The South African
Learnership VET System
A Brand-New Combination of the two VET Mega-Trends:
Competency-Based and Action-Oriented Dual VET

Werner Heitmann
Programme Director GTZ: SDSI

German Technical Co-operation (GTZ)
P.O.Box 13732 Hatfield 0028
Pretoria / South Africa

Website: www.sdsigtz.org.za
E-Mail Address: sdsigtz@icon.co.za
Table of Contents

1. INTRODUCTION
   Competence required in the globalised work environment

2. THE RELATIONSHIP BETWEEN COMPETENCE AND LEARNING STRATEGIES
   2.1 What constitutes competence?
   2.2 Action-oriented learning promotes professional action-oriented competence
   2.3 Limitations of Competency-based Training (CBT)

3. PRACTICAL GUIDELINES ON ACTION-ORIENTED LEARNING
   3.1 The foundations of action-oriented learning
   3.2 Guidelines on how to structure action-oriented learning interventions
      3.2.1 Ensure learner activity vs. passivity
      3.2.2 Structure activities in a developmental sequence
      3.2.3 Use effective tasks to promote independent action
      3.2.4 Integrate the development of technical and non-technical skills
      3.2.5 View the instructor as a facilitator of learning
      3.2.6 Select learner-centred methods
      3.2.7 Use the ‘key text’ method and project method for action learning
   3.3 Six action phases of action-oriented learning methods

4. PHASES OF THE PROJECT METHOD

5. APPLYING ACTION-ORIENTED LEARNING TO LEARNERSHIPS
   5.1 What are learnerships?
   5.2 The appropriateness of action-oriented learning for learnerships
   5.3 The critical path of learnership design and implementation
   5.4 Combining action-oriented learning with the project method

6. CONCLUSION

REFERENCES

ACRONYMS
CBT Competency-Based Training
MERSETA Manufacturing, Engineering and Retail Services Education and Training Authority
NQF National Qualifications Framework
OBET Outcomes-based Education and Training
SAQA South African Qualifications Authority
SETA Sector Education and Training Authority

Werner Heitmann: The South African Learnership VET System.
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1. INTRODUCTION

1.1 Competence required in the globalised work environment

The nature of work in a globalised work environment requires employees to perform increasingly complex tasks. A recent research study on the impact of globalisation reached the following conclusions:

“The components of work profiles that are determined by technical and organisational requirements are increasingly being replaced by ‘self-management’, ‘autonomous organisation’, ‘own responsibility’ and ‘action based on communication in a social context’. Application of the appropriate competence and behavioural potential is required for active acquisition and application of knowledge and experience in corporate training and work processes, for the legitimisation of work actions and their correction after discussion with superiors and colleagues and for the critical harmonisation of a person's own work goals and those of the company.”

To cope effectively with these challenges, employees have to be enabled to

• act in a flexible manner
• solve problems
• learn and perform independently, and
• co-operate with others.

Market demand changes the trade, occupational and professional qualifications provided by vocational education and training systems. It is still important to acquire technical knowledge, abilities and skills, but these alone are becoming less and less adequate to cope with changing workplace demands. It is becoming increasingly important to also acquire professional action-oriented competence.

This competence will benefit employers whose workforce will be more productive when employees are able to function more independently and with less supervision. Employees with professional action-oriented competence will have

1) a wide range of skills that they can apply in life and work situations outside their specific jobs, and

2) the tools with which to identify and solve problems autonomously.

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2. THE RELATIONSHIP BETWEEN COMPETENCE AND LEARNING STRATEGIES

2.1 What constitutes competence?

There is no real consensus regarding the definition of the terms ‘competence’ and ‘competency’. (These terms will be used interchangeably in this text). The terms became fashionable among education and training experts in North America in the 1980s, and they have spread and remained buzzwords ever since.

The understanding of competence has been shaped largely by the following two interpretations:

- In achievement motivation theory (e.g. of David McClelland) job competencies are those critical attributes (i.e. traits, behaviours and other characteristics) that explain and can contribute to a person’s exemplary job performance. American approaches to curriculum development (DACUM) and outcomes-based education and training seem to follow the performance paradigm. Here ‘competency’ is understood to be the ability to perform an occupational task effectively and efficiently. Tasks are clearly defined as specific units of work that are observable within a job or occupation.

