CBT as an educationally sound philosophy. Questions about 'competence' have been raised, challenging the definition provided by DEET (1992) that competence is 'the ability to perform a discrete task under specified conditions to precise standards.' (Section 1, p.4) Difficulties arise in applying this definition when one questions the performance, the conditions and the standards on which competence is based. Harris (1995) introduces further complexity into the argument by raising questions about the flexibility of delivery and learner-based

accountability. Debate on the value of learning and the appropriateness of various learning styles – such as behaviourist, cognitivist and humanist approaches (Harris 1995, Cornford 1997) – has been vigorous. Others have raised broader philosophical questions about the legitimacy of CBT for the cultivation of intellect, self-actualisation, progressive reform and organisational effectiveness (e.g. Foley et al. 2000). The relationship between work, as a means to earn a living, and education as the development of skills and knowledge is also challenged (Jackson 1994, Cornford 1998). While these debates continue, the fact remains that CBT is part of the federal government's training policy to improve the competitiveness of Australian industry in a global economy (Curtain 1994).

Training Packages provide the national framework for implementing CBT. As with CBT, concerns have been expressed about the value of learning achieved from Training Packages. Educational quality and consistency has been questioned by providers (Anderson 2000). Current teaching standards and the impact of tighter regulation through the Australian Quality Training Framework (AQTF) are seen as important factors that have undermined learning under Training Packages (Mulcahy 2003, Grace 2005). The difficulties experienced in the implementation of Training Packages could be a result of the educational flaws of CBT, Training Packages as a delivery tool and/or the failure of implementers to understand the concept of Training Packages.

A climate of confusion has surrounded Training Packages since their development. For instance, in the *High Level Review of Training Packages*, Schofield and McDonald (2004) express concerns that Training Packages are complex and lack clarity (Schofield and McDonald 2004, p.3). Yet Training Packages continue to be promoted as a very simple linear pathway to a qualification. On the one hand, we have the units of competency specified for Training Packages, and on the other we have statements of attainment of qualifications under the AQF. The role of implementing Training Packages has fallen to training providers in the form of the 'non-endorsed' component (ANTA 2005). Pathways are presented as a clear and uncomplicated educational process that supports learning for work.

The analogy of the 'Black Box'

In order to explore non-endorsed component further the concept of the 'Black Box' test used in computer software design makes a good analogy. The Black Box test is used to test a design without the need to understand the inner workings of the model being tested. The main advantage of this type of test is that the tester need only be concerned with comparing the inputs to the outputs of the model or design. (Webopedia 2005, Wikipedia 2005). Applied to the implementation of Training Packages, the analogy of 'Black Box' test suggests that, on the surface, Training Packages are simple and linear in their design. When given defined inputs, such as competency standards and assessment rules, the analogy suggests that the outputs of a Training Package are competent workers. Research suggests, however, that this process is far from straightforward. When the lid on the Training Package 'Black Box' is lifted, the many complexities of the subsystems become more apparent, and shed light on the difficulties of implementation.

The assumption that Training Package implementation is a simple linear process, as suggested by ANTA's roadmap to VET qualifications, is flawed. Government policy

and regulations are not neutral and objective techniques, but rather are open to varying interpretations depending on one's viewpoint. They are 'encoded in complex ways' and are equally 'decoded in complex ways' (Ball 1994). Stakeholders interpret policy in different ways depending on their values and interests, and these different interpretations of national policy on Training Packages result in varying, and often conflicting, interpretations of their structures, intent and implementation.

Training Packages have been introduced as an educational tool that intends, by its very structure, to be as 'flexible' as possible. The *Guidelines for Training Package Developers* indicate that this degree of flexibility is provided by: 'formal or informal education and training, experiences in the workplace, general life experience, and/or any combination of the above' (ANTA 2004, p.47). These broad statements are used to indicate pathways and an apparent process for a candidate to follow towards gaining a qualification. They are all neatly packaged (and hidden) within the Training Package 'Black Box'. The complexities of implementation, however, only become apparent when the Black Box is unpacked.

