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World trends in staff development: Implications on the performance of technical education institutions

PHIL LOVEDER
MANAGER, INTERNATIONAL AND CONSULTANCY SERVICES

NATIONAL CENTRE FOR VOCATIONAL EDUCATION RESEARCH

A criticism often levelled at technical education teachers and practitioners, especially by employers, is that they lack up-to-date and relevant industry experience or knowledge and that they are sometimes unfamiliar with the range of technological advances and ways of working occurring in modern workplaces. At the same time, evidence suggests that there is increasing pressure on these practitioners to be more responsive to an ever expanding range of clients and learners.

Sourcing industry-based trainers has been used successfully by many institutions as one response to this issue of 'relevancy and currency', while staff development and change management, and especially 'back-to-industry' programs have been used to ensure the currency of existing teaching staff. There are however other innovative practices used including communities of practice and active networking with industry, strategic change management and applying information and research.

This paper investigates the strategies and practices used by institutions worldwide to develop teachers and practitioners professional experience. It also explores successful models for ensuring that staff development provides a way of maintaining relevance in an increasingly complicated and globalised training market.

International trends and issues influencing the staff development of technical education practitioners

There are a large range of factors that are impacting on the extent and nature of staff development for technical education practitioners world-wide. Some of these relate to the changing nature of the clients of technical education while others involve recent technological advances and the growth of the knowledge economy, flexible approaches to teaching and learning and work intensification.

Technical education's clients

The way we define our 'clients' has changed in technical education. Traditionally, we have thought of students as our key clients. In many cases, this had broadened now to include; governments, industry and employers, parents, nations and local communities. Technical education in many country's contexts is linked more closely to national human resource and manpower planning policies and objectives requiring a different approach to the delivery of training. The new 'client base' for technical education is increasingly more sophisticated and used to choice and generally have high expectations of the quality of the training services and products they purchase (ANTA, 2004).

Flexible approaches to teaching and learning

There has been a major 're-think' on *how* technical education is delivered over the last decade. This includes how and where training is delivered. Guthrie (2003) reports on some of the changes to delivery type, including the move away from traditional delivery in a publicly-funded school or college, toward diversified sites for training, including, private providers, workplaces and job sites.

The growth of information and communications technology has fuelled the expansion of flexible delivery in technical education. No longer are traditional face-to-face forms of instruction adequate in themselves, but rather stakeholders expect learning that is customised, just-in-time and available where and when the learner wants it. Enterprises and companies in some countries and contexts are now able to be registered as training providers and the emphasis is on making training relevant and accessible.

Related to this has been the move toward *modularisation* of curriculum. The modularisation of training involves breaking up longer courses into shorter programs of study (or modules) that are capable of assessment as each program of study is completed (Alto et al. 2000). These modules have allowed people to undertake shorter amounts of training to meet a particular skill needs, rather than having to complete entire qualifications. All of this has resulted in the need for practitioners to re-skill and keep abreast of new developments.

Intensification of work

Workplace reforms in many countries have resulted in 'flatter' management structures and increased emphasis on team-work, and as a consequence, 'job enlargement'. This has extended to the work of technical education practitioners too, where increased market competition accompanying the 'freeing up' of some training markets has threatened the profitability of traditional (often publicly-funded) providers leading to lower staffing levels, unsustainable work demands and longer working hours in some circumstances. The absence of regulations and limits on working hours has in many instances led to 'self exploitation'. Work is becoming more

'unbounded' in time and space now, with practitioners increasingly needing to work and to engage in their own learning at home and after hours (ANTA, 2004).

Changing job roles in technical education

The International Labour Office (ILO) has identified a new 'paradigm' for technical education that has particular characteristics. Increasingly, technical education is demand-driven, emphasises employability, competency standards, lifelong and learner-focussed learning, integrated education and training, multi-skilling, flexibility (in terms of entry and exit points) and often involves participatory governance (ILO, 2002). This has had the consequence of diversifying the roles and work of many technical education practitioners, with their work being described variously as learning facilitator, workplace or industry trainer, workplace assessor, facilitator or consultant, and learning environment manager (Chappel and Johnston, 2003). Such diversified roles have required a new focus by practitioners on reflecting on their own professional practice and to acquire skills beyond the core teaching and learning competencies.

Impact of the knowledge economy

The move in modern economies increasingly toward 'knowledge work', characterized by higher skilled jobs requiring workers to identify and conceptualize problems and solutions has implications for technical education. The emergence of the knowledge economy necessitates new and often changing skills sets of modern workers – who are the students of technical education- and these skills need to be maintained and updated regularly over a working life. Technical education practitioners are expected to be far more responsive to client needs than in the past, and must adapt and tailor learning for increasingly complex learning environments (ANTA, 2004).