- Other authors, such as T. F. Gilbert, shifted the emphasis from personal attributes as prerequisites of performance to direct work results. Their understanding of competency is based on marketable work results, i.e. producing ‘worthy’ products or services.

2.2 Action-oriented learning promotes professional action-oriented competence

The action-oriented learning approach is closer to the ‘attribute’ paradigm. It is based on a holistic interpretation of technical, individual, methodological and social competence. Learners graduating through this approach are expected to have acquired not only skills and knowledge obtained from qualifications, unit standards and curricula, but also ‘key competencies’\(^2\), such as problem solving techniques, communication skills and the ability to work in teams.

Action-oriented learning provides learners with opportunities to learn to cope with ever changing occupational requirements in the workplace and to succeed in it. This constitutes the basis for continuous lifelong learning in formal, non-formal and informal learning contexts.

Professional action-oriented competence is generally understood to mean the clustering of different abilities, i.e.

- technical competence is the ability to handle complex technical tasks successfully by applying technical knowledge and skills;
- methodological competence is the ability to apply appropriate methods and strategies for handling a task or solving a problem;

\(^2\) Within the South African based education and training system the term ‘critical cross-field outcomes’ can be seen as the equivalent of the ‘key qualifications’ concept.
- **social competence** is the ability to handle other people appropriately and to communicate and co-operate successfully with them; and
- **individual competence** is the ability to deal critically and analytically with oneself, i.e. to question one's own knowledge, abilities and skills, and to take appropriate action, such as acquiring further qualifications.

![Figure 1: The clustering of different abilities that constitutes professional action-oriented competence](image)

There are convincing reasons to believe that such comprehensive action-oriented competence can only be acquired effectively if the educational process itself requires the behaviour that it is supposed to develop. Independent action can only be learned properly if the learner has to act and solve problems independently during the learning process.

### 2.3 Limitations of Competency-Based Training (CBT)

The South African outcomes-based education and training (OBET) system clearly reflects the true purpose of the competency-based approach. In principle it is a learning-outcome-oriented approach: the desired are defined in terms of competencies (knowledge, abilities, skills, behaviour patterns, etc.) which the learners should master at the end of the learning process, to enable them to perform certain work tasks.

It is worth noting that systems based on Competency-Based Training are in essence *assessment and certification* systems, rather than *training* systems. In general, CBT is not concerned about the modes and parameters of learning and teaching. Since CBT focuses on

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the *results* rather than on the *process* of learning and teaching, it offers teachers/instructors little assistance on HOW to achieve the specified results.

However, the effectiveness and efficiency of training cannot be boosted simply by defining and examining the outcomes of learning very precisely, while leaving it to the learners and learning facilitators to determine where, how and when they achieve these outcomes. The approach and method applied in facilitating learning has a direct impact on the results of the learning process.

This publication promotes the view that action-oriented learning is appropriate for developing the competencies required to cope with the challenges of a complex and continuously changing work environment.

### 3. PRACTICAL GUIDELINES ON ACTION-ORIENTED LEARNING

#### 3.1 The foundations of action-oriented learning

Action-oriented learning is based on the following premises:

<table>
<thead>
<tr>
<th>Organisation of the learning by others should be replaced by autonomous organisation by the learner!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on teaching should be replaced by a focus on learning!</td>
</tr>
</tbody>
</table>

#### 3.2 Guidelines on how to structure action-oriented learning interventions

Here are some guidelines on how to structure interventions in a way that promotes action-oriented learning.

**3.2.1 Ensure learner activity versus passivity**

Organise the learning process in such a way that the learners are allowed to act. This applies to more theoretical instruction, as well as to workplace instruction. ‘Acting’ here means that the learning process should have which ensure that the learners organise their learning in a way that is increasingly independent.

“Action-oriented” implies that learning is not a process in which knowledge is merely ‘moved around’ and ‘accumulated’ in the head, but one in which the learners ‘move’, i.e. act. The learners must be actively involved in slotting information into place, processing it and applying it. This view differs substantially from the more traditional teaching methods where the learners’
role was largely restricted to passive mental reception, in which learners were required merely to perceive and memorise information.

3.2.2 Structure activities in a developmental sequence

Shift the focus from the efficient presentation or ‘transmission’ of knowledge that the learner ‘consumes’, to planning and executing active, target-oriented activities designed to facilitate learning. Structure the activities in such a way that learners learn through the thinking that accompanies the actions, and the understanding that results from the experience gained. Obviously, this is still ‘learning’, but in a form that is deliberately ‘structured’ as a sequence of independent actions.