Training Packages do not specify delivery methods, as did curriculum-based learning (Wheelahan and Carter 2001), and for a very good reason: the intent of Training Packages to promote flexibility and recognition of a person's lifelong learning would be compromised. With the inception of Training Packages, a teacher's role became unclear as no curriculum or delivery process was prescribed. Many teachers still incorrectly refer to Training Packages as 'curriculum' and view the structure of Training Packages as a means of instruction and guidance. This misunderstanding of the purpose of Training Packages in turn causes much of the confusion when teachers realise that the key elements of a curriculum are absent (Schofield and McDonald 2004). Training Package implementation is only fully understood by skilled and experienced practitioners (Robertson et al. 2000). Moreover, policy makers' rhetorical depictions of Training Packages as 'flexible', 'accessible', 'equitable', and 'meaningful' have led to the development of a bureaucratic process that conceals the practical realities of implementation.

Research methodology

The aim of the research reported in this paper was to explore, document and analyse issues from extant literature about, and professional experience with, the implementation of Training Packages and government VET policy. In the absence of any similar published research upon which to draw in order to validate the findings and insights, the author adopted the position of critically reflective practitioner engaged in action research to investigate and problematise Training Package implementation, with a view to improving current awareness and practice. The initial findings were condensed into broad, generalised concepts or 'models' of a candidate's progress from entry into a course of study through various steps to the achievement of a final qualification. These models were used to identify key stakeholders and their responsibilities, administrative requirements, teaching and learning styles and processes for each of the key steps within the model.

The study involved a comparison of a range of Training Packages with the aim of to identifying key structural differences that may contribute to the complexities of implementation. The comparison of Training Packages was based primarily on the size

and number of competencies contained within selected Training Packages, specifically for Outdoor Recreation and Electrotechnology. The qualification packaging rules that affected a course structure were also examined. The first versions of each Training Package were studied, in order to ensure the validity of the comparisons, and consequently subsequent modifications following Training Package review processes were not considered.

The primary aim of this research was to reveal issues and concerns, both current and emerging, in relation to Training Package implementation in industry and occupational sectors within the administrative purview. In presenting these issues and concerns, no assumption of generalisability or attempt to produce definitive 'evidence' is being made. Rather, the purpose is to generate and expose key practice-based insights to wider critical scrutiny within communities of research and practice in TAFE. Such an undertaking is made in the interests of stimulating debate and further research to determine whether such insights are a realistic and valid representation of more generalised experiences in the TAFE sector. In effect, a broad objective of the research approach was to construct a tool with which to build a new and much-needed dialogue with other practitioner- researchers in order to prise open and illuminate the 'Black Box' of Training Package implementation, and thereby subject official policy claims to greater critical scrutiny.

Differences between Training Packages

Training packages differ in many ways and cannot be implemented the same way. One of the primary differences between Training Packages is the size and number of units of competence required to be demonstrated by a candidate in order to be deemed qualified. A unit of competence for the most part 'describes a key function or role in a particular job function or occupation.' (ANTA 2004, p.54) This definition is very open to interpretation and has resulted in units of competence as small as 5 hrs in the Outdoor Recreation Training Package, (OTTE 2000) or as large as 200 hours in the Electrotechnology Training Package (OTTE 2004). The Horticulture Training Package with a range somewhere between the two extremes shows competencies written in a way that is quite specific to a task or job. The elements clearly explain the broad job requirement of the unit, stating what needs to be done in terms broad enough to allow for the variations required for different applications within the context of the Range of Variables. By contrast the units of competence within the Electrotechnology Training Package very broad in their wording, and as such can be interpreted differently depending on the readers purview and the context in which the Training Package is to be applied. The Elements use very broad open statement that lack clarity. The implication of this for delivery is that the competencies must be broken up into smaller modules or subjects in order to deliver training, referred by Wheelahan and Carter (2001) as 'disaggregating'. The Sport and Recreation Training Package has units of competence that are small that they appear to be more closely aligned to an element compared to those in the Horticulture Training Package. A delivery strategy applied for these small competencies has been to 'cluster' them into assessable 'real work tasks', a practice which Wheelahan and Carter (2001) refer to as 'aggregating'. Appropriate clustering is a key way to ensure that assessments are holistic (WADT 2002). Training providers also cluster small units into 'subjects' for training purposes to facilitate a logical sequence of delivery.

