DEVELOPING HEALTH SCIENCES CURRICULA: PRINCIPLES AND PROCESS

Only workbook for HSE 3704
SU4-6: Assignment 03
“The success of tomorrow’s students will be built upon the education we design today” Dr Linda Price
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Study Unit 4: INVESTIGATING THE CURRICULUM

4.1 OVERVIEW

In study unit 2 we mentioned that a curriculum is developed and implemented in a particular context. In the HSE1501 and HSE3702 modules we discussed the context of a curriculum, namely the factors within the health sciences education system and societal factors that influence curriculum development. In this study unit you will learn that the context of a particular curriculum in a particular setting is explored by conducting a situation analysis.

Note that a situation analysis is part of the activities involved in the exploratory stage of curriculum development. In study unit 4 we revisit this stage, which precedes the stage of curriculum design. The results of the situation analysis influence the decisions which the curriculum makes during the stage of curriculum design.

After you have worked through this study unit you should appreciate the contribution of a situation analysis towards enhancing the relevance of the curriculum, based on your ability to

- explain the meaning of situation analysis
- explain when a situation analysis is conducted during the process of curriculum development
- explain the purposes of a situation analysis
- describe the determinants of a curriculum
- identify sources of data for a situation analysis
- identify the methods of data collection for a situation analysis
- describe the types of data required to describe the context of the curriculum

You will be able to achieve most of the learning outcomes by working through this study unit. Where necessary, we will refer you to appropriate sections of the
recommended book by Billings and Halstead (2012) as indicated in the reading activities.

For further enrichment we suggest you read one or more of the books or articles listed in the list of references and suggested readings at the end of the study guide, or any relevant literature of your choice.

Revise the exploratory stage of curriculum development, namely section 3.4.1.

Read SANC’s Circular 8/2013 as well for a condensed overview of SANC’s guidelines.

4.2 INTRODUCTION

The purpose of this study unit is to introduce you to the concept of situation analysis and explain the purpose of conducting a situation analysis during curriculum development. We shall also explain how a situation analysis is conducted.

There will be ONLY two comprehensive activities in this study unit, so please do it thoroughly.

Activity 4.1: Read the section on situational analysis in Uys and Gwele (2005: 25 – 27; 30 – 38. Summarise all the major components that must be included in a situational analysis. You may do this in table format or by way of a mind-map. Keep this summary or mind-map close at hand and as you read through this study unit, add the additional information found to the mind-map or summary.

** Good news, you may work in groups of 4 to create this elaborative mind-map 😊 Paste your final summary or mind-map in the space below and in your e-portfolio. Remember to provide the names and student-numbers of the other members of your group:

Student 1: N/A
Student 2: N/A
Student 3: N/A
### Situational Analysis Components Summary

| 1. Definition | • It comprises the overall view of the area to be covered in a particular teaching sequence.
|               | • The point of departure in all curriculum design should be an intensive analysis of the determinants of the particular situation (Kruger 1980:35).
|               | • It is defined as the needs assessment.
|               | • Needs assessment is a process for identifying problematic needs that must be attended to by the curriculum committee (Olivia 1997:246).
| 2. When is situational analysis done | • It is the first stage of curriculum development.
|                               | • It is done during the exploratory phase specifically.
| 3. Purpose | • It provides necessary data and information which the curriculum committee needs.
|              | • It helps to enable the committee to respond to social realities and changes through curriculum development.
|              | • It helps to test the ideas of health sciences educators.
|              | • It helps to determine current health care reality tendencies and needs.
| 4. Curriculum determinants | **Community:**
|                            | This refers to the values, issues, needs and demands within the community that is being served by the curriculum. This also refers to the broad social and cultural realities and tendencies that influence the curriculum.
|                            | **Subject discipline:**
|                            | This refers to the analysis of didactic demands that are placed on the curriculum.
|                            | This also refers to the exploration of the subject disciplines from which curriculum content will be selected.
|                            | **Learner:**
|                            | The learner needs and demands are the important determinants of
This refers to their educational background and learning styles.

5. Sources of data
   - Formal data collection methods
   - Electronic and printed materials
   - Statistical reports
   - Publications
   - The World Wide Web

6. Data gathering techniques
   - Document analysis
   - Existing reports and publications
   - Questioners and Interviews
   - Brainstorming
   - Public forums
   - Observation

7. Required data and information
   **External factors**
   - Community issues
   - Learner issues
   - Subject discipline issues
   **Internal factors**
   - Educational ethos
   - Learner issues
   - Resources
   - Existing curriculum

8. Interpreting findings
   SWOT analysis is the useful tool for interpreting findings:
   - Qualified educators constitute **STRENGTHS** in the educational institution which can be built upon.
   - Unavailability of publications and information constitute **WEAKNESSES** which has to be overcome.
   - Changing health care needs of the community and technology constitute **OPPORTUNITIES** which pose positive opportunities for curriculum innovation.
   - Emigration of highly qualifies educational educators for greener pastures constitute a **THREAT** that has to be overcome as well.
Activity 4.2: Maybe it would be best to give you your instructions for your second activity as well, as it links closely to the first activity.

Imagine… You are working for the Nursing Council and you are doing an accreditation visit at a NEI (Nursing Education Institution). You have to evaluate or access the situation analysis that they have done prior to submitting their programme for approval or accreditation. In your group (or alone if you prefer), compile an instrument that you will use. Upload this document that you have created to your e-portfolio and add it to the last page of THIS study unit.

(Yes, in essence you will summarise this entire chapter, BUT you will have to use the content, apply it and CREATE something new. We will cover Bloom’s entire taxonomy in one assignment 😊). Please be creative and try to work in groups because, as you might discover, doing something as impressive as this is always easier when you have colleagues to assist and encourage you when you ‘fall short’.

4.3 WHAT IS A SITUATION ANALYSIS?

Instead of situation analysis, some authors use related concepts that do not necessarily have the same meaning as (are not necessarily synonymous with) situation analysis, but which describe more or less the same activities. The following concepts are found in the literature:

- situation analysis (Krüger 1980; Print 1993)
- **needs assessment** (Keating 2006)
- **context analysis** (Jacobs et al 2004)

According to Print (1993:109) a situation analysis is

“… a thorough investigation into the social context for which a particular curriculum is developed and in which it will be implemented.”

Krüger (1980:35) describes situation analysis as follows:

“Situation analysis comprises the overall view of the area to be covered in a particular teaching sequence and the objective or intention of the education which arises from it. The point of departure in all curriculum design should be an intensive analysis of the determinants of the particular situation as well as the situation to be attained.”

Krüger (1980:35,47) further explains that it involves an analysis not only of the realities and issues that influence the curriculum at present, but also of projected realities and issues that might influence the curriculum in future.

Oliva (1997:246) uses the term “needs assessment”, and defines it as follows:

In its simplest definition a needs assessment is a process for identifying programmatic needs that must be addressed by the curriculum.

The above definitions indicate that a situation analysis

- is conducted **before** a curriculum is designed
- is a **systematic** scientific process - is by nature research
- entails **data collection** on the curriculum determinants
- involves the **analysis** of collected data
- involves an analysis of existing issues and situations (**current trends**), which influence the curriculum and its implementation
- involves an analysis of projected issues and situations (**future trends**), which influence the curriculum and its implementation
- entails making **judgements** about the **context** of the curriculum.
A situation analysis can be described as involving at least the following activities:

- Current social and professional issues, trends and realities that influence the curriculum are analysed.
- A needs assessment is conducted whereby the health-related needs of society that have curriculum implications are determined.
- A needs assessment is conducted whereby educationally related needs, as applied to health sciences education, are determined.
- A projection is made of issues, trends and realities that are likely to influence the curriculum in future (a probable future is outlined).

The findings are used as a basis to decide what type of curriculum should be developed and what the substance of the curriculum would be.

### 4.4 WHEN IS A SITUATION ANALYSIS CONDUCTED?

We discussed the curriculum development process in study unit 3. We indicated that a situation analysis is conducted during the first curriculum development stage, namely the exploratory stage.

Revise section 3.3.1 before you proceed with this study unit.

In section 3.3.1 we explained the situation analysis as the first step of the exploratory stage. However, since we live in a constantly changing world, we cannot regard a situation analysis as a once-off event. Rather, it is a continuous process, which means that the curriculum committee should continue to monitor the social context of the curriculum throughout the curriculum development process and adjust the curriculum accordingly (Brady 1999:20; Geyser 2004:149; Oliva 1997:247). This means that the curriculum is as dynamic as its context.