The 'demographic challenge'

A final issue identified are challenges associated with ageing technical education workforces in many countries. McGrath (2004) identifies the ageing profile of many technical education systems worldwide as a major challenge for skills development in the future. Technical education systems in Europe, the Americas, parts of East-Asia and Australasia are increasingly characterized by ageing workforces and natural attrition of senior and experienced practitioners and managers due to retirement. In an era of cost-cutting and scarce resources, insufficient attention is sometimes paid to the initial training of new entrants and to 'capturing' the knowledge of those practitioners leaving the system.

Staff development: Trends and practice

What is staff development?

Staff development (or professional development as it is often referred), plays an essential role in ensuring that technical education staff are able to keep abreast of developments in their own field of teaching as well as changes in teaching methods and technologies. Martinez et al. (1998) identified a range of other important roles that staff development plays, including staff and student attraction and retention, understanding new technologies and practices in the workplace (especially in an industrial context), and in introducing innovative teaching and learning practices into the classroom.

Maybe surprisingly, identifying a straightforward definition of 'staff development' is challenging. A major reason for this difficulty is that staff development intersects a number of other professional practices such as teaching standards, qualifications and other organisational change

agendas. Definition problems also arise due to the differences between what constitutes staff development in different country's contexts and the often very different technical education systems that underpin them. Also, staff development doesn't necessarily relate only to training but also includes a range of other strategies (like back to industry programs, mentoring, career 'pathing' and rotation, and communities of practice) that have the effect of improving the skills and professional practice of technical education practitioners.

A useful definition of staff development provided by Loucks-Horsley (1996) is:

 'Opportunities offered to educators to develop knowledge skills, approaches and dispositions to improve their effectiveness in their classrooms and organizations.'

Another from the Centre for Educational Research and Innovation (CERI) suggests staff development (and by extension, professional development) is:

 'Any activity that develops an individual's skills, knowledge, expertise and other characteristics as a teacher/educator. These include personal study and reflection as well as formal courses'

Types of staff development practices in use worldwide

Exploration of literature from international sources suggests that staff development for technical education practitioners has been clustered around the following broad themes (adapted from Dickie et al. 2004):

♣ *Pedagogical expertise*; including building the capacity of practitioners to adapt teaching and learning strategies to individual students and to incorporate new approaches such as coaching, mentoring, learner-centred and self-directed learning. European literature in particular identifies these skills as crucial

♣ *Learner focus*; includes the ability to apply and support self-directed learning and to cater for individual learning differences and to promote lifelong learning

♣ *Industry currency*; includes maintaining knowledge of the technical aspects of the practitioner's subject area and balancing this with the need to understand generic employability skills

♣ *Use of technology*; includes understanding new and emerging Information and Communications Technologies (ICT) and flexible delivery approaches to learning including models that allow practitioners to keep in touch with students (for example, communities of practice) to ensure adequate interaction between teacher and learner in remote delivery settings

♣ *Client focus*; involves understanding relationship-building and brokering skills, developing networks and partnerships with industry, customising training to client's needs and evaluating and monitoring outcomes

♣ *Technical education system expertise*; including understanding quality assurance systems, registration procedures (where they apply), government legislation and recognition of prior learning

♣ *Personal qualities and attributes;* involves understanding personal attributes that are considered essential to being a technical education practitioner, such as 'passion for learning', teaching as a key aptitude, communication skills and commitment to self-development and improvement.

Lockwood and Latchem (2004) for the Commonwealth of Learning (COL) identified use of technology and flexible learning, planning, management and administration, instructional design and course adaptation, research skills and student counselling support as key staff development priorities.

For managers of technical education institutions, a further set of staff development themes have been identified around *Leadership capabilities;* especially related to building and communicating a

vision, strategic focus on future trends and business needs, change leadership, efficient use of resources and entrepreneurship and establishing strong links with community and local industry.

Many commentators, notably, McGrath and Palmer (2004) have identified a range of different approaches to staff development in use worldwide. These include:

Formal training

Formal training, whether initial training or re-skilling, is frequently used by training institutions to maintain the currency of the skills of their practitioners. Sometimes this is done in-house, through internal or external training consultants within the country, while on other occasions, through specialist agencies such as the International Institute for Educational Planning (IIEP - UNESCO) or the ILO International Training Centre.

Mentorship

Mentoring is important, especially to new or relatively inexperienced practitioners. This often involves designating a more senior staff member to work-shadow or to provide professional support as a 'critical friend'.

