

Synchronising Formal and Informal Learning in the Workplace to Enhance Professional Development

Susan Bolt, Curtin University of Technology, Western Australia, Australia

Abstract: Formal learning, which ranges from university courses to targeted training to perform a single task in the workplace, has typically provided the knowledge and qualification base for professional and skilled workers and could be described as a hierarchical, standardised, centrally controlled, vertically integrated approach to the transmission of knowledge through organised curriculum modules. The technological revolution of the late 20th Century has catapulted us into an unpredictable complex world that is fast paced, information rich, networked and horizontally integrated. The formal approach while useful may not fully equip adult learners or the organisations in which they work for such a dynamic competitive environment. Informal learning is more horizontally integrated, dynamic and occurs when people make a conscious effort to learn from their experiences and engage in individual or group reflection (Burns, 2002; Foley, 2004). The contention of this paper is that formal and informal learning have not been consistently or effectively linked and that the outcomes of professional development could be enhanced by such synchronisation. This paper, based on results from an interpretive study investigating professional development in large Australian organisations in 2007, explores adult learners' experiences with formal and informal learning in the workplace. Semi-structured interviews and questionnaires, using mixed methods, were conducted with staff from all levels of three diverse organisations to investigate the relationship between adult learners' professional development and organisations' change agenda. Participants were asked to describe and evaluate their experiences with work related formal and informal learning. Results indicated that formal and informal learning played extensive but often isolated roles in professional and workforce development. This paper provides examples and argues that professional development could be enhanced through the overt strategic linking of formal and informal learning in the workplace.

About the Author

Susan Bolt

Susan Bolt provides administrative, consultancy and professional learning services for divisional academic staff at Curtin Business School with the aim to improve teaching and learning. Currently she is investigating the relationship between adult learners' professional development and organisations' change agenda in diverse Australian organisations. Her previous work included management of system and district teacher professional development programs and research into pedagogical renewal through action learning.

Introduction

In the context of the dynamic 21st Century environment, training and development was widely recognised as a way of increasing national competitiveness and addressing skills shortages. Furthermore it could enhance organisational effectiveness and increase individuals' employability. Therefore, the need for ongoing training and development to enhance organisational and individual competitiveness was widely recognised (Burns, 2002; DEST, 2005; McMahon, Patton, & Tatham, 2003; Smith, 1998). For example in 1997, Australian organisations spent in excess of \$7.4 billion on structured training for their employees (Robbins, Millett, & Water-Marsh, 2004). Hence, developing approaches to training and development that maximised its benefits were of paramount importance to organisations and individuals. This paper reviewed literature pertaining to historical influences and models of program development, and approaches to training and development, which underpinned current practice. Excerpts of key findings from an Australian mixed methods study conducted in 2007, which investigated the relationship between professional development and organisational change, were included as evidence of current practice in the area of training and development. Data was collected about adult learners' experiences with formal education, non-formal programs, informal and incidental learning. The results showed formal learning opportunities were favoured by managers in the planning process. In spite of this, employees also accessed informal learning, which was seen to be as effective as or more effective than more formal approaches to learning. Furthermore, current approaches did not address the full range of needs. Consequently an alternative approach to training and development was recommended.

Historical Influences on Program Development

The adult learning programs used today were influenced by liberalism, Taylorism, and the philosophies of Dewey and Lindeman. Formal learning was representative of liberalism and Taylorism, and was conceptualised as formal education and non-formal programs. Formal education resulted in a qualification and occurred in universities, technical colleges and Registered Training Organisations (RTOs). Non-formal programs could be organised through these institutions but were more likely to be provided through the workplace or community and did not result in a qualification (Foley, 2004; Sork & Newman, 2004). Formal education stemmed from the liberal tradition of 19th Century discipline-based cognitive learning typified by teacher-centred knowledge transmission, the aim of which was to broaden the mind, learn how to learn and prepare learners for life. This type of formal education was synonymous with university education (Hall Jr, 1968; Sork and Newman, 2004). Formal education also occurred as competency-

based training, which had its roots in Taylorism. Based on Taylor's scientific method, this used a behaviourist approach to learning, mechanically broke down tasks, separated mental and manual processes, and was particularly effective in skilling factory workers for simple repetitive tasks (Bruce & Nyland, 2001; Burns, 2002; Payne, Youngcourt & Watrous, 2006; Sork & Newman, 2004). Liberal education focused on knowledge, whereas competency-based training focused on skill development. Whilst knowledge and intellectual growth remained important, there was a move towards demonstration of job specific competencies. Since 1996, in the United Kingdom, trainee teachers were required to demonstrate their competency to qualify as teachers (Lomas, 1997). In Australia the adoption of competency-based training was central to the National Training Reform Agenda (Smith, 1998). Non-formal programs could adopt a liberal or competency-based approach but did not result in a qualification.

