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## **Good practice principles in apprenticeship systems: An international study**

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### **Abstract**

Apprenticeships can be seen as the ultimate in co-operation between TVET providers and industry as they are based on a combination of work and study. They provide appropriate skills for companies and also all-round occupational and generic skills, as well as providing a tried and tested means of moving young people into the full-time labour market. However there are many different actual and potential models of apprenticeship, which can be confusing for countries looking to begin or re-develop an apprenticeship system. This paper uses part of the work undertaken for a project funded by the International Labour Organization and the World Bank to compare and contrast apprenticeship systems in 11 countries, for the purpose of drawing out some principles of good practice. The project was undertaken to provide suggestions for the process of reform of the Indian apprenticeship system (Planning Commission 2009).

Experiences of other countries, both in the developed and the developing world, indicate that apprenticeship systems cannot be transplanted among countries; however, key features of countries' systems can be identified and sensitively developed in other countries. The paper explains how an international comparative study arrived at principles for good practice.

In the project, eleven individual country case studies, based on reports, literature and stakeholder comment, were produced by a team of national experts, and subjected to a cross-case analysis to extract these principles. The use of national experts was judged to be more effective than having people write on other countries' systems. The latter method has proved in many instances to result in inaccurate reports, susceptibility to the influence of limited numbers of stakeholders and a lack of sophistication in analysing trends. The country case studies took into account agreed international benchmarks for describing, analysing and evaluating apprenticeships, based on the framework described in the recently-released memorandum by INAP, the International Network on Innovative Apprenticeship (INAP Commission 2012) and the framework developed by one of the authors in the International Encyclopedia of Education (Smith 2010). The countries were selected to cover a range of variables.

A cross-case analysis was undertaken which drew together data from the countries using a thematic approach and simple data display techniques (Miles & Huberman 1994). The analysis covered both systemic issues and 'the life cycle of the apprentice'. The data were then further reduced to develop an identified set of principles of good practice in apprenticeship systems. These principles of good practice were then contextualised within a consideration of issues of 'quality', expansion and simplification strategies for apprenticeships and incentives for employers and apprentices.

## 1 Introduction

The project was commissioned by the International Labor Organization and the World Bank to contribute to Indian discussions about the reform of the apprenticeship system. India's apprenticeship system will be a major contributor to its future growth but in comparison to, for example, Australia or Germany, its apprenticeship system is small (Ministry of Labour and Employment 2011), with only about 0.1% of the formal labour force involved in apprenticeships compared with up to 4% in some countries. The Indian labour force is the world's second largest (Economist 2011) with 487.6 million workers. The agricultural sector employs most of the national workforce and is second in farm output worldwide. For the economy to continue to grow and expand, it is assumed that a large portion of the workforce will migrate from the primary sector (agriculture) to the secondary and tertiary sectors. However the skills sets that are required in both these sectors are quite different from those in the agricultural sector (ICRA Management Consulting 2010). This implies a large potential skill gap when such a migration occurs. India aims at a skilled workforce of 500 million by 2022 (Ministry of Labour and Employment 2010) and this is an extremely ambitious policy aspiration to which, it is anticipated, a major expansion of the apprenticeship system will contribute.

Some of the obvious challenges that confront the Indian government in its attempts to reform the apprenticeship system include the small size of the apprenticeship system, lack of alignment of expectations of employers and apprentices, uneven quality of curriculum, uneven participation in the apprenticeship system among socio-economic groups and other groupings, lack of confidence in the skills of graduates of the system and the difficulties associated with a predominantly informal economy (Planning Commission Sub Committee 2009). There is also concern about an over-complexity of regulation, the under-representation of women and minority groups in apprenticeships, and the availability and quality of sufficient trainers (ILO and OECD 2011). Under these conditions international good practice principles derived from this research are highly relevant.

As part of the project method, a number of international country case studies were written specifically for the project, which were then analysed by the authors of this paper. The aim of the cross-case analysis was to develop good practice principles and features of a 'model apprenticeship system' which were then utilised, following an analysis of the Indian system, to suggest possible options for the Indian system. This paper, however, focuses only on the international comparison and the good practice principles and not on the Indian system or the proposals for reform of the Indian system that have been presented (2012). The research question for the phase of the project reported on in this paper is 'What are the good practice features internationally that provide principles of good practice in apprenticeship systems?'

