



CHAPTER 5

NEEDS IDENTIFICATION AND PROGRAMME EVALUATION

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INTRODUCTION

A quality technical and vocational education and training (TVET) programme has the following qualities:

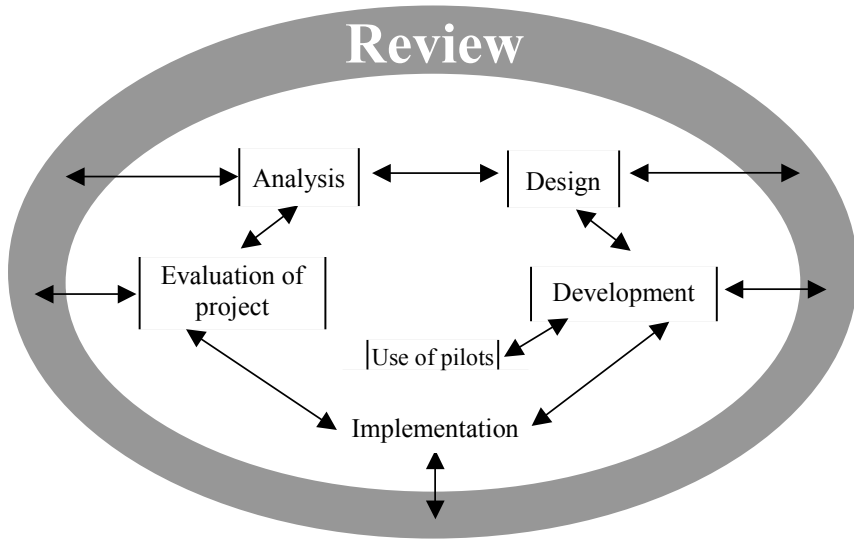
- It is *relevant* – it meets the needs of the target group.
- It is *flexible* – it can adapt to changing needs resulting from things such as economic or political changes. Flexibility is often obtained through modularisation, as small modules can be changed, dropped or developed according to perceived needs.
- It is *effective and efficient* – it produces results.
- It is *accessible* – it is able to be undertaken by the desired participants.
- It is *sustainable* – it has the resource base to succeed.
- It is *compatible* with the general requirements of the society, involving people economically and politically. An emphasis in developing particular attributes or values in participants such as critical and independent thinking, self-reliance and honesty may be important desired outcomes.

In order to provide an effective TVET programme, a firm foundation must be laid. This requires a careful analysis of the needs of target groups to identify the learning and development activities that will produce the changes that are desired in a community. It should also identify the resources available that will assist learning.

A COURSE DEVELOPMENT PROCESS

Open and distance learning (ODL) providers invariably use a phased model to provide a structured learning programme, as shown in Figure 5.1.

Figure 5.1: Model of structured learning



Each of the processes shown in Figure 5.1 involves the development of an output, which is defined in Table 5.1.

Table 5.1: Development of outputs

ACTIVITY	OUTPUT
Analysis	A clear statement of — <ul style="list-style-type: none"> • Issues to be resolved, • The target population • Identified resources and constraints
Design	A detailed plan that describes how, when, by whom and at what cost the learning could be provided.
Development	A complete learning package including — <ul style="list-style-type: none"> • All learning and teaching-related materials and equipment • Plans for delivery • Any generic type learner support materials • Learner and course evaluation and materials <p><i>Note: Piloting a programme with advanced students or prospective teachers is a way of checking that a programme is appropriate for more general use.</i></p>
Implementation	Learner progress and performance records and evaluation data.
Evaluation	The measures that will be used to assess that actions and results are occurring according to the plan.
Review — an ongoing process at every stage of the development	A quality control process where necessary resulting in revised activities that will either put things back on course or improve the delivery of the programme in the field.

In the analysis stage, a formal or informal needs analysis may be undertaken. At the same time, *evaluation criteria* also need to be considered so that during the implementation phase monitoring can occur to ensure that planned deliverables are, in fact, being achieved and timely interventions can be made before a programme gets too far off the track. Evaluation activities need to be seen as an integral component of a learning programme and need to focus on:

- How well the learning meets the goals originally identified
- How well the programme meets the needs of the learners and other stakeholders
- What contingencies are planned if the programme shows signs of not delivering what was intended

Ongoing review is essential throughout the process to ensure that things are on track to meet any desired outcomes of a project.