Informal learning, which was characterised by people deliberately learning from their experiences, was representative of the approaches espoused by Dewey (1933 in Sork & Newman, 2004) and Lindeman (1926 in Sork & Newman, 2004), the third and fourth main influences on program development. Reflection and discussion were key elements of informal learning but formal instruction was not. Dewey advocated experiential learning and active participation of individuals in the learning process. Experiential learning occurred as individuals or groups encountered situations, made observations, reflected on their experiences, generalised and tested their hypotheses. Lindeman also advocated the importance of experiential learning and extended Dewey's school-based education ideas into the arena of adult education. Lindeman emphasised the importance of small groups engaging in discussion in response to situations and reflecting on their experiences (Burns, 2002; Foley, 2004; Knowles, Holton III & Swanson, 2005; Merriam, Caffarella, & Baumgartner, 2007; Sork & Newman, 2004).

Models of Program Development

The two alternate paradigms of program development were behaviourist-scientific and reflective-intuitive. Taylorism was consistent with the behaviourist-scientific approach. Lindeman's approach was more reflective-intuitive (Knowles et al., 2005). The majority of programming models reflected a rational-technical approach similar to the behaviourist-scientific paradigm and followed the pattern established by Tyler in 1949. The Tylerian model was based on four questions:

1. What was the educational purpose of the program?
2. What learning experiences would achieve this purpose?
3. How could these learning experiences best be organised?
4. How could the learning be evaluated? (Boone, Safrit & Jones, 2002; Sork & Newman, 2004).

Tyler's model was developed to facilitate curriculum planning for the education of school children. Other programmers adapted it to suit the needs of adult learners. Caffarella (2002) developed the Interactive Model of Program Planning based on adult learning principles and assumptions about planning. Unlike many models, Caffarella's model included an element focused on transfer of learning, which incorporated informal learning strategies such as coaching, mentoring, action learning, networking and follow-up, to embed the learning in practice. Caffarella's model was Tylerian in nature but more flexible than earlier models and interactive rather than linear (Caffarella, 2002; Sork & Newman, 2004). Greater flexibility was sought so that programs would be more suitable for increasingly dynamic contexts.

Departing from a rational-technical perspective into a more reflective paradigm, Wilson and Cervero (1994 in Sork & Newman, 2004) illustrated the application of their approach through the use of case studies. They were concerned with the negotiation of power relationships but did not provide instructions for planning programs. Yang (1999 in Sork & Newman, 2004) built on the work of Wilson and Cervero by developing a self-assessment tool to inform developers about contextual power and influence tactics at play in a given situation. This approach provided some direction but may have had limited application, depending on programmers' individual approaches. Sork (2000 in Sork & Newman, 2004) developed a question-based approach that considered various technical, socio-political and ethical questions associated with planning. This approach was more complex than traditional approaches and difficult to implement.

There was recognition of the need for an alternative to the rational-technical paradigm but conceptualisation of reflective-intuitive program development was relatively new. In the context of the workplace, programs were developed and accessed through training and development in conjunction with human resource management.

Approaches to Training and Development

The three fundamental approaches to training and development were individual development, results-oriented and human resource planning. Individual development was based on the assumption that organisations benefited from individuals achieving their full potential, so the needs and aspirations of individuals were the focus of this approach rather than organisational needs. The importance of cost reduction, profitability and improved productivity were at the heart of the results-oriented approach, which focused on organisational problems in relation to groups within the organisation rather than on employees' aspirations and needs. Human resource planning was based on the predictability of change and future needs identified through a skills audit. This approach focused on developing skills required by the organisation rather than employees' career aspirations (Burns, 2002;

Cacioppe, Warren-Langford & Bell, 1990; Kane, 1986; Kane, Abraham & Crawfield, 1994).