The initial situation analysis contributes towards the development of a relevant curriculum, while the on-going situation analysis ensures its continued relevance in the midst of constant social changes.
4.5 WHAT IS THE PURPOSE OF A SITUATION ANALYSIS?

Before we explain the purpose of a situation analysis, it is necessary to revisit a previous study unit to refresh your memory about why a situation analysis is important for curriculum development.

Take a look at the description of Lawton's cultural analysis model in section 2.3.2:

<table>
<thead>
<tr>
<th>2.3.2 Lawton’s cultural analysis model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawton (Kelly 2004:48) developed a cultural analysis model that is based on the assumption that the main purpose of a curriculum is to initiate learners into the cultural heritage of society or into what is best in it. Lawton (Guilbeau et al 2002:24) defines curriculum as a selection from the culture of society.</td>
</tr>
</tbody>
</table>

Understanding of the social, professional academic realities enables the curriculum committee to develop a realistic and relevant curriculum or to adjust an existing curriculum, thereby ensuring its continued relevance (Print 1993:112). It is quite possible to construct a magnificent curriculum that does not help anybody at all, because it is irrelevant and fails to meet the educational needs of a particular health care system. A situation analysis helps to avoid such an occurrence.

The purpose of a situation analysis is to provide the necessary data and information which the curriculum committee use to enable them to respond to social realities and changes through curriculum development (Van Niekerk 1992:120). It is possible to do so only if we, as educators, are up to date with what is happening around us.

With specific reference to health care, a situation analysis is done to determine current health care realities, tendencies and needs that influence the curriculum and to make projections about future health care realities, tendencies and needs that are likely to influence the curriculum in future. This is done to enable curriculum developers to make deductions about which educational programmes are needed to
prepare health care practitioners so that they can respond to current and future health care needs and demands (Bevis & Watson 1989:112).

When conducting a situation analysis, the curriculum committee determines what the current situation is - compared with what interested parties (such as educators, practitioners, employers, health care consumers and learners) regard as an ideal situation. The gap between the current and ideal situations is described. Curriculum development is then aimed at closing that gap (Print 1993:112).

Another purpose of the situation analysis is, according to Bevis and Watson (1989:113-114), to test the ideas (which are often very idealistic) of health sciences educators against reality. This is to ensure that curriculum development is reality-based and not an ivory tower exercise. Educators are often criticised for losing sight of reality by developing educational programmes that are not suitable for the context within which these programmes are implemented.

In short:

The purpose of a situation analysis is to enhance the immediate and future relevance of the curriculum.

4.6 WHAT ARE THE DETERMINANTS OF A CURRICULUM?

The main matters that the curriculum committee study during a situation analysis are referred to as the determinants of a curriculum. Determinants to study during a situation analysis are:

- community,
- subject discipline and
- learner

These curriculum determinants are the main variables that influence decisions made during curriculum development, as well as the curriculum itself (Tanner & Tanner 1995:252).

4.6.1 The community as a curriculum determinant

Community as a curriculum determinant refers to the values, issues, needs and demands within the community that is served by the curriculum, namely those that will ultimately be served by the graduates. It also refers to broad social and cultural realities and tendencies that influence the curriculum (Krüger 1980:35-44). For instance, the main health problems prevalent in the community are identified. The health problems identified are then regarded as priority areas for curriculum development. The curriculum committee responds by allocating relatively more weight to the identified priority areas in the curriculum in relation to less important health issues.

The purpose of health sciences education is to prepare learners to practise a specific profession. This means that the nature, tendencies and demands of the particular profession should also be investigated. For instance, the main issues that are being debated by the profession are analysed and the curriculum implications determined. For instance, debates about the need for practitioners who are able to think critically are documented by the curriculum committee. They then respond to these calls by developing a curriculum that will enhance the critical thinking skills of learners. This can be done by establishing a problem-centred curriculum design and applying the principles of problem-based learning.

The educational institutions where learners interact with the curriculum must also be investigated to determine strengths that can be built upon, constraints that have to be overcome and specific needs that have to be met. For instance, institutions with high cultural diversity require a culturally sensitive curriculum that would also equip learners with the ability to render culturally competent and congruent care.
4.6.2 Subject discipline as a curriculum determinant

Subject discipline as a curriculum determinant refers to an analysis of the didactic demands that are placed on a curriculum. It also refers to an exploration of the subject disciplines from which curriculum content will be selected (Krüger 1980:48-49). The curriculum committee investigates the nature of the subject disciplines, the latest tendencies within the disciplines, as well as the intellectual demands put on the learners by the disciplines. This is done within the context of the potential contribution of each discipline towards developing health science professionals.

We must remember that health sciences education is rendered in a social era that is characterised by scientific and technological explosion. While investigating this determinant, the implications of constant scientific and technological innovation must be spelt out. This deserves to be done with great caution in areas/communities in which great social disparity is present. The curriculum committee must also try to keep up to date with the constant flow of new publications and discoveries and update the curriculum accordingly (Skilbeck in Print 1993:115). Prescribing reading material is becoming an increasingly difficult task because we are bombarded by new knowledge and publications daily. What is new and relevant today may be outdated a month from now. Therefore, the curriculum committee must try to devise strategies to cope with constant change.

4.6.3 The learner as a curriculum determinant

Curriculum experts agree that the learners’ needs and demands are important determinants of the curriculum. The learner as determinant refers to the:

- nature (e.g. educational background),
- educational needs (such as learning styles) and
- demands (e.g. political demands) of learners.

Points included are the different views about the nature of humans and how human beings learn. This will influence decisions such as which learning theories underpin curriculum development, teaching and learning (Mostert 1985:70-71; Skilbeck in Print 1993:115). For instance, if the view is maintained that humans learn in interaction with others, then Vygotsky’s (1978) social cognition learning theory
might be regarded as an appropriate learning theory for the curriculum because it underpins collaborative learning.

4.7 SOURCES OF DATA

A situation analysis is a **formal investigation** into the context of a curriculum. This implies that relevant **data sources** are consulted and formal methods of **data collection** are applied. Because educational institutions do not exist in isolation, it is necessary to obtain data on the local, regional, national and international **trends** that influence a particular curriculum.

The data are obtained from different electronic and printed sources. **Statistical reports** and **publications** which discuss recent and future social, professional and academic trends are particularly important. Possible data sources to investigate the context of a health sciences education curriculum include the following:

- World Health Organization (**WHO**) statistical data and publications (e.g. health care declarations, country profiles, burden of disease reports, best-practices publications and health news from around the world) - [http://www.who.int](http://www.who.int)
- international professional councils (e.g. **INC** / international nursing council policies, publications and fact sheets) - [http://www.icn.ch/](http://www.icn.ch/)
- **national departments** of health publications (e.g. demographic and epidemiological data and information; health Act and policy)
- national departments of education publications (e.g. educational Act and policy)
- regional, provincial and local governmental publications (e.g. census data and information)
- health care institution reports
- educational institution reports
- nongovernmental organisation reports (e.g. The Kaiser Family Foundation) - [http://www.kff.org/southafrica/](http://www.kff.org/southafrica/)
- journals (e.g. epidemiological, medical, nursing and other professional journals)
- general publications (e.g. specialised economic, technological and scientific magazines and newspaper reports)
- publications by individual experts in the field

### 4.8 DATA-GATHERING TECHNIQUES

Scientific methods of data collection, analysis and interpretation are applied to obtain valid data and information. We can use various methods and techniques for data gathering.

You are already familiar with research in the health sciences. Revise data collection methods and instruments, covered in the RSC201H module which you have completed.

The main data-gathering method is **document analysis**, although it may be necessary to also conduct some interviews or distribute questionnaires. In addition, **public forums** and **brainstorming sessions** could be held to shed more light on selected issues.