## 2 Background and literature review

Apprenticeship is an institution which, for centuries, has successfully effected entry into working life for young people, and has also been responsible for the maintenance of the skills

base of many national economies. Apprenticeships began in medieval times, and perhaps before that in some countries, when young people went to live in their masters' houses to learn trades, over a period of up to seven years. Although apprenticeships have become less demanding of both master and apprentice, they have survived in many countries over the centuries (Lane 1996).

The essential components of a formal apprenticeship are generally understood to be:

- a training regime set up by, or with the approval of, governments;
- a combination of off and on the job training;
- the assumption of responsibility by the employer for the development of the apprentice;
- The award of a qualification and/or licence and/or some other recognition that enables an occupation to be practised independently once the apprenticeship is successfully completed.

In modern economies, apprenticeships are regarded as important ways of developing skills in the workforce along with their perceived role in reducing youth unemployment. After a period of neglect, apprenticeships have recently returned to centre-stage and they are beginning to take a more prominent role in the way that countries manage their education, training and labour markets (Rauner & Smith 2010).

However, different countries have different expectations of apprenticeships and therefore regulate and manage their apprenticeship systems in different ways (Smith 2010) and thus it is difficult directly to compare systems or to transplant ideas from one country to another.

### 3 Method

Eleven country case studies of their respective apprenticeship systems were commissioned (Table 1). One was written by one of the authors of this paper and the remainder by nine invited experts, who wrote about countries where they were located (n=8) or with which they were familiar (n=2). One expert wrote about two countries. The countries were selected to cover a range of variables: stages of development, size and reputation of apprenticeship system, global location to ensure that all continents were covered. Some of the selections were suggested by the funding bodies and others were added by the researchers. India was included in the initial case studies to allow comparison with the Indian system from the commencement of the project. The findings from this comparison are the subject of a paper to be published by the International Labour Organization (Smith & Brennan Kemmis, forthcoming, 2013).

Table 1: **Countries studied, by state of economic development**

More developed	Australia, Canada, England, France, Germany, United States
Less developed	Egypt, Indonesia, India, South Africa, Turkey

After considering other cross-national studies, it was decided that the use of case studies (Yin, 2009) written by national experts would be more effective than having the researchers themselves write on other countries' systems. Experience has shown that the latter method has proved in many instances to result in inaccurate reports, it is susceptible to the influence of limited numbers of stakeholders and it is not possible to judge accurately the influence of the full range of contextual factors. To help ensure currency and quality, the country experts were requested to interview a senior government official in their country before finalising the writing-up, and also to submit their case study to an independent academic expert at another institution for review. These objectives were achieved, in some instances partially, in seven of the country case studies.

The purpose of the country case studies was firstly to obtain accurate and current information about countries' apprenticeship systems written by people who had a deep understanding of the culture, politics and economics of the countries as well as the apprenticeship systems. It is well-recognised that apprenticeship systems need to grow from countries' national economic and cultural contexts and cannot be transplanted as complete entities from one country to another. The second purpose was to obtain targeted information about key features and trends that could be used to develop good practice principles in apprenticeships.

The country case studies took into account agreed international benchmarks for describing, analysing and evaluating apprenticeships. These were the framework described in the recently-released memorandum by INAP, the International Network on Innovative Apprenticeship (INAP Commission 2012) and the framework developed by one of the authors in the International Encyclopedia of Education (Smith 2010). Based on these frameworks, the authors were requested to cover the following: a number of topics under major headings, each of which included up to ten sub-topics. These were as follows:

- Introductory paragraph about the country's economic and education systems
- Nature of the apprenticeship system
- Occupational coverage
- Participation
- Training and assessment
- Participation of governments and other stakeholder groups (social partners)
- Major issues and learning points (what are the major issues facing apprenticeship in the researched countries and what has been the effectiveness of the policy developments?)