Research Methodology

The issue of how best to plan and implement training and development programs to maximise benefits to individuals and organisations was at the heart of this interpretive Australian mixed methods study. Stratified, purposeful sampling methods were used to select representative sample populations. Survey questions investigated respondents' knowledge and experiences of organisational change and professional development. Data was collected concerning background, organisational change, formal education, non-formal programs, informal learning and incidental learning. Exploratory interviews sought a strategic perspective on organisational change, the provision, and evaluation of professional development. Semi-structured interviews sought an overall perspective of how individuals experienced organisational change and professional learning. In total there were 218 survey responses and 70 interviews. Quantitative survey data was analysed using SPSS and qualitative data from the survey and interviews was analysed using NVivo7. Individual case studies were developed and cross case analysis was conducted. Three organisations, referred to as cases, participated in the study. This research was exploratory in nature and therefore limited to an overview of the situation rather than an in-depth investigation of a narrower range of phenomena. For example, comprehension of the range of participants' engagement with learning opportunities was sought rather than the delivery and impact of specific programs.

Results

An extract of the results of this exploratory research was presented in this paper. Survey results presented in Table 1 highlighted the differences in respondents' educational background, their participation in different learning opportunities, and the perceived effectiveness of these opportunities in meeting personal and organisational learning needs either fully or to a major extent. Survey results indicated greater participation in formal education by respondents in Case One, which had a lower frequency of highly qualified staff. It could be concluded that less qualified people participated more extensively in formal education, but this may not be the only reason; interview results showed there was a strong link between this participation and the organisation's change agenda. Following Table 1, an extract of the interview results commented on the context and presented findings about provision of, access to and satisfaction with training and development across the three cases.

Table 1: Extract of Pertinent Cross Case Survey Results

Category Frequencies		Case 1	Case 2	Case 3
Number of responses		40	76	102
Response Rate		80%	72%	69%
Highest level of education	High School	33%	7%	25%
	TAFE	30%	12%	17%
	University	33%	75%	48%
Formal Education	Participation (total percentage)	63%	26%	41%
	• <i>Liberal education (subset of total percentage)</i>	5%	66%	43%
	• <i>Competency-based programs</i>	89%	26%	50%
	Learning needs were met fully, or to a major extent			
	• <i>Personal learning needs</i>	52%	30%	26%
	• <i>Organisational learning needs</i>	40%	25%	10%
	Non-formal Programs			
Non-formal Programs	Participation (total percentage)	95%	87%	73%
	• <i>Workshops (subset of total percentage)</i>	22%	21%	23%
	• <i>Lectures</i>	16%	15%	17%
	• <i>One-day courses</i>	15%	18%	16%
	• <i>Conferences</i>	11%	20%	17%
	Learning needs were met fully, or to a major extent			
	• <i>Personal learning needs</i>	40%	46%	30%
• <i>Organisational learning needs</i>	40%	35%	20%	
Informal Learning	Participation (total percentage)	80%	86%	66%
	• <i>Mentoring (subset of total percentage)</i>	15%	9%	13%
	• <i>Team-based learning</i>	14%	14%	10%
	• <i>Networking</i>	12%	18%	14%
	• <i>Professional reading</i>	11%	16%	13%
	Learning needs were met fully, or to a major extent			
	• <i>Personal learning needs</i>	59%	45%	30%
• <i>Organisational learning needs</i>	56%	43%	21%	

Incidental Learning	Participation (total percentage)	90%	92%	80%
	• Working with others (subset of total percentage)	22%	21%	23%
• Talking with colleagues	20%	23%	23%	
• Doing the job	20%	22%	26%	
Learning needs were met fully, or to a major extent				
• Personal learning needs	50%	29%	40%	
• Organisational learning needs	53%	29%	30%	

An Extract of Interview Results

In each of the cases senior management planned formal learning opportunities to support change initiatives. Respondents in Case One had the lowest qualification levels and the highest participation rate in formal education. When asked about the provision of learning opportunities the CEO, in Case One, stated *“if there is anything I can give anybody, especially our volunteers who give us so much time, if I can give them a qualification, I am only too pleased to give them the training they need”*. Furthermore this was consistent with a major change initiative in this case. As a volunteer organisation and a Registered Training Organisation (RTO), financial viability and compliance with the National Training Framework drove change (Smith, 1998). Many respondents participated in Certificate IV Training and Assessment (TAA). Other change initiatives in this organisation were concerned with centralisation of administrative tasks and raising professional standards. Respondents participated in courses such as Certificate IV in Business and Diploma in Front-line Management. Access to training and development was determined by the CEO and respondents had little personal choice.