#### 4.8.1 Document analysis

The main data-gathering method is document analysis. Most of the data and information that you require can be found in **existing reports and publications**. Document analysis means that we obtain the data that we require from existing publications. Most of the data sources which we identified in section 4.7 are existing publications which require analysis in order to describe the context of the curriculum. The curriculum committee should obtain the most recent sources because old sources are of little use for investigating contemporary trends and projections of what the future will be like. They are likely to sketch a reality which no longer exists when the situation analysis is being conducted.
4.8.2 Asking people directly: sending out questionnaires or conducting interviews

As we explained earlier, most of the data and information that you require can be obtained by means of a document analysis. However, you may discover that existing documents do not answer all your questions about the curriculum context. You may need to obtain the missing data and information by asking people directly to shed more light on these questions. One option would be to send out a questionnaire, while interviews, brainstorming sessions or public forums are other options.

4.8.2.1 Sending out questionnaires

A questionnaire comprises a series of items to which the participants, namely the human data sources, respond. It may be distributed directly to the participants, for example in a classroom, on the street or in their homes; but in a study including a large geographical area, it is necessary to mail the questionnaires.

Questionnaires may be structured, comprising closed-ended items. Structured questionnaires are used to gather quantifiable data. They may also be unstructured, comprising open-ended items. Unstructured questionnaires are used to gather qualitative data. For instance, data pertaining to the academic achievements of the existing learners are quantifiable, while data pertaining to the learners' experiences in the educational setting are suited to qualitative data collection and analysis. Some questionnaires consist of a combination of open-ended or closed-ended items.

4.8.2.2 Conducting interviews

Interviews may be held in addition to document analysis. During an interview the participant answers an interviewer who asks questions according to an interview schedule (when structured interviews are held) or interview guide (in the case of unstructured interviews).

Interviewing is more appropriate than administering questionnaires if you intend to gather data by involving illiterate or semiliterate participants.
4.8.2.3 Public forum and brainstorming sessions

The public forum method enables the curriculum committee to gather a lot of data within a short period of time. **Members of the general public** are invited to a gathering during which relevant questions are asked and the attendees are given an opportunity to voice their opinions. This method is useful to obtain information about what the general public expect from the health care system and the health care professionals who render the services. It often **raises needs** that are passed over by more formal methods. The disadvantage of a public forum is that influential and long-winded speakers may dominate the proceedings and a one sided view is obtained. It is necessary to notify the public beforehand through the media.

Brainstorming is a valuable supporting method. Specialists from various fields of society and from diverse disciplines are involved in informal discussions. For instance, experts from your professional field are valuable sources of data on the clinical learning experiences which should be created for the learners. It is important to have an informal atmosphere where each participant can freely express his or her opinion.

4.8.2.4 Observation

Observation can shed light on the role and functions of health care professionals. For instance, it is possible to determine how much time a health care practitioner spends with a client during a 24-hour period and which **functions** they mainly perform. The data that we obtain in this manner is used to identify the **competencies** which health care professionals require in order to practise competently. The competencies are then used to develop the **curriculum outcomes**.

4.9 REQUIRED DATA AND INFORMATION
In this section we indicate the data and information which are required in order to conduct a thorough investigation into the curriculum context. According to Brady (1999:33), factors external and internal to the educational institution are investigated.

4.9.1 External factors to investigate during a situation analysis

External factors which need to be investigated during situation analysis include the issues and trends related to the community, the learner and the subject discipline. It would be useful to develop a conceptual framework to guide you through the process of data collection. The conceptual framework should indicate the data that you require, the data sources and how coding should be done to help you to make sense of the data obtained. Table 4.1 is an example of a conceptual framework which you could use to investigate the factors external to the educational institution.

Table 4.1: Conceptual framework to investigate the factors external to the educational institution

<table>
<thead>
<tr>
<th>FACTORS EXTERNAL TO THE EDUCATIONAL INSTITUTION</th>
<th>DATA SOURCES</th>
<th>CODING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constitutional environment</td>
<td>CE</td>
<td></td>
</tr>
<tr>
<td>Statutory environment</td>
<td>SE</td>
<td></td>
</tr>
<tr>
<td>Political environment</td>
<td>PE</td>
<td></td>
</tr>
<tr>
<td>Economic environment</td>
<td>EE</td>
<td></td>
</tr>
<tr>
<td>Technological environment</td>
<td>TE</td>
<td></td>
</tr>
<tr>
<td>Demographic trends</td>
<td>DT</td>
<td></td>
</tr>
<tr>
<td>Learner issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General educational environment</td>
<td>GE</td>
<td></td>
</tr>
<tr>
<td>Professional educational environment</td>
<td>PE</td>
<td></td>
</tr>
<tr>
<td>Subject discipline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic developments</td>
<td>AD</td>
<td></td>
</tr>
<tr>
<td>Technological developments</td>
<td>TD</td>
<td></td>
</tr>
</tbody>
</table>

Section 4.9.1 is structured according to the conceptual framework in table 4.1. You may have noticed that we did not include anything in the data sources column. It is your responsibility to add the data sources as you proceed through section 4.9.1.
4.9.1.1 Community issues

The data and information which the curriculum committee should gather to investigate the community in which the curriculum exists are outlined in this section. We pay attention to the constitutional, statutory, political, economic, technological and demographic environment of the curriculum.

a) Constitutional environment
Constitution is the mode in which a state or society is organised, especially the manner in which sovereign power is distributed. It also refers to the basic principles and laws of a nation, state or social group that determines the powers and duties of the government and guarantees certain rights to the people in it (Merriam-Webster’s online dictionary, sv “constitution”). For the purpose of conducting a situation analysis for the development of a health sciences curriculum it is sufficient to focus on matters relating to the health sciences education system and the health care system.

i) Social and politico-economic ideology
The ideology of a nation is enshrined in its national constitution. It is therefore necessary to study your country's constitution and determine how the curriculum should respond to the stipulations of the constitution.

You need to answer the following questions:

- What are the main principles of the constitution which are relevant to health sciences education and health care delivery?
- What are the implications of the above question for the health sciences education curriculum?

ii) Authorities responsible for health sciences education
It is necessary to identify the authorities responsible for health sciences education in your country and determine how they view health sciences education. In some countries the ministry of health is responsible for health sciences education, while in
other countries it is the ministry of education. In some countries these two ministries share this responsibility.

You need to answer the following questions:

- Which ministry is or which ministries are responsible for health sciences education?
- What type of education do the authorities prescribe (e.g. vocational training, liberal education or emancipatory education)?
- Which guidelines relevant to health sciences education did the responsible authority establish?
- What are the implications of the above questions for the health sciences education curriculum?

iii) Educational structures

Education is rendered within a specific educational structure. It is necessary to spell out the nature of the educational institution involved and the educational programme to which the situation analysis applies.

You need to answer the following questions:

- Which type of institution is involved (e.g. university, technikon [polytechnic] or college)?
- What types of programme are offered (e.g. diploma or degree)?
- Who are the consumers of the graduates of the educational institution (e.g. public sector, the private sector, religious health care institutions and/or industry)?
- How do the above trends in your country compare with international trends on the nature of the programmes and the educational institutions involved?
- What are the implications of the above questions for the health sciences education curriculum?

iv) Health sciences education relations

The educational institution does not function in isolation. Various other institutions collaborate with the educational institution to ensure that academic standards are
maintained and that the learners have access to the clinical setting to gain the necessary clinical experience.

You need to answer the following questions:

- In the case of colleges, are there any affiliation arrangements with a university and which academic standards have been set by the university?
- Which clinical institutions are affiliated with the educational institution and which clinical learning opportunities do they offer?
- Which community institutions are affiliated with the educational institution and which clinical learning opportunities do they offer?
- What are the collaboration arrangements between the educational institution and the affiliated institutions?
- What are the implications of the above questions for the health sciences education curriculum?

v) Health care delivery structures

Health care professionals are prepared to be able to function in a particular health care system. In addition, the health care system is a source of clinical learning experiences for learners. It is therefore necessary to spell out the structure of the health care system, the levels of health care delivery and the human resources requirements at each level. This information enables the curriculum committee to determine which type of health care professional is required to meet the human resources needs of the health care system and the competencies that they require.

You need to answer the following questions:

- How is the public health care system structured?
- What are the levels of health care delivery?
- Which institutions exist at each level?
- Which health care professionals are employed at each level?
- Which services are rendered at each level?
- What is the level of technology at each level?
- Which competencies are required for each level?
- What is the nature of the private health care system?
• Which categories of health care professionals are employed?
• Which services are rendered?
• What is the level of technology?
• Which competencies are required?
• What are the implications of the above questions for the health sciences education curriculum?

b) Statutory environment
The statutory environment flows from the constitutional environment. Relevant legislation and policies provide a statutory framework for education and health care delivery. You should therefore investigate the legislative framework within which health care and health sciences education are rendered.

i) Educational legislation and policies
With regard to the educational system it is necessary to determine which Acts, regulations and policies direct professional education.