Career 'pathing' and rotation

This involves understanding the likely career path of new staff and planning for staff development strategies beyond those involved in initial orientation. In some circumstances, rotating practitioners through different postings to gain a balance of experience is important to the retention of good staff.

Exchange programs

Providing opportunities to undertake staff exchanges with other agencies is an effective way of exposing practitioners to good practice models or to contribute to the understanding of others. These exchanges maybe short term or longer term (secondments) and in relation to senior managers, maybe with multi-lateral agencies (such as CIDA, European Training Foundation, SEAMEO Voctech and so forth).

Communities of practice

This is a relatively recent phenomenon (last 5 years or so) and involves practitioners with like interests and experiences establishing a 'community' as a way of sharing professional and technical knowledge. They may also serve to codify the existing, tacit knowledge of institutional staff (or groups of institutions) and to provide useful knowledge to other staff to improve practice.

Back to industry (attachment) programs

In order to maintain knowledge of technologies and practices commonly used in industrial contexts, using sabbaticals or professional leave in order to work in industry has been used for sometime by technical education practitioners. In this way, they can ensure the skills that they may have acquired sometime ago are 'replenished' and updated.

Information sites and databases

There are examples of information websites and databases emerging across the world that play an important role in information sharing and networking. For example, the UNEVOC network has been an important source of information for technical education practitioners in conjunction with

ILO forums such as the Asia-Pacific Skills Development Information Network (APSDIN) which is presently being re-invigorated as the SKILLS-AP forum.

Regional trends

Staff development for technical education practitioners tends to be unique to particular countries and policy circumstances. And even within countries, there are considerable variations in how staff development is organised and applied by training institutions. However, there have been a few studies, especially from Europe, that have attempted to document 'regional trends'.

The OECD, and the Centre for Educational Research and Innovation (CERI) in particular has documented staff development trends in member countries. Other agencies such as CEDEFOP have compared groupings of European Community (EC) countries.

European trends

It is difficult to make general statements about staff development across all EU member countries. However, Cort et al. (2004), for CEDEFOP, identified the following staff development themes emerging from Europe as more-or-less uniform country-to-country:

* 'New' *pedagogical skills* in line with a learner-centred approach and on-the-job learning techniques now being offered to trainees (pedagogical updating)

* Up-to-date *vocational skills* related to modern technologies and workplaces (vocational updating)

* awareness of the *needs of business and employers*

* skills for *team working and networking*

* *managerial, organisational* and *communication* skills.

According to Dickie et al. (2004) most European approaches to staff development tend to be found along a continuum from mandating initial qualifications (such as Germany where teaching and industry-specific qualifications are required before employment) through to further education in England where no formal teaching qualifications were required before 2001. In the United Kingdom, staff development has focused on standards for teachers, and there is now a requirement for practitioners to have a teaching qualification. Industry 'currency' continues to be a key issue in Britain and the majority of system-wide approaches to staff development have been around organisational and national objectives (Brookes and Hughes, 2001).

In Scotland, staff development has been characterized by educational theory and practice, vocational theory and practice, corporate knowledge and awareness and career and future skills development (SFEFC, 2005)

In France, technical education has been tied quite closely to social development and as a result, staff development practices have been centred on preparing practitioners to develop active relationships with the large range of economic and social partners in the country.

In the Scandinavian countries (Norway, Sweden, Finland and Denmark), developments have been around general pedagogy and psychology as well as subject-specific teaching theory and methodology as well as linking educational development to innovation (Harreby, T et al. 1997). As a result of modern reforms to technical education, new skills are being required of practitioners meaning staff development in areas such as counselling, brokering collaborative arrangements with diverse stakeholders and e-learning approaches are becoming increasingly important (Cort et al. 2004).

Australasian trends

In Australia, staff development has been driven by several initiatives from the Australian National Training Authority-ANTA[1]. Of greatest importance has been the *Reframing the future* initiative which has provided a focus for the 'professionalisation' of the technical education workforce in Australia. Emphasis in Australia has been around understanding:

♣ how to develop *sustainable partnerships* with industry and the community,

♣ improving the *quality of teaching and learning* through course design

♣ use of new *modes of learning* that enable students to choose learning styles and preferences

♣ *action-based learning* and use of 'up-front' assessment and individual learning plans (Grady et al. 2003)

North American trends

In the United States, teacher professional development has emphasised 'teacher-as-learner' models, institutional-based curriculum and instructional improvement, classroom management and partnership development skills (Szuminski, K 2004).