Respondents in Case Two were the most highly qualified and senior management in this government agency facilitated access to centrally developed non-formal programs consistent with major change initiatives outlined in the organisation’s strategic plans. In addition to participation in these non-formal programs, team leaders developed training and development plans for their teams and managed associated budgets to support organisational needs. One team manager stated *“I ensure that there is enough money for training because school psychologists need to value add ... It has to be linked to their performance management ... the recent national conference I think most people went to and came away feeling they were treated as professionals ... I know I will get a better outcome because they identify professionally, for getting world class presentations, stimulated by being at a high level conference where they are learning”*. In addition to mandated training and development associated with

central initiatives, respondents had a degree of freedom to choose work related learning opportunities.

Even though respondents in Case Three were not directly involved in the major change initiative of their organisation, they were indirectly affected by it and engaged in training and development to continually improve performance. This government agency, also an RTO, outsourced much of its training and development needs to external providers. A human resource planning approach was adopted, and managers and their staff negotiated access to training and development through a robust process which *“if the ‘Performance Development Process’ is working properly, having gone through what the goals are for the year and that would include any changes that would happen, then the natural result of that, I suppose in terms of development, is that you are looking at what we need - what are going to be the skills shortages”*. Respondents self-nominated or were nominated by their line managers to participate in a range of formal education or non-formal programs through this process.

In summary, senior managers in each of these cases, in response to exploratory interview questions, indicated the major focus of planning for training and development was through the provision of formal education and non-formal programs in response to organisational needs. Minimal attention, if any, was given to planning for informal learning opportunities, but in spite of this, respondents accessed such opportunities. Responses to semi-structured interview questions indicated individuals had varying degrees of choice about selection of and participation in training and development. Survey results indicated even though the focus was on organisational learning needs, respondents perceived their individual learning needs were more likely to have been met than organisational learning needs. Although most respondents were satisfied with the provision of training and development, some people were dissatisfied, and some needs were overlooked.

Key elements leading to satisfaction with provision of training and professional development included career enhancement, relevance, and availability of opportunities. Satisfaction was enhanced when respondents increased their knowledge, skills and understanding, and received funding and support from their employer. Some respondents claimed interest, personal choice and personal responsibility were important factors which led to satisfaction. Others claimed feedback increased levels of satisfaction. Generally speaking, lack of opportunity to participate in relevant training and professional development was a key factor leading to dissatisfaction with provision of training. Lack of follow-up, funding, time and information also led to dissatisfaction. Furthermore failure to recognise respondents' expertise, skills and career interests increased dissatisfaction.

One of the areas which received little attention was induction of new managers into their respective roles. Interestingly, middle managers from all three organisational cases identified a lack of opportunity to access training in relation to managing staff and budgets. Regardless of their age, educational qualifications or previous work experience, the common scenario was an inability to access relevant training for the middle management role.

For example in Case One ... *“I came in without any management, well basically no formal qualifications after Year 12. I had no experience in managing people or managing full stop so I had to gain knowledge to be able to do my job”*. An older, more experienced person in Case Two, faced the same problem taking on a complex middle management role in a new context ... *“I’ve never had to manage budgets before and I am still learning that. There is no professional development. I have tried to find professional development ... but there is none available ... So that has been really less than adequate and in fact has caused me significant distress ... Performance management, I have not been in a management position since 1994 and that was just at the time that performance management was starting to roll out so I really have had little or no experience in delivering performance management”*. After a restructure in Case Three, a competent staff member was promoted but similarly received no induction to the role ... *“I think we probably could do with some more to make that shift from reporting to a supervisor to actually supervising a staff member, just a bit of training to help you step out of one role and in to that next level, that middle management role, just that understanding of what is expected of you – you tend to operate daily as a worker and then all of a sudden you’ve got staff to manage and to me it is a big jump”*. Other learning needs such as succession planning, response to critical incidents, keeping up-to-date and career development were overlooked in strategic planning. Furthermore, respondents wanted to be supported by the employer to access training and professional development, and implement it in the workplace. Additionally, they wanted their expertise, skills and interests to be recognised and utilised.