‘Structured’ here means that the actions in the learning process are carefully planned and sequenced to achieve specific learning outcomes. It does not mean that the learning process is rigidly prescribed and controlled by the facilitator. The learning environment must be structured in a way that allows the learners to interact independently with the learning content, and the learning process must be revealed to and understood by the learners.

Clearly, action-oriented learning does not support the laissez-faire approach that assumes that learning should take place without any structure or facilitator guidance/influence. In this approach, which was particularly popular in the 1960s, it was assumed that learning occurs naturally, and is hampered by the interference of facilitators who structure learning processes around specified learning outcomes.

3.2.3 Use effective tasks to promote independent action

Structure the learning activities around clearly formulated tasks, problems and questions that are designed to encourage the learners to embark on independent learning activities. The action-learning process encourages learners to learn through the process of completing these tasks and solving the given problems.

Tasks and problems should be formulated in a way that encourages the learners’ active involvement in the learning process, as they discover the relevant information and use it in a way that is appropriate to completing the task or solving the problem. The learning should be described in terms of broad tasks or problems that relate to a product or service that is delivered in an occupational role. Examples of such are: ‘Build a cupboard to the given specifications’ and ‘Solve the problem so that the engine will start running’.

The action-learning process enables the learners to be self-responsive in a democratic way, as they work towards achieving the learning outcomes. Learners are encouraged to think, to critique and challenge their own thinking, and to generate their own points of view.

Questions (asked by the facilitators or the learners themselves) are used to guide the learners to solve problems and discover solutions, for example: What is the problem? What is the root
cause of the problem? What do I/we need to do first to solve the problem? What information do I/we need to be able to solve this problem? Where can I/we find this information?

Such questions guide the learners to think and act in the appropriate direction to resolve the problem. This enables the learners to discover the relevant content on their own, while developing higher-level abilities and competence. Self-managed, action-oriented learning is therefore characterised by thinking that focuses on solving problems and by the presence of opportunities for independent action. Problem-oriented learning assists the learners to identify the problem and motivates them to find the appropriate solution to it.

It is important to ensure that the tasks and problems are at an appropriate level of complexity for the specific learner group. If the level is too high it is likely to demotivate learners and, conversely, if it is too low it does not challenge learners to think and engage with the problem. This should be kept in mind during the design of the learning process.

3.2.4 Integrate the development of technical and non-technical skills

Use action-oriented learning to ensure that the learners acquire professional competence while simultaneously achieving the critical cross-field outcomes, such as the ability to solve problems, communicate effectively and act independently. As was stated in the introduction, the complexity of work demands the ability to integrate technical competence with these personal/interpersonal skills.

Technical and non-technical skills should be acquired simultaneously, to enable learners to understand how these support and supplement each other in the learning process and in the workplace. It would therefore be contrary to commonly-accepted rules of effective learning to develop critical cross-field separately in a kind of separate ‘crash course’, which does not promote the integration of these with technical competence.

Action-oriented learning is an appropriate tool for promoting the NQF principle of integration, as it encourages the integration of theory and practice, and the integration of ‘head’, heart’ and ‘hand’ skills. It promotes the development of a competent person who is able to combine acting, thinking and feeling in ways that are appropriate to achieving stated outcomes and solving problems.

However, to ensure such integration requires the structuring of learning around clearly formulated tasks, problems and questions that encourage learners to combine these skills appropriately.

3.2.5 View the instructor as a facilitator of learning

One of the most important factors determining the success or failure of action-oriented learning is a change in the role of the teacher/instructor. The more traditional one-way, top-down communication of information to learners does not promote active and self-managed learning.
The action-oriented approach to learning does not mean that the teachers/instructors (the learning facilitators) are no longer involved in organising the learning process. This would be impractical and would not be sensible. It is a misconception that learning facilitators are not supposed to intervene in the learning process, and must only wait patiently for learning to happen spontaneously. The facilitators still have an important role in planning and structuring the learning process around tasks, problems and questions. However, they have to relinquish their role as ‘organisers’ of the learning process, in order to encourage the development of autonomous, self-directed learners who largely ‘organise’ their own learning.

The overall purpose of action-oriented learning is to develop self-organised and self-driven learners, who are not organised or moulded by external facilitators. The very nature of the action-learning process encourages the development of such maturity and independence. Through the action-oriented learning process learners:

- learn how to learn
- develop the competence to integrate their skills to solve problems, and
- acquire and process information needed to perform tasks.