One implication of these variations in the structure of Training Packages is that they cannot be implemented in the same way, and require different delivery and assessment strategies and administrative processes. Administrative issues that stem from structural differences in Training Packages include:

- difficulties in identifying the commencement of small competencies nested in 'subjects' as required for AQTF compliance, reporting and funding requirements.
- information technology systems designed for student records are inadequate (King 2001).
- aggregating and disaggregating competencies is a logistical nightmare (Wheelahan and Carter 2001) to facilitate effective teaching/training and assessment strategies.
- a consistent enrolment process is difficult to achieve over several reporting periods for large competencies (TDA 2002).
- inconsistency of training delivery between registered training organisations with large indistinct competencies (Anderson 2000).
- recognition and credentialing of partially completed competencies (TDA 2002).
- lack of flexibility due to the predisposition of some Training Packages to specific delivery methods.

Differences between Training Packages exemplify issues relating to their inconsistent development and the subsequent impact on implementation. However, complexity and implementation are also linked to the concept of flexibility that has been a hallmark of Training Packages.

Training Packages and curriculum

Prior to Training Packages, VET was delivered via curriculum-based learning outcomes or objectives, as documented within an accredited course structure and specified hours of delivery. Such VET delivery was generally institution based. In contrast, Training Packages comprise competency standards which are acquired and assessed in real or simulated workplace environments. Training is no longer time-based under Training Packages (Anderson 2000).

The initial stage of curriculum development under the pre-Training Package model, the analysis phase, is similar to the process now adopted for designing a Training Package; that is, a task analysis or skills audit was conducted and the 'job' and associated skill requirements documented. The design and implementation phases were akin to the current 'non-endorsed' components of Training Packages, which have been left to training providers to develop. A course leading to a VET qualification from one institution could be far different to the same one from another institution. A student's prior study may have attracted credits or exemptions, but life experiences did not. One administrative model tended to fit all courses. Teachers were clear about their responsibilities (Wheelahan and Carter 2001). With the onset of CBT, these learning 'traditions' were challenged and a whole new way of dealing with learners emerged.

One of the key features of Training Packages is the notion of flexibility and choice (Anderson 2000). The ability to engage in tailored learning in any form and have the learning recognised towards a qualification meant that traditional delivery strategies were no longer necessary. Training and learning could take place any time. The

Australian Qualifications Framework Handbook states that a candidate's access to a qualification could be through:

- a training program meeting the requirements of an endorsed Training Package or a training program meeting the requirements of an accredited course(s) delivered by a Registered Training Organisation; or
- a combination of a training program meeting the requirements of an endorsed Training Package or a training program meeting the requirements of an accredited course delivered by a Registered Training Organisation, *plus* recognition of prior learning including credit transfer and/or experience; or
- the recognition of prior learning that provides evidence of the achievement of the competencies for the qualification (AQF 2002).

In essence, this provides the candidate with the choice and flexibility to gain a qualification through any combination of study models from accredited courses, life experience to prior learning.

One essential difference between the traditional model of VET and Training Packages is that a person is deemed qualified under the latter if they can demonstrate competence. Time is no longer a governing factor (AQF 2002). A candidate's pathway to a qualification can take a number of routes. The AQF handbook provides examples of possible pathways to a qualification:

- work-based training and Assessment
- institution-based education and training and assessment (including schools)
- part institution-based education and training and assessment (including
- schools)/part work-based training and assessment
- recognition of prior learning
- recognition of prior learning combined with further training as required
- accumulation of a variety of short courses/training programs' (AQF 2002, p.28).