Current Approaches to Training and Development

Results from this research suggested current approaches did not completely meet either individual or organisational needs. It was evident that senior management appeared to be influenced by liberalism and Taylorism when planning training and professional development programs, but overall learning showed not only these influences but also those of Dewey and Lindeman. This showed planners relied on a technical-rational approach, but both this approach and the reflective-intuitive paradigm were practised. Planned learning experiences focused mainly on immediate organisational needs and used either results-oriented or human resource planning approaches. This approach satisfied some organisational and individual needs. Planned change was predictable and so it was logical to plan formal learning opportunities to facilitate planned changes. It was difficult to plan for less predictable situations. It was also difficult for senior management to plan for learning needs beyond their control. The needs of adult learners were varied and adults themselves could not always accurately predict their own learning needs. Adult learners were experienced, learned from the experiences of others, needed to know why they were learning something and needed to direct their own learning. They were motivated intrinsically and more likely to learn in response to an immediate life or work related need that required a solution. It has proven difficult to effectively plan training

and professional development strategies that satisfied organisational and individual needs, incorporated formal and informal learning opportunities and utilised both rational-technical and reflective-intuitive paradigms (Burns, 2002; Knowles, et al., 2005; Sork & Newman, 2004).

An Alternative Approach to Training and Development

As a result of this research, an innovative model for professional learning in dynamic environments was developed, and depicted in Figure 1. Although this was an alternative approach, the elements within it were not new and were well known to program developers. The problem had been that managers and human resource developers typically operated within only a narrow spectrum of these parameters. The strength of this alternative approach was its consideration of individual and organisational needs, together with a planning approach which considered foreseen and unforeseen, but predictable catalysts for learning, and incorporated varying forms of learning, loci of control and evaluation strategies. To achieve equilibrium with such diverse needs and strategies, the human resource developer would need to be able to utilise both logical and intuitive thought processes, perhaps even simultaneously. The following paragraphs on learning needs, planning considerations and juggling paradigms provided a brief overview of this approach.

Learning Needs

Like most models of program and organisational development, this approach also recommended conducting a needs analysis to determine and prioritise needs, for which appropriate strategies could be developed (Boone et al., 2002; Knowles et al.; Waddell, Cummings, & Worley, 2004). Additionally, this approach identified seven learning catalysts, three of which will be discussed in this section, ranging from those favouring individual needs to those relating more directly to organisational needs. Recognition of these learning catalysts overcame problems inherent in current approaches to training and development. For example, career development was inadequately addressed by methods favouring organisational needs, and furthermore Australia lagged behind other OECD countries in the provision of career development for adults (McMahon et al., 2003). In today's dynamic environment, it was expected people would experience multiple career paths and career changes (Houle, 1980; McMahon et al.). Changes in roles were one of the most likely changes to occur for both organisations and individuals, yet surprisingly current approaches often overlooked the necessity for inducting employees into new roles. This research highlighted the need for induction into middle management roles which equipped personnel to manage staff and budgets. Critical events often took individuals and organisations by surprise and consequently their aftermath was prob-

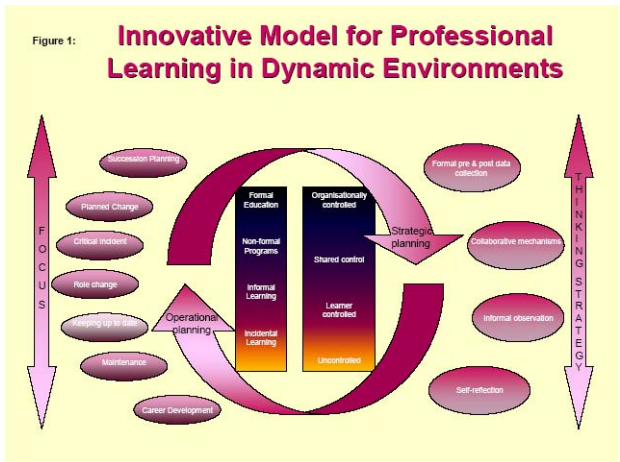
lematic. Although not reported previously in the findings in this paper, each of the three organisational cases had experienced a recent critical event; for example, a flash flood, intervention by the Corruption and Crime Commission (CCC), and an accidental death. In the case of the flash flood no debriefing sessions were held and an external agency recommended training in Occupational Health and Safety for one of the officers. Staff requested training and development in relation to the outcomes of the intervention by the CCC but it was slow to eventuate. A new directorate was established to enhance the focus on safety in the final case and key personal were appointed and later participated in related training and development. Given the 'inevitability' of critical events, scenarios should be developed to facilitate timely and appropriate training and development to debrief and improve these situations.