You need to answer the following questions:
• What are the stipulations of the national education Act and policy and how should the curriculum respond to these stipulations? (For instance, the emphasis on vocational training for quality enhancement in some countries has led to the development of competency-based or outcomes-based curricula.)
• What are the stipulations of the Act pertaining to your profession (e.g. nursing Act) and professional education policy, and how should the curriculum respond to these stipulations?
• What are the implications of the above questions for the health sciences education curriculum?

ii) Health care legislation and policies
The national health Act and national health policy of your country also influence health sciences education.
You need to answer the following questions:

- What are the stipulations of the health Act and national health policy and how should the curriculum respond to these stipulations?
- Does your country have a minimum health care package; how should you prioritise the curriculum content in accordance with the minimum health care package; and which competencies are required to implement the minimum health care package?
- What are the implications of the above questions for the health sciences education curriculum?

Because the curriculum is also influenced by international factors it is necessary to investigate the policy statements of international organisations as well. An example of a relevant organisation is the WHO.

You need to answer the following questions:

- What are the stipulations of the relevant WHO position statements and declarations (e.g. the 1978 Alma Ata Declaration - [http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf](http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf))?
- What are the implications of the above questions for the health sciences education curriculum?

iii) Statutory control

Statutory control is exercised through regulating bodies, which are established by parliament. Examples are higher education councils, national qualifications authorities and professional councils.

You need to answer the following questions:

- Which bodies regulate health sciences education in your country?
- Which training regulations exist (e.g. R.425) and what is the nature of the macro-curriculum which has been set at national level?
- Which requirements must be met before the graduates can be registered as professional practitioners?
- How must the curriculum be submitted for validation by the statutory body?
• Which requirements have to be met before the curriculum will be validated by the statutory body?
• What are the implications of the above questions for the health sciences education curriculum?

Health sciences education in your country is not rendered in isolation but rather exists in an international context. It is therefore also necessary to identify the relevant international statutory bodies (e.g. the International Nursing Council) and obtain their views on education.

You need to answer the following question:
• Which guidelines of the international statutory body are relevant to the curriculum under construction (e.g. ICN scope of nursing practice [http://www.icn.ch/psscope.htm])?

c) Political environment
The political environment encompasses the major political forces and people with influence in the community. The curriculum committee must also avail themselves of the political demands which stakeholders direct to health sciences education. Social pressure groups such as the trade union and feminist movements also influence the health professions. Trade union activities underscore the need to include matters such as the basic rights of the health care consumer in the curriculum. Although health professionals have not been directly involved in the feminist movement, it has nevertheless led to equal pay for women, better educational opportunities and a greater acceptance of, for example, the female nurse as a professional in her own right.

You need to answer the following questions:
• Which community interest groups exist and what are their views on health care delivery and the required competencies of health care professionals?
• What are the views of the relevant interest groups on education in general, and health sciences education in particular?
- Which relevant pressure groups are active in the area surrounding the educational institution and what are their demands relevant to health sciences education?
- Who are the gatekeepers in the community and how can the access to the community be secured to utilise community-based learning opportunities?

d) Economic environment

The health sciences curriculum is influenced by the economic climate in the broader national and international context. Economic trends and constraints greatly impact on health care delivery and health sciences education. Since financial resources are limited, rationalisation may be inevitable. Educators need to be creative and prepare learners to be resourceful without detriment to their patients. They need to develop innovative skills in seeking ways to accomplish the desired health care outcomes with fewer resources. Economic restrictions on the provision of resources and materials may necessitate adjustments in planning and organising the health sciences education systems. Spiralling health care costs are most likely to force increasing regulation of health care in the future, and health professionals must be prepared to become actively involved in developing health policy.

i) International trends

In the HSE3702 module you studied the impact of globalisation on the health care system and health sciences education systems of individual countries. You learnt that globalisation is underpinned by the principle of free market capitalism. Company operations, trade and services of multinational corporations are offered globally. The world is seen as a global marketplace, as there is a flow of trade, capital and labour across borders. National economies are consequently opened, deregulated and privatised to enhance competitiveness and attract the foreign investment needed for economic growth and wealth creation (Friedman in De Villiers 2005:56). The flow of immigrants from poor nations to richer nations leads to a brain drain in the poor nations. While globalisation, in theory, promises to contribute towards growth and development in developing countries, in practice the divide between rich and poor countries may increase. Consequently people living in poor countries may find it very difficult to escape from the spiral of low educational levels, unemployment, poverty,
crime, violence and disease (De Villiers 2005:56-58). These conditions severely hamper health care delivery and the delivery of health sciences education.

Globalisation has highlighted the following issues:

- The principles of free market capitalism prevail in the international context.
- The operations of multinational companies, including health care and pharmaceutical companies, are evident on a global basis and most likely in your country as well.
- Health care professionals are likely to leave and/or enter your country in search of lucrative employment opportunities.
- Public companies, including health care and educational institutions, have been or may be privatised in the foreseeable future.
- There is increased competition between health care institutions and educational institutions to attract customers (patients or learners).
- While some communities may thrive, others may experience increased levels of poverty and related problems.

It is necessary to investigate how these international economic trends influence the economic system in your country in general, with specific reference to the health care economy. The curriculum must equip learners with the competencies which would enable them to function in a globalised world and overcome the problems associated with globalisation.

ii) Economic realities in your country

The curriculum committee should avail themselves of the economic climate in your country. As stated above, since financial resources are limited, rationalisation may be inevitable.

Educators need to be creative and prepare learners to be resourceful without detriment to the patients. They need to develop the learners’ innovative skills in seeking ways to accomplish the desired health care outcomes with fewer resources. Economic restrictions on the provision of resources and materials may necessitate adjustments in planning and organising the health sciences education systems. This requires creative strategies to ensure high quality education despite these
constraints. Spiralling health care costs are most likely to force increasing regulation of health care in the future, for example managed health care.

Economic ideologies also influence the curriculum. For instance, where the economy is underpinned by capitalist principles, learners need to be prepared to function in service-for-profit settings. In a socialist environment, a service orientation enjoys preference over a profit motive, but economic restrictions are becoming more and more evident in this type of environment as well. Regardless of the ideological climate, learners need to acquire financial management skills as health care is rendered in an increasingly restrictive economic climate.

You need to answer the following questions:

- How is your country classified in economic terms (least developed, developing or developed)?
- What are the levels of external debt?
- What is the annual economic growth rate?
- What is the annual per capita income?
- What proportion of the population lives below the poverty line?
- Which economic paradigm is followed (capitalist and socialist)?
- How does the prevailing economic paradigm impact on the role and functions of health care professionals?
- How does the prevailing economic paradigm impact on the delivery of health sciences education?
- Has your country developed millennium development goals and how does this impact on the role and functions of health care professionals?
- What are the implications of the above questions for the health sciences education curriculum?
- How can high quality health sciences education be rendered despite these economic restrictions?

### iii) Health care economics

Health care economics refers to the financing of health care delivery. As far as this is concerned, the relevant questions include the following:
• What is the level of privatisation of especially health care institutions and how does this impact on the role and functions of health care professionals?
• How affordable is health care and which strategies have your government adopted to make it more affordable for the general population?
• How is health sciences education financed and how do the economic constraints influence curriculum development?
• What are the implications of the above questions for the health sciences education curriculum?

iv) Human resources issues
Consider the fact that health sciences education is aimed at meeting the human resources needs of your country.

You need to answer the following questions:
• What is the state of human resources for health provision in your country?
• What are the client-health professional ratios?
• What is the urban-rural distribution of health care professionals and where are the graduates likely to work?
• Are there any proposals to alleviate shortages of health care professionals through curriculum development? (For instance there may be calls for the establishment of a modularised delivery system for a professional educational programme, which makes provision for sub-professional exit points. By doing so, the short-term human resources needs could be met, while a career path would be available to those persons who exit the programme at the exit points and re-enter the programme at another point in time.