With more choice available for the candidate there is inevitably more complexity in the provision of training programs for training providers. The move from a relatively simple curriculum based model to Training Packages brought with it many complexities.

Recognition of Prior Learning (RPL) or Recognition of Current Competence (RCC) is a cornerstone of Training Packages. The concept is one that supports the notion of life long learning and that skills and knowledge are acquired without the need for formal training. When discussing the uptake of RPL by students, Byron states that 'The existing approach to RPL assumes that there is a relatively straightforward process of "translation" between the student's prior knowledge and the learning outcomes or competency standards against which they are being assessed. However, personal learning is not neatly packaged for comparison with academic or course requirements' (Byron 2003). The open ended learning model of life long learning cannot be categorised easily into competencies for a person be deemed partly competent. Byron (2003, p.9) found that 'information was often difficult to find and would require the student to be actively looking for RPL information. The skill to engage RPL then becomes somewhat of a problem for candidates in itself.' RPL assessors are trained in the art of RPL/RCC, but 'Examination of Australian and international RPL literature

shows that there is a lack of focus on the way in which people are supported to learn the skills they need to engage in RPL' (Byron 2003, p.13). This introduces a new dimension in that providers should be training candidates in the use of RPL policies. Byron continues 'it may be useful to consider offering a subject or module in RPL to help students prepare'(2003, p.13). Teaching students to gain a qualification by RPL raises some interesting questions, and challenges the notion of learning to learn.

Off-the-job training is more akin to the traditional curriculum model. A candidate's pathway to a VET qualification begins with a career choice. A training plan is developed based on the candidates choice of units of competence (AQF 2002) based on broad industry specifications of a job. The level of qualification, the type of skills and the number of competencies required all need to be taken into consideration by the candidate. This requires the candidate to be aware of the nature of the industry and the outcomes required in the Training Package. With the complexity and confusion that surrounds Training Packages now, it is unlikely that they would be fully informed. Practical skills must be assessed in a 'real' or 'simulated workplace environment' in order for the candidate to be deemed competent (ANTA 2005). Administration of off-the-job training is much like the traditional model, however the complexities of different Training Packages do introduce another dimension.

Workplace training involves a model of training where employee-learners receive all of their training on the job. The skills and knowledge are acquired while doing their work. Relationships in the workplace between the learner, their employer and the training provider take on a new form. The employer becomes more responsible for workplace training, the candidate must become more self-reliant, and the training organisation takes on a monitoring and support role. The workplace trainer must be skilled in training and learning principles so that the candidate is given every opportunity to learn. Multi-modal training delivery tends to combine workplace and off-the-job training. Practical skills development can be demonstrated on the job. Theoretical knowledge and conceptual skills are gained in a formal off-the-job setting. This model is most common under New Apprenticeships, where employers release their apprentices from work to attend a training institution or formal training sessions in their workplace. Although not described in any detail, both these models require their own administrative support and management systems, thereby compounding the complexity of Training Package implementation. Further difficulties arise as a result of different Training Package structures, and the various models of delivery required by clients as part of flexible delivery promoted by official policy.

Training packages and policy

Ball's (1990, 1994) work on policy and policy processes provides some insight into implementation of government policy, and argues that policies, by their very nature, are interpretive documents to which stakeholders give varying meanings. Politicians, bureaucrats and professionals all have different beliefs and values that influence their interpretation (Ball 1990). Training Packages are a reflection of government policy and are therefore subject to varying interpretations. Politicians look to market forces and freedom of choice; bureaucrats value administration, management systems and efficiencies, while professionals prefer experience, practice and quality (Ball 1990). These differing beliefs and values generate confusion about the purposes of Training Packages and contribute to the complexities of implementation. Differences in Training

Package designs between industries may also be explained in a similar fashion, in that different industries see different values in Training Packages which they seek to exploit for their own particular purposes. For the training provider who is charged with the delivery of Training Packages, these complexities are reflected in the administration processes required to service the differing structures and clients.