Such learners are truly ‘mature’ in the sense that they are able to learn and act independently within the learning environment, in the world of work and in everyday life. They will be equipped to cope with the challenges of the complex work environment.

Although the function of the learning facilitators is now different, it is still central to the learning process, even though it is less prominent in the learner’s learning activities. This is evident from the following description of the changed role of learning facilitators in action-oriented learning.

- The learning facilitators have to take responsibility for the learning process, in the sense that they structure the learning opportunity and organise the learning environment. The structure of the learning process is no longer dominated by their own input and continuous presentation. They structure the learning process more in the form of questions and tasks that serve to teach, guide and assist the learners in the learning process. In this way the teachers/instructors enable the learners to actively obtain new knowledge and extend their scope of professional action-oriented behaviour.

- The learning facilitators have to create the conditions for autonomous organisation of the learners and independent learning by the learners. The facilitators do not ‘create’ the knowledge that should go ‘into the heads’ of the learners, but ‘enable’ (facilitate) the process of independent exploration and acquisition of knowledge.

- The learning facilitators still need to be experts, but they do not use the classroom as a platform to communicate their expertise. They use their expertise to formulate the learning outcomes and to structure the tasks, problems and questions that will guide the learner in the learning process. They structure the assignments in a way that enables the learners to discover things on their own (as far as this is meaningful), and at the
same time they learn to act independently. This differs widely from the traditional role which placed the teachers/instructors at the center of events as the experts on all issues: the ones who determined the topic, the procedure and the speed of the learning process, as well as the content that learners were required to ‘absorb into their brains’.

- The learning facilitators move into the background in a process that can be described as ‘learning by autonomous organisation’. The facilitators are available as coaches and knowledge resources that can be used if the learners cannot proceed on their own.

- The learning facilitators are giving the learners feedback on how the learning process is coming along.

3.2.6 Select learner-centered methods

Learning facilitators should select and apply appropriate learner-centered methods that combine 1) activity methods and 2) independent acquisition methods. As will be shown, these two approaches feed into each other in a cyclical process (see Figure 2):

- **Activity methods** are those in which the focus is on the learners’ activities.
- **Independent acquisition methods** encourage learners to work independently towards achieving the learning outcome, and are essential if learners are to manage their own learning process and make productive use of activity methods. For example, learners will only be able to make productive use of the freedom of active learning once they can use reference works and other resources to obtain the information they require to solve problems.

Learning facilitators who are committed to developing comprehensive professional action-oriented competence should therefore ask themselves the following key questions when planning their teaching methods:

1. How can I cluster the relevant technical knowledge, abilities and skills into complex tasks (work specifications) to ensure that the learners will be able to learn as much as possible in a self-managed and autonomous way?
2. Which independent acquisition methods can I develop systematically through all the modules of the learning programme?

Within the framework of action-oriented learning these two key questions have to guide the learning process. They are critical in avoiding the domination of the learning process by the facilitators. One can therefore call the method ‘action-oriented learning in stereo’. This means that learning is not a one-dimensional experience, but one in which the learners are encouraged to use a comprehensive range of experiences to enhance the learning process.

Activity methods and independent acquisition methods should be combined in a way that enables learners to visualise/conceptualise the end product they are creating. These methods
will encourage the learners to identify all the relevant components of the end product and understand the interrelationship between them.

[Note the correlation of the headings in row B with critical cross-field outcomes.]

<table>
<thead>
<tr>
<th>Learner centred methods</th>
<th>Work with self-study material</th>
<th>A Activity methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Activity methods</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projects</td>
<td>Handling of work tasks</td>
<td></td>
</tr>
<tr>
<td>Scenario planning</td>
<td>Building of models</td>
<td></td>
</tr>
<tr>
<td>Problem-solving methods</td>
<td>Group work structured around training questions</td>
<td></td>
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<tr>
<td>Role-play</td>
<td></td>
<td></td>
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<tr>
<td>Case method</td>
<td></td>
<td></td>
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<tr>
<td>Exploration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excursion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| B Independent acquisition methods                            |                                                                     | B Independent acquisition methods                                                  |
| Learning to learn                                            |                                                                     |                                                                                     |
| • Compiling mind maps                                        | • Planned reading                                                  | • Problem-solving processes                                                       |
| • Preparations for exams                                     | • Marking texts                                                    | • Visual communication (metaplan)                                                 |
| • Planning of learning time                                 | • Summarising information                                          | • Communication techniques                                                       |
| • Etc.                                                       | • Working with reference books                                     | • Etc.                                                                              |
| Information acquisition                                      |                                                                     |                                                                                     |
| • Working in libraries                                       | • Structuring of a presentation                                   |                                                                                     |
| • Etc.                                                       | • Etc.                                                              |                                                                                     |