Similarly there may be calls for increasing the sub-professional training programmes, which develop a small range of basic health care delivery skills.)
• What are the numbers and qualifications of mentors in the clinical fields who guide the learners in the field while they achieve their clinical learning objectives?
• What are the implications of the above questions for the health sciences education curriculum and which educational strategies can be utilised to ensure high quality education despite human resources shortages?

e) Technological environment

Currently, technological advances and the digital revolution are changing how we live, learn, communicate and work. Technological advances are one of the driving forces behind globalisation. Even the remotest areas in the world are, or will be, affected by these developments: therefore the technological environment is an important area of investigation.

Advanced technology has had a tremendous impact on the health sciences. Consider for instance the equipment available to health services today compared with that of 10 or 20 years ago - and, consequently, the renewed emphasis on the humane caring role of the carers as high-tech environments tend to be impersonal.

Sophisticated technological equipment and computers are increasingly being used in health care institutions, resulting in the requirement that technological literacy be included in the curriculum. Technological literacy refers to the ability to use health care technology (such as ventilators), information technology (such as computers), and communication technology (such as mobile telephones and email) in the workplace.

Computers are playing an increasing role in education. Many educational institutions already use computer-assisted instruction, whereby the multimedia computer and the internet are utilised for teaching and learning purposes. There are also many examples of the use of satellite systems, facilitating interactions between educators and learners who are geographically separated.

Technological developments also influence disease patterns because, although technology has helped to prevent and/or treat certain diseases, the increase in certain malignancies has been ascribed to chemical pollutants in the air, food and water. The high-tech environment in industrialised areas is also seen as the cause of the increase in psychiatric and psychosomatic disorders.
Advances in technology also bring new ethical dilemmas. Learners will need to be taught strategies to identify and respond to complex moral problems. For instance, in developing countries health care professionals are often confronted by opposing views on issues: such as saving the life of one patient through sophisticated and expensive technology versus rendering relatively inexpensive primary health care to hundreds of people. Depending on government policy in this regard, one may be put in a position where lifesaving treatment is withheld from a patient, resulting in conflicts between the professional ethical code (such as alleviation of suffering) and the realities in the health care system (such as economic constraints preventing us from utilising existing technology to alleviate suffering).

i) International technological advances
With reference to the international technological trends, the relevant questions that you should answer include the following:

- Which technological developments related to information-communication technologies are evident internationally?
- Which technological developments related to health information systems are evident internationally?
- Which technological developments related to health care equipment and procedures are evident internationally?
- Which technological developments related to the delivery of education are evident internationally?
- How do the above developments influence the delivery of educational programmes and teaching and learning?
- What are the implications of the above questions for the health sciences education curriculum?

ii) National technological advances
The digital divide has seen many developing and less developed countries falling more and more behind the developed world in terms of development. It is therefore necessary to shift your attention to how your own country shapes up in terms of technological advances.
You need to answer the following questions:

- How does your country compare in terms of the availability, affordability and utilisation of the identified technologies?
- Which initiatives exist to increase people’s access to the identified technologies?
- Which initiatives exist to include technological studies in the curriculum and develop technological skills in the learners?
- Which initiatives exist to utilise relevant technologies to deliver education in your country?
- What are the implications of the above questions for health sciences education?

1) Demographic trends

Demographic trends give an indication of the nature of the population which is served by the graduates and their health care needs. They also shed light on the contexts in which the graduates are likely to work. The curriculum should reflect the health priorities of the community which your institution serves to enable the graduates to effectively meet their health care needs.

Rising numbers of elderly people (above the age of 65 years), in especially developed countries and communities, require that nurses or health care professionals of the future are trained to meet the health needs of the elderly. This may require a review of some educational programmes, ensuring that the health needs of the elderly are covered sufficiently. This may be done by placing more emphasis on chronic health problems, for instance. The high proportion of children under the age of 14, in especially developing countries and communities, requires that more attention is given to infant care and school health services, for instance.

The phenomena of continuing urbanisation and depopulation of rural areas result in problems that need to be tackled. Continuing urbanisation may lead to overpopulation with its accompanying social problems. Learners must be trained to meet health needs associated with overcrowding for instance, tuberculosis, AIDS.
and violence. In sparsely populated rural areas many inhabitants are living below the poverty line. When basic needs for food, clothing and shelter are seldom or erratically fulfilled, health care becomes a luxury. Preventable conditions are often not prevented owing to lack of education. Learners need to be prepared to develop innovative skills in seeking ways to overcome these problems. Examples are skills in influencing policy-making processes for the benefit of the community, as well as community empowerment skills.

Changes from unicultural to multicultural health establishments result in a reality that requires that health care professionals can care for all heterogeneous, culturally diverse groups. Each group has its own entrenched cultural practices, health beliefs, folk remedies and conventional wisdom, all of which influences health care. Learners must be aware of these differences and be prepared to deal with them. This can be achieved by including, for instance, anthropology, medical anthropology or transcultural nursing in the curriculum.

It is necessary to define the community which your educational institution serves before you gather demographic data. Large educational institutions which attract international students have a wide community focus while a small rural educational institution which attracts students from a small geographical area has a narrow focus which does not extend beyond a specific region (Keating 2006:108). For instance, Unisa serves an international community while a small educational institution in rural South Africa servers a regional community. A situation analysis by Unisa lecturers will include international demographic trends with particular focus on the African continent, while the staff members of an educational institution in the Limpopo province of South Africa will focus on the demographic trends in the province.

i) Population patterns
Population patterns influence the health care needs of a given society and the curriculum must equip learners to meet these needs. For instance, an ageing population requires health care for chronic health problems and the influx of refugees require the prevention of communicable diseases.

With regard to population patterns, you need to answer the following questions:
• What are the population statistics in your country and specifically your region (e.g. population size, growth, composition and distribution)?
• What are the population dynamics in your country and specifically your region (e.g. mobility and influx of refugees)?
• How culturally diverse is your country and specifically your region?
• How do the above trends influence the health sciences education curriculum?

ii) Health care trends
The general health care trends in the community determine the roles and functions of health personnel; therefore they have implications for the health sciences curricula. Curriculum committees should consider the incidence and the magnitude of disease and disability in the community to enable them to meet community health needs by establishing relevant educational programmes for health care professionals. Particular emphasis should be placed on the health priorities of a given society.

You need to answer the following questions:
• What is the health profile of your country and your specific area (e.g. burden of disease)?
• What are the health priorities in your country and specifically your area?
• How do the above trends influence the health sciences education curriculum?

4.9.1.2 Learner issues
The level of school education in a community dictates the availability of candidates to be recruited for a particular educational programme in the health sciences. A situation analysis should therefore include a comparison between the characteristics of required recruits and those of the available recruits. The recruits who enter health sciences education are mainly the products of the general educational system.

You need to answer the following questions:
• How is the quality of the schooling system rated?
• What are the strengths and limitations of the general educational system?
• What are the entry requirements for the health sciences education programme and what is the level of availability of suitable recruits?

The learners enter an educational programme because they have specific educational needs. The situation analysis also serves to explicate their needs and expectations. Therefore you need to answer the following questions:

• Why do the recruits enter the educational programme (e.g. to pursue a first qualification or to improve their existing qualifications)?
• What are the expectations of the recruits?
• How do the above issues influence the health sciences education curriculum?

4.9.1.3 Subject discipline

As stated before, a situation analysis should explore the subject disciplines from which curriculum content is selected. Developments in the fields of science and technology necessitate frequent updating of existing curricula to account for the new knowledge, skills and values which the learners should acquire. These developments change the roles and functions of health care professionals and educators (refer to HSE3702). This has an impact on health sciences education because it is its business to prepare the learners for their role and functions in the health care sector. Developments related to the subject disciplines therefore influence not only the curriculum but also the practice of health care professionals. The competencies which the graduates require when they enter the field of professional practice and which the curriculum should develop in the learners should therefore be reconsidered in light of the findings of the situation analysis.

Each subject discipline places unique intellectual demands on the learners. The subject disciplines have unique forms of thought and logical structures. This influences curriculum organisation and how the subject content is taught to the learners.

You need to answer the following questions:
• What new knowledge has been generated in recent years (e.g. human genetics, molecular biology, latest research results on health and disease) and how is the knowledge best learnt?
• What are the latest technological developments specific to the subject discipline (e.g. stem cell technology and nuclear medicine)?
• How do these developments influence professional practice?
• How do the above developments influence the selection of curriculum content, how the content is organised and sequenced, and the required teaching strategies and learning opportunities?