Schofield and McDonald (2004) highlight many of the resulting problems that underpin the introduction and implementation of Training Packages. Whilst affirming the value of Training Packages to skills development and the labour market, they state that 'changes will be needed to the ways in which Training Packages are conceptualised, developed and implemented, or the model will struggle to achieve its purposes, and will ultimately fail (p.4). They also acknowledge the 'complexity' of Training Packages with regard to relationships between stakeholders. Reference is made to the 'necessarily complex national VET system' which supports the continuing problem that policy makers have in hiding behind the 'Black Box' of implementation. Flexibility and complexity go hand in hand. The more flexible training providers try to be, the more complex their systems and processes will become.

The degree of complexity and flexibility has contributed to the difficulties of implementing Training Packages effectively and underpins many of the problems encountered during implementation. The skill sets of training provider staff who are required to implement Training Packages also need to be considered. Negotiators, facilitators, teachers, trainers, mentors and administrators all require different skill sets that underpin different delivery models. Not all educators have or would necessarily develop such skills. This means employment and human resource development practices within training providers need to take account of the different skill sets that the delivery models require. The degree of 'flexibility' expected of Training Packages, particularly in relation to the many models of delivery, requires different skills and attributes for handling administration, enrolment procedures, student records, management (e.g. teaching, coordination, mentoring). The more delivery models that a training provider uses, the more complex the administration becomes. Down (2003) refers to the 'contradictions and multiplicities' faced by training providers who are drawn into a complex world of balancing educational outcomes with delivery strategies and assessment models with client, government and organisational priorities and demands.

A further complexity that is hidden within the 'Black Box' of Training Packages is the anomaly of inconsistent funding models across the country which contributes to further problems. Flexible delivery comes at a cost; resource development, professional development, assessment, travel and more complex record keeping systems contribute to additional funding needs for training providers (TDA 2002). Training providers must weigh up the cost of delivering a particular model if they are to remain competitive.

Conclusion

Training providers are at the coal face of Training Package implementation, and yet their input into their design and development has been sought rather late in the process (Anderson 2000). The top-down approach adopted to date has done little to secure provider support, and has inhibited healthy discussion about appropriate

systems and processes, thereby contributing to poor performance. Training Packages have been designed for industry to enable candidates to attain skills that meet Australia's growing needs for the global marketplace. Policy makers prescribe the Training Package structure, and provide the qualifications framework and rules for quality training. While this appears to provide the basis on which to deliver adequate training, the key issues for implementation remain concealed within a bureaucratic 'Black Box' of the non-endorsed component.

As we lift the lid and peer inside the Black Box, we find confusion because of the complexities of Training Package design, and the need to be 'flexible' in delivery. Differences in design and the many pathways that a candidate can follow to gain a qualification create an administrative nightmare that inhibits the growth and development of education. These complexities can be better managed at a training provider level if they peer inside the black box themselves and prepare processes and procedures to support the variations in Training Package complexities and delivery models. Deconstructing each model and preparing administrative procedures to better manage each will reduce the tension and the confusion experienced by practitioners. Where training providers have limited capacity (resources) for delivery then a rationalisation of delivery models would enable them to better utilise the existing skill sets of staff. Smaller training providers may find working with a limited number of Training Packages with similar structures to be more cost effective where administrative systems align. Training Packages can be made to be more effective if systems and procedures are developed to support training providers. Due to serious funding constraints, training providers are likely to select the most cost-effective and manageable delivery model in place of providing the maximally flexible strategy that was expected under the Training Package model, simply to remain financially viable.

Acknowledgment

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