| Information processing                                       | Communication & co-operation                                       |                                                                                     |
| • Planned analysis                                           | • Questioning techniques                                          |                                                                                     |
| • Questioning techniques                                     | • Visualisation techniques                                       |                                                                                     |
| • Visualisation techniques                                   | • Presentation techniques                                         |                                                                                     |
| • Structuring of a presentation                              | • Structuring of a presentation                                   |                                                                                     |
| • Etc.                                                       | • Etc.                                                              |                                                                                     |

| Communication & co-operation                                 |                                                                     |                                                                                     |
| • Etc.                                                       |                                                                     |                                                                                     |

**Figure 2: Learner methods in action-oriented learning**

Learning experiences should be structured in such a way that the learners develop the skills to use activity and acquisition methods independently. These methods should become so ingrained in learners that they form part of the toolbox learners use to solve problems and complete tasks in every learning, work and life situation.

<table>
<thead>
<tr>
<th>Dimensions of functional competence</th>
<th>Technical competence (technical knowledge, skills)</th>
<th>Methodical competence (learning and working techniques)</th>
<th>Social and leadership competence (teamwork, communication methods)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational methodical structuring</td>
<td></td>
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<td></td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Learning based more on traditional instruction</th>
<th>Presentation / speech</th>
<th>+</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational discussion</td>
<td>+</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Use of closed media</td>
<td>+</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Super-learning (suggestopaedics)</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controlled project</td>
<td>+ + + +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scenario planning</td>
<td>+ + + +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-organising project</td>
<td>+ + + +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key text method</td>
<td>+ + + +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team-work based on key questions</td>
<td>+ + + +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual work based on key questions</td>
<td>+ + + +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visualisation of the learning method (metaplan method)</td>
<td>+ + + +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artificial exercises</td>
<td>+ + + +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience-based methods</td>
<td>- + + +</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Educational efficiency of different methods 5

Learners should also develop the skill to identify which acquisition methods are the most appropriate to use in different contexts. Figure 2 on page 11 provides examples of activity methods and independent acquisition methods, and shows how they are inter-related. Activity methods, such as scenario planning, require the learners to follow a structured, step-by-step process that is more or less clearly defined. Although learners would apply the independent acquisition methods in a structured way, no set process is prescribed for these methods.

A further issue concerning the selection of methods is the question of educational efficiency, or educational value of the different methods. Table 1 on previous page shows that this varies significantly. The more traditional methods are only ‘efficient’ in the technical area, whereas the activity methods, which are based on action and experience, are educationally effective at all levels of professional action-oriented competence.

This table indicates that learning based on traditional instruction methods is effective for developing technical competence, but less effective for developing methodical, social and leadership competence. Learning that is based on experience that is not structured or directed towards clear learning outcomes also does not succeed in developing competence in all three areas. Clearly, action-oriented learning is the most effective method for developing well-rounded learners who have the required technical competence, the techniques for learning and working, as well as social and leadership competence, including teamwork and communication skills.

3.7.2 Use ‘key text’ method and project method for action learning

Teachers/instructors should select an activity method that is most appropriate for action-oriented learning. Two methods that are particularly suitable are:

- the ‘key text’ method and
- the project method.

These methods are described in more detail below.

3.2.7.1 Activity-oriented learning method: the key text method - activating learning through self-study material

The key text is the basis for successful self-study by the learners. The term ‘key’ is derived from the German ‘leit’, which means to lead or to guide. Thus the ‘key text’ refers to learning material that guides/leads the learners. It directs them to engage in the learning process and helps them to ‘go through’ the learning process independently. The key text enables the learners to acquire knowledge and work through problems independently. The concept is to some extent comparable to ‘resource-based learning’, now used widely in education and training.