Sandford and McCaslin (2004), for the National Centres for Career and Technical Education (NCCTE) identified the following staff development emphases in United States community colleges; identifying the learning characteristics of students and learners, alternative teaching methods to accommodate different learning styles, understanding web-based instruction and distance learning techniques and methods.

Asian and sub-continent trends

Mustapha (2001) identified several approaches to skills development from the Malaysian context which included professional networking, industrial attachment, knowledge and skills upgrading and further education.

Jain and Saxena (2002) identified block-release industrial attachment for new and experienced technical education practitioners using technology and facilities available in industry as a major staff development strategy in India.

Implications for technical education colleges

There are a range of important challenges for technical education institutions arising from the trends and issues reported earlier in this paper. In particular, institutions are increasingly concerned about their ability to adapt their staff and professional development practices to the new training environment.

McGrath (2004) provides possibly the best analysis of the challenges facing staff development in technical education in the modern era. He identified three (3) sets of challenges in particular that posed serious challenges to managers and practitioners of technical education. Firstly, there are issues around whether staff development has adequately kept pace with the rapid and far-reaching changes in the nature of work, and whether sufficient progress has been made in shifting the focus from 'technical education' to 'skills development'. Secondly, institutions are faced

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[1] The Australian National Training Authority was abolished in June 2005 and its functions assumed by the federal Department of Education, Science and Training.

increasingly with the need to address problems with the composition of their workforce, especially age and gender. Thirdly, many are realising that they have not turned their commitments to developing partnerships into sufficiently good practice (McGrath, 2004 p22)

In relation to the staff development challenges, McGrath recommends that institutions need to address both the needs of new practitioners especially for basic orientation and balance this with the needs of existing staff. It is sometimes forgotten that staff development needs arise equally for experienced practitioners as a result of the changing nature of work and new technologies as they do for novice ones. Providing adequate opportunities for staff development for more experienced staff has proved to be an important factor in retaining good staff in technical education institutions, especially when these staff have been recruited from industry (Strebler, M et al. 2005)

With a trend toward 'broadening' the roles of other staff in non-teaching roles within technical education institutions worldwide, the need to pay greater attention to building the knowledge and expertise of non-specialist staff, especially in skills development, is becoming more essential. This is especially important as institutions realise they no longer have the 'technical experts' they could once rely upon. This also extends to the roles performed by the practitioners themselves.

Cort et al. (2004) remind us that the role of the modern technical education teacher is not only to teach, but to also guide students in their educational choices. This requires a whole range of other skills in counselling, in performing management and administrative duties, planning, conducting research and building partnerships and relationships that all require staff development and skills acquisition. Staff development is essential to providing practitioners with the knowledge and skills to cope with their new roles and functions.

Staff development should not be viewed as simply orientating new staff either. Managers of technical education institutions need to be aware of the medium-term career pathways of their staff to ensure that appropriate opportunities for staff development are provided. These also need to be balanced with the medium and longer term strategies and visions for the operation of the institution.

In addressing future staff development needs, greater consideration needs to be given to inter-agency or cross-institutional cooperation to ensure that the good practices are shared.

The internal staff development requirements of the institution should not over-ride the importance of addressing the needs of its partners however. Managers need to ensure that these partners (government, communities, industry, individuals) are given sufficient opportunity to express how they would like to see partnerships develop and to understand how staff development strategies impact on the capacity development of these partnerships (McGrath, 2004). Cort et al. (2004) go further to suggest that engaging with industry partners is essential to ensuring that practice in the classroom prepares students adequately for learning styles in the workplace (for example on-the-job training) and that practitioners have a role in making technical education relevant for industry.

Cort et al. (2004) suggest that institutions should adopt staff development approaches that have the following features;

♣ staff development programs should take a 'dualistic approach', integrating practice and on-the-job learning in the practitioner's classroom with theory

♣ where possible, staff development should use flexible, modular approaches to meet the needs and backgrounds of practitioners

♣ staff development is often most beneficial when it uses a 'bottom-up' approach and encourages practitioners to reflect on their own teaching practice

♣ use of 'study circles' or 'communities of practice' involving staff from different departments, disciplines or institutions can be beneficial ; and

♣ use of ICT provides a powerful medium for encouraging active participation in staff development. (Cort et al. 2004, p. 27)

Finally, the staff development of technical education practitioners is too important to be left to individual teachers' own personal motivation according to Cort et al. (2004). Staff development should be regular and compulsory, especially as initial training cannot be expected to sustain a practitioner throughout their entire teaching career. Having said this, it is important to recognise that staff development takes time and commitment, and managers must be willing to ensure that staff have both the time and financial support they need to participate in their own learning.

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