The headings proved more applicable to some countries than others. As simple examples of differences, some countries had more than one major apprenticeship system, and in some countries little official data were available. But all case studies were able to provide at least some information under each major heading, if not each minor heading.

A thematic cross-case analysis was then undertaken (Miles & Huberman 1994). For the cross-case analysis the following guidelines were used to develop the structures and headings:

- The format of the case study guidelines, which was itself developed partly from the project terms of reference but also informed by the following two documents:
  - o The INAP memorandum on apprenticeship architecture;
  - o Analysis of apprenticeships in the International Encyclopedia of Education (Smith 2010);
- The cross-country analysis in the European Commission report on apprenticeship supply (European Commission 2012); and
- An apprenticeship life-cycle model developed in an Australian study (Smith et al. 2009) to describe the progression through an apprenticeship for the individual apprentice.

However, some themes also arose from the data themselves (Stake 1995). Also, the researchers' views on issues and policy developments were collated into a table.

The research question for this phase of the project and therefore for this paper is 'What are good practice *features* internationally that provide a set of good practice *principles* for an apprenticeship system?'

## 4 Findings

The analysis showed that apprenticeship systems could often be grouped together into 'bands' in terms of individual features with each 'band' representing a cluster of similar characteristics. For example information relating to completion rates, involvement of social partners, payment of apprentices, and target age groups across the different case study countries tended to show distinct similarities and differences and allowed the researchers to develop the typologies discussed below. Two examples are provided below (Tables 2 and 3)

Table 2: **Typology of availability of apprenticeships to adults**

Predominantly for young people	Egypt, France, Germany, India (?), Turkey
Routinely includes both young people and adults	Australia, England, Indonesia (?-must be 18), South Africa
Predominantly for adults	Canada, United States

Table 3: **Typology of employment status of apprentices**

Apprentices paid as employees	Australia, Canada, England, France, Germany, South Africa, U.S.
Apprentices paid, but not as formal employee	Turkey
Stipend/allowance only	Egypt, India, Indonesia

Such typologies are useful in describing the breadth of practices that occur across various apprenticeship systems across the case study countries. But the arrangements in the various typologies were often combined in different ways. So, for example, it was not possible to produce principles of good practice for a country at a particular stage of development, or for a country that wishes to open its system to adults. The reality is much more complex than that.

The paper proposes groups of good practice principles without proposing particular ‘mixes’ of features. In the discussion that follows, the findings from the cross case analysis are grouped into the following headings: Underlying principles, quality systems, provisions for apprentices and for employers, and expansion strategies.

#### **4.1 Underlying principles**

From the country data, underlying good practice principles were drawn out, grouped into four categories: occupational coverage, participation, national government structures and stakeholders. The principles are listed in Table 4.

Table 4: **Underlying principles for a model apprenticeship system**

<p><b>Occupational coverage</b></p> <ul style="list-style-type: none"><li>• Apprenticeships available in all industries;</li><li>• Apprenticeships available in a range of occupations, particularly those that are typically undertaken by women as well as men.</li></ul> <p><b>Participation</b></p> <ul style="list-style-type: none"><li>• Apprenticeships open to people of either gender and all ages;</li><li>• Apprenticeships available in rural and regional as well as urban areas;</li><li>• Clear pathways for school-leavers;</li><li>• Pathways for disadvantaged people and for people without necessary entry qualifications;</li><li>• Availability of off-the-job programs to facilitate entry to an apprenticeship;</li><li>• Pathways into apprenticeship (and beyond) are clear and well-publicised in ways that reach all potential candidates.</li></ul> <p><b>National government structures</b></p> <ul style="list-style-type: none"><li>• National policy emphasis is both on training aspects and on employment aspects of apprenticeship;</li><li>• Good liaison between government agencies responsible for different aspects of the apprenticeship system;</li><li>• Where responsibilities lie with states and provinces as well as national governments, the relative responsibilities are well-defined and publicised;</li><li>• Rigorous qualifications that are regularly updated;</li><li>• Collection of appropriate data about apprenticeships;</li><li>• Systems make provision for apprenticeships in different geographical areas (e.g. rural as well as urban).</li></ul>
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### **Stakeholders**

- All major stakeholder groups (employers, training providers, employer groups and employee associations/trade unions) are involved in the development and maintenance of apprenticeship regulation and structures;
- A commitment to collaboration among the various stakeholders;
- System for adding new occupations to the apprenticeship system according to specified criteria, with specific stakeholder bodies having responsibilities to notify new occupations.