4.9.2 Internal factors to investigate during a situation analysis

Internal factors are those factors within the educational institution itself which influence the health sciences curriculum. These factors include the characteristics of the particular institution, its educational ethos and the existing resources (Keating 2006:138-139). Table 4.2 is an example of a conceptual framework to investigate and code the factors internal to the educational institution.

Table 4.2: Conceptual framework to investigate the factors internal to the educational institution

<table>
<thead>
<tr>
<th>FACTORS INTERNAL TO THE EDUCATIONAL INSTITUTION</th>
<th>DATA SOURCES</th>
<th>CODING</th>
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<tbody>
<tr>
<td>Educational ethos (vision, mission, educational philosophy)</td>
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<tr>
<td>Learner issues</td>
<td>LP</td>
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<td>Learner profile</td>
<td>LN</td>
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<td>Learner needs</td>
<td>AA</td>
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<td>Past and current academic achievements and failures</td>
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<td>Resources</td>
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<td>Material resources</td>
<td>HR</td>
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<td>Human resources</td>
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<td></td>
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<tr>
<td>Existing curriculum</td>
<td>EC</td>
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</table>
Section 4.9.2 is structured according to the conceptual framework in table 4.2. You may have noticed that we did not include anything in the data sources column. It is your responsibility to add the data sources as you proceed through section 4.9.2.

4.9.2.1 Educational ethos
The HSE3703 module dealt with the foundations of a curriculum in general and specifically the educational ethos that underpin the curriculum.

Revise the sections in HSE3703 which discuss the educational philosophies and educational ethos that underpin the health sciences education curriculum.

The educational ethos of a particular institution determines the type of educational programme and the educational activities in the institution. You need to answer the following questions:

- What is the vision and mission of the educational institution?
- Which educational philosophy or philosophies have been adopted by the educational institution?
- Which learning theories underpin the curriculum?
- What are the educators' views on the nature of a curriculum (refer to section 1.2) and the purpose of a curriculum (refer to section 1.3).
- How does the educational ethos influence the health sciences curriculum?

4.9.2.2 Learner issues
The main reason why a curriculum is designed and implemented is to guide the learning of learners in accordance with their learning needs. Determining the characteristics of the learner corps enables the curriculum committee to determine their learning needs. It is therefore necessary to investigate the learner profile within the educational institution.

You need to answer the following questions:

- What is the demographic profile of the existing students (e.g. age, gender, socioeconomic status, family commitments)?
• Which languages do the learners speak and which language do they all understand?
• How culturally diverse is the learner population?
• What is the throughput of learners (e.g. what are the pass rates)?
• Do learner organisations (e.g. unions) exist and what are their educational views and demands?

4.9.2.3 Resources
Curriculum implementation is influenced by availability of material and human resources within the particular educational institution. For instance, it would be very difficult for an educational institution to positively respond to the latest developments in science and technology if the human and material resources were inadequate.

a) Material resources
The quality of educational programmes greatly depends on the availability of material resources which support learning. Similarly, efforts to develop a new curriculum or update an existing one may be supported or hampered by the availability of the relevant material resources. For instance, an educational institution would be hampered in its intention to introduce technological studies in the curriculum or to render computer-assisted learning if there is a lack of suitable qualified educators, a lack of recent publications, and inadequate funds to purchase the required technological equipment and contemporary publications.

You need to answer the following questions:
• How adequate is the budget of the educational institution?
• How adequate are the buildings, classroom facilities, library facilities, clinical teaching and learning facilities?
• How adequate are the teaching and learning equipments and material?
• What is the availability of contemporary publications?
• To what extent do learners have access to information-communication technologies, computer-assisted learning and the internet?
• How adequate are the support services, like transport services and technical facilities?
b) Human resources

It is the educators who implement curricula. Therefore the quality of the educators in terms of having the relevant knowledge, experience, skills (educational and clinical skills) and attitudes greatly affects the quality of education. For instance, it would be difficult to introduce technological studies and computer-assisted learning in an educational institution if the educators were not technologically literate or if they were resistant to these developments. It is therefore necessary to investigate the educator profile during a situation analysis.

You need to answer the following questions:

- What is the profile of educators (theoretical and clinical) and clinical mentors?
- What is the availability of suitably qualified educators?
- How mobile are available educators (e.g. is there a high rate of resignations because of better employment opportunities elsewhere)?
- Do educator organisations (e.g. unions) exist and what are their views and demands?

4.10 INTERPRETING THE FINDINGS OF THE SITUATION ANALYSIS

Once data have been collected they must be analysed to determine the influencing trends, areas requiring improvements or adaptations and problem areas. This does not require sophisticated analysis techniques but rather a systematic analysis and synthesis of the collected data to determine what patterns are revealed. From these patterns the curriculum committee is able to recommend directions for action (Print 1993:119).

A useful analysis strategy is the SWOT analysis (Quinn 2007:497-498). This entails scrutinising the collected data and identifying the strengths, weaknesses, opportunities and threats. For instance:

- The availability of suitably qualified educators in the educational institution constitutes strength, which can be built upon.
• The unavailability of contemporary publications and information-communication technologies in the educational institution constitutes weaknesses, which has to be overcome.

• Changing health care needs of the community, and scientific and technological developments in the subject discipline, pose opportunities for curriculum innovations.

• Emigration of highly qualified educators to pursue better employment opportunities constitutes a threat to high quality education, and this threat has to be overcome.

• The outcome of a situation analysis is a set of recommendations on the extent of curriculum change which is required, namely whether a new curriculum should be developed or whether an existing curriculum should be updated to ensure its continued relevance. The recommendations also give an indication of how to solve problems which stand in the way of high quality education.

![SWOT Analysis Diagram](image)

**Figure 04-1: SWOT analysis**

### 4.11 SUMMARY

In this study unit we proposed a method which you could apply to conduct a situation analysis in your institution. The data and information which you obtain will influence your decisions on the outcomes and content of the curriculum, and how teaching, learning and learning assessment will take place.
Remember to upload and paste the products of Activity 4.1 and 4.2 in your e-portfolios.

ACTIVITY 4.2

ACCREDITATION VISIT AT NURSING EDUCATION

INSTRUMENT FOR EVALUATION:

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<td>2. Purpose stated.</td>
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<td>3. Curriculum determinants specified.</td>
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<td>4. Sources of data used specified.</td>
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<td>Document analysis</td>
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<td>Interviews</td>
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<td>Observation</td>
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<td>6. Methods used to interpret findings specified.</td>
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<td>7. Identified areas of improvement:</td>
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Auditor:
Full Name
Signature:
Date and time:
“The success of tomorrow’s students will be built upon the education we design today”  

Dr Linda Price
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Study Unit 5: DESIGNING A CURRICULUM AT MESO-LEVEL

5.1 OVERVIEW

In study unit 3 we explained the stages and steps of curriculum development. In this study unit you will learn that various levels of curriculum development exist. We discuss the levels of curriculum development in this study unit. You will learn how to develop a meso-curriculum, which is derived from a macro-curriculum. You will also develop a lesson plan, using your meso-curriculum as a guideline.

After you have worked through this study unit, you will be able to design a module at meso-curriculum level, based on your ability to

- describe the levels of curriculum development
- interpret a macro-curriculum
- select and apply an organising framework
- develop a module which is in accordance with the macro-curriculum stipulations
- develop a lesson plan on a selected topic

The prescribed reading for this study unit is as follows:

- Billings & Halstead 2009:138-51, 173-183
- Uys and Gwele 2005: Chapter 4 and 5 (free e-book)

Where necessary, we will also refer you to appropriate articles, websites and e-books. For further enrichment we suggest you read one or more of the books or articles listed in the list of references and suggested readings at the end of the study guide or any relevant literature of your choice.

You are already familiar with curriculum development at micro level. We advise you to revise the following sections of the first and second level Health Sciences Education modules:
You are also familiar with the second stage of curriculum development, namely the design stage. We advise you to also revise section 3.4.2 of the study guide.

5.2 INTRODUCTION

In study unit 3, we discussed the principles of curriculum development and the stages and steps involved in developing a curriculum. You should therefore have a general idea about what the curriculum development process entails. In this study unit, we will further elaborate on curriculum development by proposing strategies which you could use to develop a meso-curriculum.