Guidelines on producing a key text

The components of a key text are:

- definition of the learning targets (knowing where the journey is going);
- practical work instructions;
- key questions that direct the learners in the right direction and guide them towards acquiring and handling information;
- key information, i.e. factual information, references to sources of information such as texts, drawings or work plans;
- key questions and information related to planning for performing the work;
- questions and tasks related to the management of learning and working; and
- information related to evaluation and control.

The following steps are necessary for preparing educational content in the format of a key text:

- Make an inventory:
Which workplaces and processes are affected? Which problem areas can be determined?

- **Determine learning goals and methods by clarifying the following:**
  What has to be learnt through these key texts? Which learning content that was previously taught in a traditional way should in future be taught through key texts?

- **Develop a first draft of the key text**
  Then have it evaluated by a teacher/trainer colleague in terms of completeness, technical correctness and how easily it can be understood.

- **Make corrections where required.**

- **Test the preliminary version with learners in a pilot test.**

- **Integrate suggestions for changes where required.**

- **Produce the final version.**

**Guidelines to learners on how to use the key text**

Provided with the above-mentioned information, the learners follow a number of steps in working with the key text:

1. **identification and acquisition of the information** required for carrying out the work instruction, e.g. by clarifying the function of the item that will be produced, or the changes that have to be made to the raw materials provided;
2. **planning**, e.g. deciding on the order of the required work steps;
3. **decision making**, especially the procedure for making decisions;
4. **execution** of the task, either individually or through a division of labour;
5. **controlling**, i.e. internal work quality check by the learner/supervisor; and
6. **evaluation**, i.e. external control.

<table>
<thead>
<tr>
<th>Step</th>
<th>Goal</th>
<th>Organisational form</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Read cover sheet</td>
<td>• Get to know the tasks that have to be completed</td>
<td>• Individual, with a partner or in a team</td>
</tr>
<tr>
<td>• Work on key questions</td>
<td>• Think about the tasks, individually and in groups and discuss</td>
<td>• Individually and in a team</td>
</tr>
<tr>
<td>• Work through the knowledge checklist and key information</td>
<td>• Acquire technical knowledge</td>
<td>• In a team</td>
</tr>
<tr>
<td>• Discuss the knowledge checklist and key information</td>
<td>• Check the knowledge that has been acquired</td>
<td>• With trainer</td>
</tr>
<tr>
<td>• Carry out the work instruction performed</td>
<td>• Apply skills and improve them</td>
<td>• Individually or in a team</td>
</tr>
<tr>
<td>• Control and evaluate the work performed</td>
<td>• Develop appropriate quality criteria and learn through self-testing</td>
<td>• With learning facilitator (trainer/teacher/instructor)</td>
</tr>
</tbody>
</table>
Table 2  Processing steps of a work instruction according to the key text method

3.2.7.2 Activity-centered learning method: the project method - holistic learning through 'head, heart and hand'

The project method is based on the principle of tighter integration and application of theoretical knowledge and practical action, which is achieved through learning that is focused on a project. The project is designed on the basis of a product or service that has to be produced by the learners, and which has value for its customer(s), i.e. it must be a complete, useable object and it must make sense to someone in the value chain. The process of creating this product/service requires a number of sub-processes, including independent planning, execution and control. In order to develop skills in teamwork and co-operation, the planning and execution of a project is performed mainly, but not exclusively, in teams.

An example of a project is: ‘ensure that the sliding door operates effectively’. The execution of this project requires an understanding of all the components of a sliding door and the way in which they work together in a system that operates the door. Learners will have to investigate the whole system, including the door, the infrared mechanisms, the mechanical and electronic components, as well as the impact of a non-functioning door on the organisation. They will need to combine a range of skills and knowledge to execute the project, including maths, drawing skills, planning, organising, information collection, communication and teamwork. Such a project is an ideal way of optimising an action-oriented learning method, as it encourages independent learning and the integration of a variety of skills to produce a usable product/service that is authentic and makes sense within a work context.

3.3 Six action phases of action-oriented learning methods

Action-centred learning methods, such as the project and key text method encourage learners to embark on an iterative learning process involving six main action phases, indicated in Figure 3. Although learning generally follows a sequential pattern in which phases build on one another, these phases do not take place in isolation, and may overlap in time. There is continuous interaction between the action phases as learners move back and forth between phases, repeating some phases several times during the project. Advisory or information phases and small group work sessions can be integrated into this six-step process, to provide advice, information or clarification to learners. The facilitators discuss the previous and following steps of the project with the learners, and initiate tasks that generate the knowledge that is needed to continue with the project. The frequency and intensity of the advisory/information phases depends on the ability of the group to perform independently and on the initial technical knowledge of group members.
Figure 3: Typical action phases of the action-oriented learning method

4. PHASES OF THE PROJECT METHOD

The following phases of the project method describe how the action-oriented learning approach is translated within a specific learning context, using the project method.