These principles address the major components of a system: who can participate, what is the coverage of the economy, what structures are in place, and which stakeholders are involved.

## **4.2 Quality systems**

It became apparent when analysing the country case studies that good practice principles needed to have an underpinning concern for quality. In some cases, where apprenticeship systems were in their infancy or were historically very small, quality was not a primary consideration, but the need for quality was emphasised throughout. Apprenticeship systems involve many components: employment, training in the workplace, training at training providers, and administrative systems at different levels of government. To address these issues and to suggest strategies, derived from the country case studies, that increased and assured quality, the following points were suggested (Table 5). Instances of each of those were found in one or more of the country case studies.

Table 5: **Systems to improve and maintain quality**

### **Training providers**

- Training providers that are subject to quality regimes including audits;
- Content of qualifications is viewable on the internet;
- Requirements for qualifications/training for teachers in training providers;
- Trade testing at the end of the apprenticeship that is managed externally to the enterprise and the training provider (e.g. national 'Red Seal' system in Canada and local examination board in Germany).

### **Employers**

- A registration scheme for enterprises/employing organisations offering apprenticeships, with requisite criteria; proportionate criteria (i.e. less stringent) developed for small and medium enterprises, especially micro-businesses;
- Supervision ratios in companies, which are communicated and enforced as part of maintenance of registration;
- Requirements for qualifications/training for in-company trainers;
- On-the-job training subject to some form of overseeing;
- Continuing upskilling programs for company trainers and teachers;
- Involvement of employer associations or groups and employee associations or trade unions at national and local level in apprentice systems;
- Employers should be able to apply for registration as a training provider for off-the-job component of apprenticeships.

An important contributor to quality is the provision of resources. Apprenticeship systems involve complex decisions about appropriate use of scarce funds, the relative contributions of governments, industry and individuals, and planning for the future so that financial commitment to the system remains appropriate should the system expand considerably.

The following principles for incentives to employers, training providers and individuals were suggested, derived from practices in the country case studies.

- Financial incentives for enterprises to participate, subject to monitoring of satisfactory performance including audits;
- Additional incentives for employers to employ disabled or disadvantaged people as apprentices;
- Public funding for training providers – wholly or partly funded for apprenticeship training - but could arguably be financed by student loans system;
- Discounted wages for apprentices (either a lower overall rate or non-payment while at off-the-job training), but within the discounted range, higher wages for mature aged people;
- Payment of social contributions for apprentices by the State; and
- Financial incentives to apprentices to complete their contracts and to employers who continue to employ their apprentices on completion.

### **4.3 Provisions for apprentices and employers**

Despite government structures and stakeholder involvement, the basic participants in all apprenticeship systems are apprentices and employers. The ‘lifecycle’ model proposed by Smith et al (2009) focuses on this key relationship, following an apprentice through from recruitment to completion of the contract of training. In the current project, we listed a number of provisions for the apprentice and for the employer (Table 5) which the country experts had identified as good practice. While the table is divided into ‘apprentice’ and ‘employer’ it is apparent that systems that support the apprentice also assist the employer, and vice versa. For example, if there is a ‘fall-back’ system for apprentices whose employer can no longer afford to employ them, this eases pressure on employers and also makes them more willing to employ an apprentice in the first place.