Activity 5.1: Watch the presentation “Curriculum Development: Macro-, Meso-, Micro Curriculum - PowerPoint PPT Presentation” for a quick overview of the different levels of curriculum development. In short, quickly summarises:

- Macro-curriculum: This is broad curriculum which spells out statutory requirements. An example is the South African Nursing Council, South African Qualifications Authority.
- Meso-curriculum: It is a detailed and specific curriculum which complies with the macro curriculum. It consists of the requirements of the specific educational institution.
- Micro-curriculum: These are detailed lesson plans, learning contracts, tests and examinations including clinical assessment tools. It should comply with the meso-curriculum requirements.

Now we are ready to start!
5.3 **LEVELS AT WHICH CURRICULUM DEVELOPMENT MAY TAKE PLACE**

Curriculum development occurs at various levels. The statutory body (e.g. the nursing, or health professions council such as SANC) and/or the national qualifications authority (e.g. SAQA) develop a macro-curriculum. The macro-curriculum falls within the framework of the National Education Act and policies, and the National Health Act and policies. The macro-curriculum specifies the minimum requirements for an educational programme in the Health Sciences and the main exit outcomes which should be achieved.

An examples of a macro-curriculum is R.425, as well as the critical cross-field outcomes which SAQA formulated for the South African context. (Also see SAQA2).

The provincial authority responsible for the provision of health sciences education generally appoints a working committee, with representatives from the respective educational institutions in the region. This committee usually formulates or revises the health sciences education policy for the province. It is important to have a uniform policy, so that learners who may have to transfer from one educational institution to another within the same province will not be penalised by variations at different institutions.

Educational institutions plan a more detailed curriculum within the framework of the macro-curriculum and the provincial educational policy for the health sciences. This is called the meso-curriculum. The meso-curriculum is a detailed and specific curriculum which complies with the macro-curriculum and serves the educational needs of the specific area whose human resources needs are catered for by each educational institution. It comprises of:

- broad outcomes,
- an outline of the curriculum content,
- planned teaching strategies and learning opportunities, and

Each health sciences education programme must comply with a macro-curriculum which applies to the specific educational programme.
• an **assessment strategy** and assessment criteria.

Each educator will plan his or her subject curriculum for the course for which he or she is responsible. This is the micro-curriculum. The **micro-curriculum** consists of:

- detailed **lesson plans**,
- learning **contracts**,
- tests and examinations **papers** and
- clinical assessment **instruments**.

The meso-curriculum serves as a point of departure for the development of the micro-curriculum, and the micro-curriculum must, in turn, comply with the requirements of the meso-curriculum.

Is that more or less what you wrote in Activity 5.1? To assist you, the levels of curriculum development are indicated in table 5.1.

**Table 5.3: Levels of Curriculum development**

<table>
<thead>
<tr>
<th>Level</th>
<th>Who is involved?</th>
<th>Description</th>
</tr>
</thead>
</table>
| Macro-level curriculum development: National guidelines | • South African Nursing Council (SANC) or the statutory council in your country.  
• Health Professions Council of South Africa (PHCSA) (or the medical and dental council in your country)  
• SA Qualifications Authority (SAQA) or the qualifications authority of your country | Broad curriculum outline: spells out statutory requirements. See the different regulation promulgated by SANC on the education and training of different categories of nurses and different fields of specialization such as nursing education. |
| Meso-level curriculum development: Guidelines specific to the educational institution | • Curriculum **committee** of an educational institution | A detailed and specific curriculum which complies with the macro-curriculum. It spells out the requirements of the specific educational institution. |
| Micro level: Guidelines specific | • Educators who are responsible to implement the                                    | Detailed lesson plans, learning contracts, tests and |
Activity 5.2: Think about the educational activities which you were involved in when you did the second level Health Sciences Education modules, and specifically the HSE practica module (HSE2063). Which curriculum development level was involved?
It was micro curriculum. It consists of the lesson plans that are specific to classroom teaching.
(Refer to always motivate your answer).

5.4 THE MACRO-CURRICULUM

Regulations that serve as guidelines for the education of health professionals are laid down by the relevant statutory bodies. This is done at national level. Such training regulations serve as the macro-curriculum, which is the point of departure for making decisions about the curriculum content to be included in a particular curriculum.

At this level (macro- or national) broad programme objectives (or exit outcomes) and broad subject or study fields are specified. An example of such an educational regulation is the SANC:

- regulations relating to the approval of and the minimum requirements for the education and training of a nurse (general, psychiatric and community, and midwife leading to registration: R.425 of February 1985, as amended).
- and regulations relating to the approval of and the minimum requirements for the education and training of a learner leading to registration in the categories professional nurse and midwife R.174 of 8 March 2013.
Activity 5.2: Visit SANC’s website (or the nursing council of your country) and select any of the regulations leading to a qualification, such as R.425. (Tip: Go to www.sanc.co.za. Then click on “Publications”. In the Publication section, click on “Regulations” and you will find a list of all the current SANC-regulations. You can download them in Afrikaans or English.) You will use that document in this study unit as well as when you develop your meso-curriculum.

- Downloaded: Yes

The curriculum committee operating in an educational institution will obtain a copy of the macro-curriculum (SANC’s regulation) to ascertain the requirements which they should adhere to when they develop the meso-curriculum.

5.5 DEVELOPING A CURRICULUM AT MESO LEVEL

Remember that we said we use the macro-curriculum as a point of departure when we develop a meso-curriculum. In this section we will teach you how this is done. But first we discuss the value of using an organising framework to guide us in our curriculum development endeavours.

5.5.1 Selecting and applying an organising curriculum framework

Curriculum committees often develop organising frameworks according to which curriculum development can occur. A curriculum framework helps the curriculum development committee to develop a mental picture of what learners should learn in order to successfully complete an educational programme and to translate what they have learnt into competent practice, which would serve the health care needs of the community and the human resources needs of the health care system.

The organising framework provides a structure according to which the subject areas to be incorporated into the curriculum are categorised. The relationships between the categories must also be described. The conceptual framework provides a global view of the curriculum content and the relationships between the themes and ideas that are inherent in the content.
The recommended book by Billings and Halstead (2012) has a good section on organising frameworks and the sections below will guide you through the authors' discussions.

5.5.1.1 Nature and purposes of curriculum frameworks
Consult the following sources:
- Billings and Halstead (2012:139-146). You should be able to explain what a curriculum framework is and which purposes it serves during curriculum development.
- SANC’s Circular 8/2013 (Curriculum framework for entry levels of nursing (higher certificate: auxiliary nurse; national diploma: staff nurse; advanced diploma: midwifery and bachelor’s degree: professional nurse and midwife).

5.5.1.2 Developing an organising framework
Study Billings and Halstead (2012:141). You should be able to
- debate the merits of developing a single theory framework versus an eclectic framework;
- briefly explain non-traditional curricular frameworks; and
- briefly explain the use of a graphical representation of a curriculum framework.

Let's consider the curriculum development implications of the wellness-illness organising framework which is discussed in the book by Billings and Halstead (2009:141). How would you apply this organising framework to conceptualise the sequence of levels 1, 2, 3 and 4 of a four-year nursing curriculum?

We planned the curriculum sequence as indicated in figure 5.1.

![Figure 5-1: Sequencing a curriculum using the wellness-illness continuum](image)
The focus of level 1 of the curriculum will be health promotion and the prevention of ill health.

- Level 2 will focus on health problems associated with minor ailments.
- Level 3 will be structured around chronic health problems.
- Level 4 will deal with acute and life-threatening health problems.

We trust that you now understand how an organising framework can assist you to specify the focus and sequence of a curriculum.

The wellness-illness continuum is a very simple organising framework. The framework in figure 5.2 is a more complex framework which captures the complexity of health care.

![Diagram of organisational framework](source: Greaves (1987:48))

**Figure 5-2:** An organising framework depicting the health professions (Greaves, 1987:48)
5.5.1.3 Guiding principles for developing a curriculum framework

Study Billings and Halstead (2012:145). You should be able to explain the guiding principles for developing a curriculum framework. You will notice that the following principles are discussed.