Planning Considerations

Planning was both strategic and operational. Strategic planning considered the seven learning catalysts and operational planning considered the types of learning, motivation for participation, responsibility, access, implementation and evaluation of learning programs. Traditional logically planned programs often resulted in a 'one-size-fits-all' approach to training and development which failed to adequately meet the needs of participants. It was difficult to plan for the diversity and complexity of adult learners. This alternative comprehensive approach recognised the importance of planning logically for known situations, but acknowledged its limitations. There were instances where reflection and intuition catered for the diverse range of experiences and contexts represented in training and development sessions. For example, trainers in Case One were frustrated with the TAA course because they were required to develop scenarios for hypothetical situations. Logically, this made sense to develop a course that could be rolled out regardless of context. However, upon reflection it would not have been difficult to adapt the course to this context and provide participants with the opportunity to engage in authentic rather than hypothetical tasks. Similarly, a mentoring program in Case Three required everyone to participate in several hours of introduction to the concept of mentoring. Logically it was seen as providing the same information for everyone so that all understood the parameters of the program. However the lack of recognition of prior knowledge and experience caused some mentors not to attend, which sent negative messages to their mentees, while others who did attend felt like their time was being wasted, and it created a sense of frustration. These brief examples highlighted the need to go beyond a solely logical approach to planning.

Juggling Paradigms

Considering the full range of possibilities in the planning phase of this approach required the human resource developer to constantly juggle paradigms. Examples of juggling logical and reflective approaches to program planning were provided in the previous section. Further to this, consideration must be given to factors such as locus of control and motivation, needs and responsibilities. Adults were typically self-directing learners, intrinsically motivated to learn by their immediate life or work related needs and wanted recognition and support from their employers (Knowles et al.). Organisations typically had to achieve their purpose, and be competitive to sustain advantage in dynamic environments. The locus of control over training and development options depended on the context and varied from organisational, to individual or shared. Other factors varied depending on locus of control. Traditional approaches to training and development focused on individual or organisational needs but not usually both simultaneously (Kane, 1986; Kane et al., 1994). Evidence from this research indicated these approaches met some but not all needs and therefore limited the effectiveness of programs. The innovative model for professional learning in dynamic environments recognised the co-existence of individual and organisational needs and advocated a ‘logical-reflective’ approach to address a wider range of needs.



Recommendations

Three recommendations emerged from this paper. It was recommended that this innovative model for professional learning in dynamic environments:

1. Be trialled in a range of situations to determine its practicality and effectiveness
2. Be supported by the development and implementation of a training program so that managers, trainers and human resource developers could learn to use this approach, which was different to traditional approaches, because it attempted to address ambiguities, and operated from both logical and reflective paradigms
3. Be evaluated in conjunction with evaluation of its supporting training program.

Conclusion

The technological revolution of the late 20th Century increased the complexity, pace of change and need for ongoing learning. The major influences on program development were conceptualised in the late 19th and early 20th Centuries and contributed to approaches to formal and informal learning, which rarely overlapped. Since the middle of the 20th Century program development was largely influenced by the Tylerian model and followed a rational-technical approach. More recently program developers explored reflective-intuitive approaches but these were less commonly adopted. Approaches to training and development focused either on the individual needs, results or human resource planning but did not consider the needs of both the organisation and individuals simultaneously. An interpretive study was conducted in three large Australian organisations in 2007, the results of which indicated the current approach to training and development did not completely meet the learning needs of organisations or individuals. An innovative model for professional learning in dynamic environments was developed as a result of this research (see Figure 1). This model considered a broad range of learning catalysts, types of learning, loci of control, and evaluation strategies. It drew from both the rational-technical and reflective-intuitive paradigms and facilitated integrated planning of formal and informal learning to meet both organisational and individual learning needs. Training and development professionals, human resource developers and managers would need to be trained in using the model before its implementation, the model would need to be trialled, and both the training and implementation evaluated to determine its effectiveness.

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