IDENTIFYING NEEDS

A needs analysis is a universal method of finding out what is required. A needs analysis sets out to identify:

- The learning and development needs of the group and/or individuals within the group and what any instruction should accomplish
- What constitutes competent performance
- What is worth teaching and whether instruction is in fact called for
- The support required for learning to occur
- The associated needs of funders and other contributors, be they entities such as foreign or local governments, non-governmental organisations (NGOs), philanthropists or community groups

Requests for TVET activities can arise from within a community or from agencies involved directly or indirectly in the activities of a community. Each training request needs to be analysed carefully to see if its purpose will contribute to a group's well-being and if a pragmatic workable solution is possible. It is important to determine if the content and design of a training programme will result in the outcomes desired; be appropriate for the needs, skills and attributes of the intended participants; and be able to be delivered within the resource constraints of the community. For example, in the Pacific Islands, the reliability of getting materials to communities can be an issue, particularly to outlying areas with no regular air, sea or land transport. This may necessitate programmes being designed as a core set of teaching resources supported by a range of local resources including personnel.

A systematic investigation of local needs and readily available resources needs to be carried out, including consideration of things such as:

- Identification of the target population (i.e., age, sex, language, literacy and numeracy levels, education achievement to date, and cultural norms that need to be considered in light of possible training including learning styles)
- Location and topography, which can influence access to equipment, the delivery of support services and closeness to job markets
- The actual needs for skills in a community, and the importance a community places on its members gaining new skills and knowledge (Decisions need to be made about whether training is job-specific or generic.)

- Previous education and training activities that have been undertaken and their success or failure (Lessons can be learnt from what worked or did not work in the past with a community.)
- Existing social and economic infrastructures which can influence things such as access to power sources and equipment and available resources that could contribute to a programme (The latter includes the potential for collaboration with key influencers within a community, access to opportunities for hands-on learning and opportunities that will exist for the skills to be used later.)
- Economic activities in the area that may influence when best to schedule teaching activities (e.g., the influence of seasons on appropriate timing for instruction)

A needs analysis may be undertaken in different ways:

- Within a community, by capturing their knowledge using processes such as brainstorming with a group of locals to compile their needs
- Using an independent consultant/facilitator to work through a needs analysis process objectively with selected groups or individuals within a community
- By an organisation or group providing a selected institution or individual who is deemed competent to complete an analysis based on a brief outline of perceived requirements using minimal community input (This is often a lower-cost way of getting an analysis done, but it is a high-risk strategy with success dependent upon the skill of the people doing the analysis.)

For example, a staff member of The Open Polytechnic of New Zealand with needs analysis expertise has worked with staff of the Tarawa Technical Institute in Kiribati to convert face-to face material to a set of distance learning materials for students on outer islands where there was a need for basic management skills to be developed. This analysis made extensive use of local knowledge to ascertain what was required and the environment in which it could be provided.

The amount of surveying undertaken can vary according to the complexity of a situation. Detailed market surveys and studies may be undertaken to identify specific needs. Alternatively, it may be that pragmatism indicates what is required, and a quick agreement can be obtained from all key participants on how education and training opportunities using ODL teaching methods can be used in a particular situation.

In assessing needs, it is important to identify *whose* needs are to be met by a particular programme. The needs of learners, communities, societies, funders and employers must all be considered. In setting up a programme, future development needs should also be considered.

The practical feasibility of a planned course needs to be considered. Factors influencing feasibility could include the following:

- The number of participants
- The availability of people to participate in the course (e.g., where structured support is integrated into the programme, what times in the day or evening are people available?)
- The availability of an appropriate environment for learning to be undertaken
- Any community contribution and acceptance, including programme viability, health and safety-related issues and supervision
- The age and educational levels of the intended participants

Where training is to be undertaken in the workplace, an assessment needs to be made not only of the desired learning, but also of how the learning can be supported within a community for the ODL strategies that are to be used. Designing workplace “trainers and/or assessors” into the programme can often be a useful solution. The requirements of such mentors and learning supporters should also be considered at the needs analysis stage so that appropriate training for them and roles in the delivery of the learning can be incorporated into the programme.

A LEARNING NEEDS ANALYSIS PROCESS

There are a number of different types of analyses that can be used to identify the learning and development needs of individual adults and groups. (Specific details of techniques can be found in training texts.) These are outlined in Table 5.2.

Table 5.2: Types of needs analyses

TYPE OF ANALYSIS	FUNDAMENTAL QUESTION THE ANALYSIS EXPLORES
Performance analysis	Why are people doing what they are doing?
Results analysis	Why are the business results the way they are?
Job analysis	What work are people responsible for?
Task analysis	What tasks do people do and what are the skills involved?
Skills audit	What skill levels are currently available within a particular community or work environment?