Table 7: **Good practice provisions for the apprentice and the employer**

Provisions for the apprentice	Provisions for the employer
<ul style="list-style-type: none"> <li>• Assistance in meeting entry requirements and/or learning support once employed;</li> <li>• Employed status within an enterprise;</li> <li>• An increase in pay over the period of an apprenticeship and a higher rate of pay on completion;</li> <li>• A combination of on and off the job learning with around 20% of time at a training provider;</li> <li>• A chance to mix with apprentices from other enterprises;</li> <li>• Attainment of a recognised qualification;</li> <li>• A training plan within the company;</li> <li>• Opportunities to experience different workplaces if in a limited environment;</li> <li>• A 'case manager' to oversee progress in off and on the job training (e.g. 'pedagogical referent tutor' in France);</li> <li>• Opportunities to switch employers for good reason;</li> <li>• A chance to progress further to higher level employment or self-employment.</li> </ul>	<ul style="list-style-type: none"> <li>• Provision to enterprises of suggested workplace curriculum;</li> <li>• Cohort management systems within or across enterprises;</li> <li>• Support for small and medium enterprises, through structured arrangements, by specified bodies;</li> <li>• Support for employers rather than punitive measures for non-compliance;</li> <li>• Easily-available information about the system for would-be apprentices and employers (e.g. Ellis chart in Canada);</li> <li>• Fall-back system for apprentices whose employer can no longer afford to employ them (e.g. Group Training Organisations in Australia or interim 'out of trade' arrangements).</li> </ul>

#### 4.4 Expansion and simplification strategies

A number of expansion strategies were noted in the country case studies. These included the promotion of the 'brand' of apprenticeship by governments, particularly in countries where the status of apprenticeships is low. This often included promotion of apprenticeships as a valued school-leaving pathway with deep connections into secondary schools, and Education of secondary school and other careers staff about apprenticeships. It also included measures to make apprenticeships more attractive through providing pathways to higher level qualifications so that people do not feel the choice is final and through encouragement through industrial relations or other systems for apprentice qualifications to form the basis of recruitment to jobs and/or be rewarded with higher pay. Strategies to increase participation of minority groups both assisted those groups in their labour market outcomes and increased the numbers in apprenticeships. Finally, two of the countries (Australia and, at a later date, England) had introduced a system of third-party employers into the apprenticeship system so that not all apprentices had to be directly employed by an enterprise.

However, without due care being paid, a rapid expansion poses quality risks that are subsequently difficult to address. The experiences of countries trying to increase their apprenticeship rates suggest the following risks:

- A rapid increase can lead to quality problems.
- Employers may be persuaded to participate without being fully aware of their responsibilities.

- Completion rates may be low unless quality is properly managed.
- Rapid establishment in new occupational areas without a tradition of formal training can lead to the risk of low-quality qualifications and workplace curriculum which can be hard to shift later, leading either to persistent negative perceptions of the occupation and the apprenticeship, or to rapid and confusing policy shifts to address the problem.
- The establishment of ‘differently-badged’ systems should be avoided, as it can lead to the newer systems being viewed as inferior, and such perceptions are difficult to shift subsequently (examples: traineeships in Australia, ‘modern apprenticeships’ in England).
- Extensive stakeholder involvement is vital.

Therefore countries looking to expand their systems need to be aware of these risks, and while each country is unique, other countries’ experiences can provide useful guidance.

Simplification is another important process for apprenticeship systems which is often allied to expansion because extremely complex systems cannot be scaled up. The country case studies illustrated the following processes which they had used, or which it was evident were needed, to simplify systems.

- Harmonisation across jurisdictions (states and provinces) to enhance mobility and improve understanding of systems.
- Consistency of contract periods (at least no more than two or three set lengths).
- Removal of parallel systems with the same country where feasible; or if not, clear communication processes.

Most of the case study countries were involved in exercises to try to reduce the differences among jurisdictions, in particular.

## 5 Conclusion

The features mentioned in this paper could be considered by any national or provincial government seeking to review or reform its apprenticeship system, in conjunction with industry representatives. For the scholarly study of apprenticeships, the study provides a set of good practice principles for examining apprenticeship systems. A particular feature of the principles is the need to attend to the quality and relevance of training by TVET providers. The nexus between the principles of good practice and quality of training is undeniable but often overlooked in policy discussions, as the latter often focus on employment aspects. Another unique feature of the principles of good practice is the explicit attention paid to expansion strategies and the risks that such expansion pose for all those involved in administering, developing and participating in apprenticeships.

## 6 Additional hints

This template was developed for Microsoft Word 2007, English language version. If you are using a Word version in a different language, the styles “Body Text” and “Heading xx” might have different names. For older versions of Microsoft Word another template is available.

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