Phase 1: The start-up

⇒ Consider which of the learners’ skills should be developed through solving/performing the project tasks: e.g. technical, methodical, social and/or individual competence.
⇒ Collect project ideas: e.g. within the framework of a brainstorming session with the learners.
⇒ Design the project: with input from both learning facilitators and learners.
⇒ Test whether the targets as well as the feasibility of the project have been judged realistically: e.g. in relation to available material, resources, costs and time.
⇒ Consider which competence the learners must already have in place before the project commences: this includes the methodological and technical competence learners must have to be in a position to execute the project.

**Phase 2: Planning**
⇒ Define goals, content and tasks.
⇒ Provide material, tools and infrastructure or clarify where these can be obtained.
⇒ Arrange the division of labour.
⇒ Clarify the requirements for information and provide the information sources.
⇒ Clarify time and space requirements, as well as the scope of the project.
⇒ Agree on the rules of the game, quality and success criteria: e.g. quality standards, methods, and rules for co-operation and evaluation criteria.

**Phase 3: Execution**
During the actual project phase, the learning facilitators are available to the learners as ‘coaches’ and resource providers. This means that the facilitators are required to:

⇒ help the learners to help themselves in solving problems;
⇒ provide information input, only if absolutely necessary;
⇒ intervene if security regulations are violated or if there is danger;
⇒ ensure that the rules of the game are adhered to; and
⇒ facilitate the advisory and discussion sessions that take place during the development phases.

**Phase 4: Evaluation and assessment**
⇒ The learners monitor and evaluate their performance at the intermediate stage and during the final inspection, based on the success criteria that were agreed upon (i.e. self-assessment).
⇒ The objective is to monitor the progress made in learning, the co-operation of the group and the individual work performance of each learner.
⇒ The evaluation is done orally or in writing, e.g. through protocols or evaluation forms, based on criteria that were agreed upon.
⇒ Thereafter the learning facilitator assesses the learning and work performance and conducts an assessment discussion with each learner. (The assessment of learners is one of the tools used for evaluating the success of the project.)

5. APPLYING ACTION-ORIENTED LEARNING TO LEARNERSHIPS

5.1 What are learnerships?
Learnerships form the cornerstone of South Africa’s skills development strategy, and are seen as an important mechanism for addressing the current skills deficit in this country. The following are the key characteristics of learnerships:

- “Learnerships are a tool for aligning education and training initiatives more closely with labour market needs. They establish a relationship between structured learning provided by education/training institutions and structured work experience, in order to equip learners with the competence that is required in the labour market.”

- “A learnership is a structured learning programme that combines learning at a training institution with practical work-based learning in an integrated programme.” The institutional learning component covers the more theoretical aspects of the learning, while the work-based learning involves practical learning experience in workplaces.

- A learnership leads to a qualification that is registered by SAQA. “Therefore, the person who successfully completes a Learnership will have a qualification that signals occupational competence and is recognised throughout the country.”

- “An essential requirement for the successful completion of a Learnership is that learners must demonstrate their competence by applying what they have learnt in the workplace.”

5.2 The appropriateness of action-oriented learning for learnerships

It is clear from the above that learnership implementation demands a learning process that ensures a link between institutional and workplace learning, the integration of theory and practice and the practical application of learning in the workplace. The traditional approach to teaching, that mainly requires the learners to absorb the information provided by the teachers/instructors, is clearly not appropriate for developing the competence that learners are required to demonstrate at the end of a learnership.

The effective implementation of learnerships demands a fundamentally different approach to the way in which teachers teach and learners learn. It is self-evident that the action-oriented approach to learning is most appropriate for achieving the goals of learnerships. The end product of the action-oriented approach is learners who are able to use an appropriate combination of technical and non-technical skills to take action and solve problems. This enables them to complete tasks in the real work situation in an autonomous, self-managed way.

Such independent and self-managed action is most effectively acquired if the learners are required to act autonomously and solve problems independently during the learning process. Therefore this publication proposes that the action-oriented learning approach should be adopted for implementing learnerships.