There are four steps involved in the learning needs analysis process:

1. Planning the analysis
2. Collecting the data
3. Analysing the data
4. Reporting the findings

Planning the analysis

In planning the analysis, an overall analysis objective must first be set (e.g., the date it is to be finished and what the purpose of the analysis is). Next, the target audience must be identified (e.g., describing the potential learners and other potential stakeholders).

Next comes identifying the type of data that will need to be collected for the analysis and choosing how to collect the data and from whom and where it will be collected. The way this is done needs to be appropriate to the group. For example, a face-to-face talk rather than a questionnaire would be more appropriate when seeking information from people who do not have good reading or writing skills or whose culture has an oral base.

After this, any protocols to follow must be identified (e.g., whom to visit, when to visit them and who needs to be consulted before any contacts are made). Finally, it must be determined how reporting back will be done and to whom. Who will get the report and what sort of information do they need? In what form will the report be provided to its audience?

Collecting the data

Collecting the data requires carrying out what you have planned.

Analysing the data

Analysing the data involves identifying any required learning outcomes (i.e., what people should consequently be able to perform on the job) and the skills, knowledge and attributes required to do a job. It also involves identifying the gap between the required and actual levels of performance and the learning needs and support that will be required for learning to occur.

Analysing includes verifying the data and the results. It is wise to check with people consulted as part of the analysis to ensure that the results make sense.

Reporting the findings

Reporting the findings could be done in a variety of ways ranging from a formal written report or informal feedback to a meeting of interested parties. It is important to respect any cultural norms during the reporting phase.

ASSEMBLING THE DEVELOPMENT TEAM

The development of a learning programme requires the following mixture of skills:

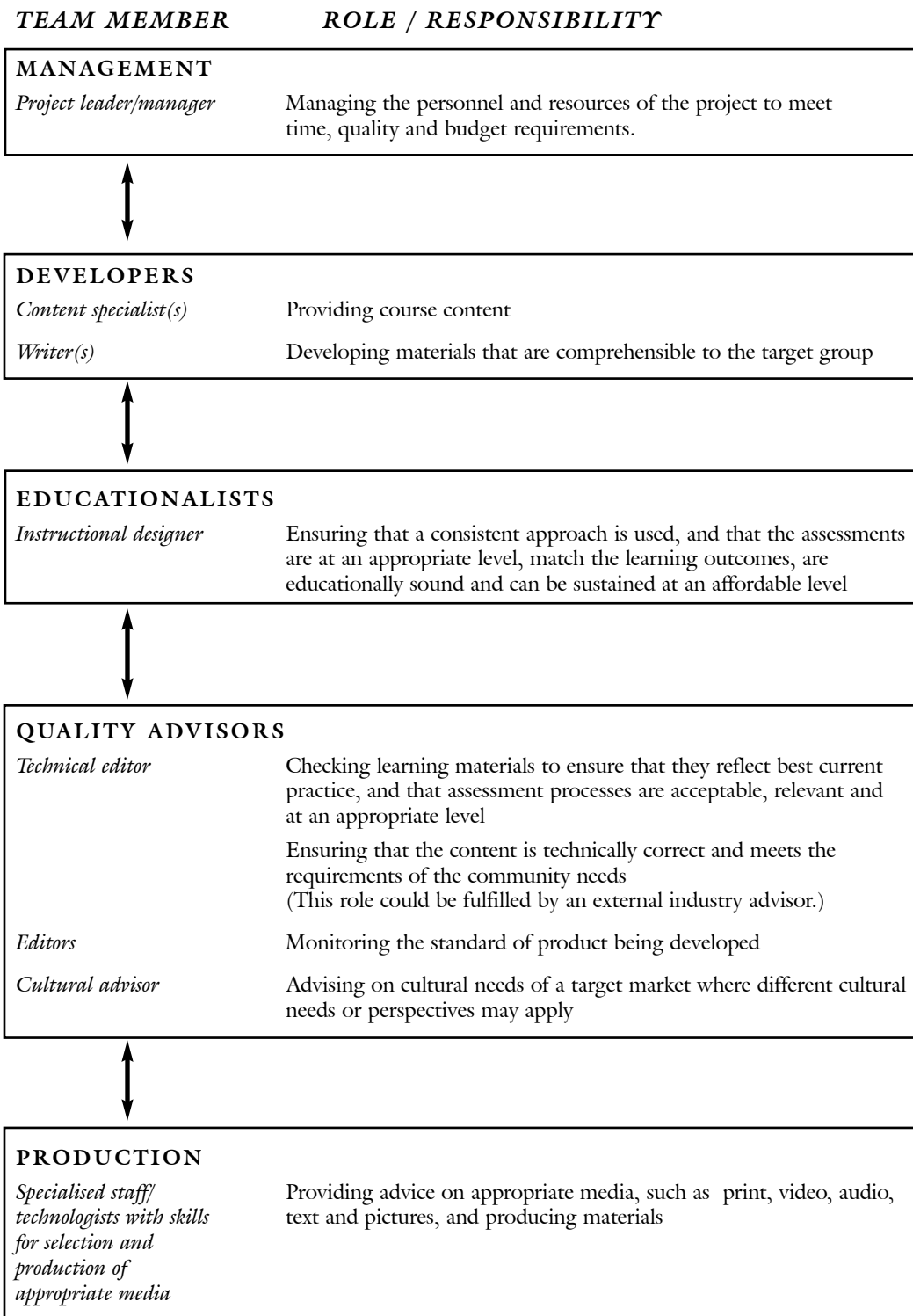
- Content expertise
- Instructional design expertise
- Cultural expertise
- Project management
- Production knowledge