5.3 The critical path of learnership design and implementation

The following is a brief overview of the key processes in the design and implementation of learnerships, as depicted in Figure 4:

- Learnerships have to be demand-led and needs-driven, so the design process starts by identifying the need in the workplace.

- The employment/workplace needs should inform the development of qualifications and unit standards that capture the current and future outcomes that learners would be required to master.

- The Learnership Registration Form is completed and submitted by the relevant SETA to the Department of Labour for registration.

- The Curriculum Frame is developed on the basis of the purpose of the learnership as well as the qualification and unit standards that the learnership is designed to achieve.

- The learning programme and learning materials are developed from the curriculum.

- The workplace provider and training provider ‘deliver’ the learnership by facilitating the workplace and institutional learning components, in accordance with the learning programme that has been developed from the curriculum.

- Learners are assessed against the outcomes of the qualification and unit standards during the learning programme and at the end, to ensure that they meet the requirements for certification.

- The learnership and its implementation are evaluated to determine their impact in addressing the workplace needs and the needs of learners.

The processes above the dotted line in the figure below are components of the outcomes-based education and training system. The outcomes that are formulated during these processes are best achieved if the processes below the dotted line are implemented through the action-oriented learning approach.
5.4 Combining action-oriented learning with the project method

The Manufacturing, Engineering and Related Services Education and Training Authority (MERSETA) has successfully combined the action-oriented approach with the project method for designing and implementing its learnership projects. Figure 5 below reflects some of the main components of this model.

<table>
<thead>
<tr>
<th>OUTCOMES-BASED EDUCATION &amp; TRAINING</th>
<th>The outcomes to be achieved are captured in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHAT must be learnt?</td>
<td>• Qualifications</td>
</tr>
<tr>
<td>WHY must it be learnt?</td>
<td>• Unit standards</td>
</tr>
<tr>
<td></td>
<td>• Exit level outcomes.</td>
</tr>
</tbody>
</table>
DEVELOPMENT OF THE CURRICULUM FRAME

(\text{on the basis of the qualification and unit standards that the learnership leads to})

Unit standards are ‘unpacked’, i.e. each unit standard is broken down into a list of items the learners must know, understand and be able to do in order to achieve the specific and critical cross-field outcomes and assessment criteria of the unit standard. These outcomes are ‘repacked’ into topics (or learning activities) that constitute the building blocks of the learning programme. The topics are clustered in a way that makes sense for learning purposes, i.e. they should constitute logical chunks of learning. These clusters should serve the needs of the industry as well as the personal development needs of the learners.

ACTION-ORIENTED LEARNING APPROACH

\textbf{HOW must it be learnt?}

The curriculum is developed on the basis of the action-oriented approach, which means that the facilitators structure and guide the learning process in a way that ensures that: learners are actively engaged in the learning process; learners learn through self-managed, independent activities; learning is guided by clearly formulated questions, problems and tasks; learners develop technical and non-technical skills in an integrated way; and the appropriate learner-centred methods (activity and independent acquisition methods) are used to encourage self-managed and autonomous learning.

PROJECT METHOD

The topics are clustered together into projects on the basis of a product/service that has to be produced by the learners. Learners move between the training institution and workplace, and through the integration of this learning they develop the knowledge, skills, values and attitudes they require to produce the product/service. Assessment is conducted at designated intervals to measure progress and achievement of the outcomes of the qualification and/or unit standards (indicated by the ‘A’ in the circles below).

\begin{itemize}
  \item Action-oriented learning describes a form of vocational education and training in which the focus is on the learners’ own actions.
\end{itemize}

\textit{Werner Heitmann: The South African Learnership VET System.}

\textit{A Brand-New Combination of the two VET Mega-Trends: Competency-Based and Action-Oriented Dual VET}
• To enable the learners to act independently at their workplaces later on, the training itself has to be structured according to the criteria of self-management and autonomous organisation.

• It is essential that the content of the learning process should no longer be seen as input from the teachers/instructors, but that it is integrated into complex tasks that the learners can handle independently, so that they can learn from their own experiences.

The crucial factor determining the success or failure of this more active and autonomously organised learning is the learning facilitator. Facilitators of learning have to be willing to accept the new definition of their roles in the learning process – this is key.
REFERENCES

Addis, J. et al. Undated, developed in November 2002. MERSETA Curriculum Design Policy Framework and Model. Commissioned by GTZ in partnership with the MERSETA.