As these skills are rarely available in a single person, a development team usually needs to be assembled to develop a learning programme that meets the identified needs. Nevertheless there may be an individual in a team who is able to undertake more than one role.

Team composition

A model describing the roles of people involved for a course design team is shown in Figure 5.2.

Figure 5.2: Course design team model



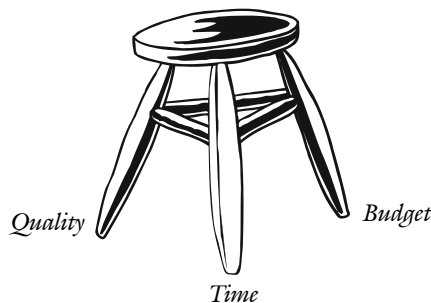
Forming a team

In forming the team, the preferred mode of delivery must be considered so that appropriate instructional designer expertise is included. Where technology is to be used as part of the learning strategy, a person with the appropriate understanding of the technology needs to be included. At the needs analysis stage, it is advisable to have as many potential team members involved in the project as possible to give advice (although depending on the project, this is not always possible). The advantage of involving as many of the potential team as early as is practicable is that it increases the “ownership” of the project and reduces the risk of fall-out due to “surprises” or misunderstandings related to the project’s purpose and any underlying values and behaviours necessary for the project’s effective achievement.

DETERMINING THE QUALITY OF LEARNING MATERIAL

The final quality required of learning materials must be determined before development begins, and thus should be one of the outcomes of a needs analysis. It is like a three-legged stool, with quality, time and budget being the three legs. (See Figure 5.3.)

Figure 5.3: Quality of learning materials



- If the quality is to be high (such as colour printing, photography, CD-ROM, and video), then that “leg” is longer, and the other two legs will need to be of sufficient length to match it to ensure the stool (project) does not fall over.
- If, however, the timeline is very short, then the quality leg might also have to shorten, but unless managed carefully, the budget leg may lengthen, which makes for an unstable stool or a high-risk project.
- If there is a very limited budget, then again the quality leg will likely be short, and without careful management, the timeline may lengthen and the project could be risky.

USING EXISTING LEARNING PACKAGES

Many developers do produce materials that have many learning opportunities resident within them, namely mixed-mode delivery, distance education delivery and work site delivery.

Once the analysis is complete, an exploration of existing ODL provision in the area of need may result in learning materials being sourced that can be used as is or adapted. This exploration is often considered as part of a needs analysis: being able to adapt existing materials can have a significant impact on the cost of development and the speed at which the learning can be commenced. This approach, however, can involve high risk and raise substantial issues of the suitability of the pedagogical approach and its appropriateness for target groups.

LEARNING MATERIALS DEVELOPMENT CHECKLIST

The following checklist may be a useful tool for helping to determine that all avenues have been covered when developing learning packages or buying existing materials for adaptation:

- Level of course
- Standard of presentation (printing, graphics, video, etc.)
- Quality of content
- Standard and level of writing and suitability for translation
- Cost of purchase, licensing, etc.
- Appropriateness of case studies, graphics, etc.
- Compatibility of technology
- Reference to relevant legislation
- Copyright clearance
- Length of time needed to convert material
- Cost of converting or developing material
- Cultural and learning styles (one product may not fit all)
- Arrangements for updating material
- Any other specifics

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