- **Principle 1**: Look at the Philosophical underpinnings and core concepts attached to your institution:
  - Vision, Mission and Values
  - Learning theories
  - Expected outcomes
  - Stakeholder entities
  - The essence of nursing (health, person, environment, nursing)
  - Future relevance
  - Student needs
  - Required knowledge and competencies

- **Principle 2**: Define the concepts clearly

- **Principle 3**: Show linkage between the concept

If you go to [www.google.co.za](http://www.google.co.za) and you click on “Images” and you enter the words “curriculum framework nursing” in the search box, you will find a large variety of graphically illustrated curriculum frameworks. A few examples of curriculum frameworks are included below: (Click on the image to see it on-line).

1. Nashville State Community College’s conceptual framework
2. Raritan Valley Community College’s conceptual framework
Activity 5.3: Draw a conceptual framework for the R.425 programme. If you are not a South African student, you may use any degree-programme offered in your country. Paste it in the space below and upload it to your e-portfolio.
5.5.2 Developing curriculum outcomes and competencies

The organising framework, which provides a visual portrayal of the entire curriculum, serves as a guideline for identifying the competencies which the graduates should possess and the learning outcomes towards acquiring the competencies.

The conceptual framework of Jefferson State Community College is quite interesting. You might want to look at the way in which they depicted their framework.

Study Billings and Halstead (2012:146-156). You should be able to discuss the development of outcomes and competencies for a meso-curriculum.

Activity 5.4: Consider the R.425 programme objectives (exit outcomes) (2) (a), (b), (d) and (e) in box 5.1. For each of the stated programme objectives (exit outcomes), formulate one level outcome for each of the four levels of an educational programme. Use the structure indicated in the table below:

### Box 5.1

<table>
<thead>
<tr>
<th>Exit outcome</th>
<th>Level 4</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2)(a) On completion of the course of study, the learner will show respect for the “dignity and uniqueness of man in his social-cultural and religious context and approaches” and understand “him as a psychological, physical and social being within this context”</td>
<td>A learner is able to deliver care that is cultural sensitive and congruent.</td>
<td>A learner has developed understanding of own and others cultural and religious beliefs and values</td>
<td>A learner will meet the individual cultural and religious differences and diversity.</td>
<td>A learner will meet the need for privacy.</td>
</tr>
<tr>
<td>Exit outcome</td>
<td>Level 4</td>
<td>Level 3</td>
<td>Level 2</td>
<td></td>
</tr>
<tr>
<td>Exit outcome (2)(b) On completion of the course of study, the learner will show skill in the diagnosing of individual, family, group and community health problems and in the planning and implementing of therapeutic action and nursing care for the health service consumers at any point along the health-illness continuum in all stages of the life cycle (including care of the dying), and evaluation thereof.</td>
<td>A learner is able to assess, plan, implement and evaluate care given.</td>
<td>A learner is able to formulate nursing diagnoses and implement nursing care plan.</td>
<td>A learner is able to collect data and interpret findings.</td>
<td></td>
</tr>
</tbody>
</table>

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HSE 3704 Curriculum Development workbook

Edited & Applied by: Dr JC (Irene) Lubbe

Page 56
<table>
<thead>
<tr>
<th>Level 1</th>
<th>A learner meet basic understanding of anatomy and physiology of the human body system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exit outcome</td>
<td>Exit outcome (2)(d) On completion of the course of study, the learner will maintain the ethical and moral codes of the profession and practise within the prescriptions of the relevant laws.</td>
</tr>
<tr>
<td>Level 4</td>
<td>A learner is able to practice in an ethical manner and able to deal with ethical dilemmas.</td>
</tr>
<tr>
<td>Level 3</td>
<td>A learner is able to maintain confidentiality of her patients.</td>
</tr>
<tr>
<td>Level 2</td>
<td>A learner is able to act as a patient advocate.</td>
</tr>
<tr>
<td>Level 1</td>
<td>A learner understands her scope of practice and regulations.</td>
</tr>
<tr>
<td>Exit outcome</td>
<td>Exit outcome (2)(e) On completion of the course of study, the learner will endorse the principle that a comprehensive health service is essential to raise the standard of health of the total population and in practice contributes to the promotion of such a service, bearing in mind factors from within and outside the borders of the country which are a threat to health.</td>
</tr>
<tr>
<td>Level 4</td>
<td>A learner understands external factors that influence health and its impact. A learner is able to provide care accordingly.</td>
</tr>
<tr>
<td>Level 3</td>
<td>A learner is able to provide effective health education.</td>
</tr>
<tr>
<td>Level 2</td>
<td>A learner understands the referral system and its process.</td>
</tr>
<tr>
<td>Level 1</td>
<td>A learner understands components of comprehensive health care system.</td>
</tr>
</tbody>
</table>

We formulated level outcomes for exit outcome (2)(e). Note that we used the wellness-illness continuum (figure 5.1) to guide us.

<table>
<thead>
<tr>
<th>Exit outcome</th>
<th>(2)(e) On completion of the course of study, the learner will endorse the principle that a comprehensive health service is essential to raise the standard of health of the total population and in practice contributes to the promotion of such a service, bearing in mind factors from within and outside the borders of the country which are a threat to health.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 4</td>
<td>After completion of level 4 of the programme the learner will meet the health care needs of patients with acute and life-threatening health problems.</td>
</tr>
<tr>
<td>Level 3</td>
<td>After completion of level 3 of the programme the learner will meet the health care needs of patients with chronic health problems.</td>
</tr>
<tr>
<td>Level 2</td>
<td>After completion of level 2 of the programme the learner will meet the health care needs of patients with minor ailments.</td>
</tr>
<tr>
<td>Level 1</td>
<td>After completion of level 1 of the programme the learner will meet the basic human needs of healthy individuals through preventive and promotive health care.</td>
</tr>
</tbody>
</table>
Using the above level 3 outcome, which we highlighted in bold text, we will now develop a module for HIV and AIDS:

**Box 5.2**

Refer to the R.425 programme objectives (exit outcomes) in box 5.1. Our point of departure is the following programme objectives (exit outcomes):

(2) (a), (b), (c), (d), (e), (f), (g), (m), (n)

Also refer to the following in box 5.1:

(3) (a), (b), (f), (g), (h)

Note that R.425 states that the approach shall be the integration of the various fields of study, particularly in their clinical application. This means that an integrated curriculum design is advocated.

Suppose we have chosen the integrating theme of HIV and AIDS and now have to select appropriate curriculum content.

Let's assume that the following module will form part of the meso-curriculum:

<table>
<thead>
<tr>
<th>Name of the module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive health care for the management of HIV and AIDS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>One semester</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 credits (1 credit = 10 notional hours; 12 credits = 120 notional hours)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of theoretical hours</th>
<th>80 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of clinical hours</td>
<td>40 hours</td>
</tr>
<tr>
<td>Total number of hours</td>
<td>80 + 40 = 120 notional hours</td>
</tr>
</tbody>
</table>
Module outcome

Upon completion of this module the learner will be able to provide holistic and comprehensive health care for the management of HIV and AIDS in individuals and communities.

Required competencies

Below are examples of the competencies which the learners require to be able to provide holistic and comprehensive health care for the management of HIV and AIDS in individuals and communities. These competencies will serve as guidelines for the development of specific learning outcomes at the micro level of development.

- cognitive: knowledge and understanding of HIV and AIDS; the ability to apply, analyse, synthesise and critically evaluate
- affective: sensitivity; empathy; presence; authenticity
- psychomotor: relevant practical skills; relevant technical skills
- integrative: interviewing; assessment; counselling

5.5.3 Selection of curriculum content

Various issues must be considered by the curriculum committee when they are selecting curriculum content. This includes what content to select and how to go about this process. The selection of the curriculum content should be a well-planned activity. The factors that determine content choice include:

- the findings of the situation analysis,
- the foundation of a particular curriculum and
- the stated curriculum aims and outcomes.

The curriculum content should have educational, occupational and professional credibility.

Note that the content outlined at the meso level of development serves as a framework for the selection of specific topics which are taught at the micro level of development.
5.5.3.1 Using Carper's patterns of knowing to select curriculum content

Do you remember Carper's patterns of knowing which you encountered in the HSE3703 module? In this section we explain how you could apply the patterns of knowing to the selection of curriculum content. If you are interested in this topic, you might want to read the book by Chinn and Kramer (2011).

Figure 5-5: Chinn and Kramer's illustration of Carper's patterns of knowing

At this point we should remind you what knowing means. Knowing refers to individual human processes of perceiving and understanding self and the world in ways that can be brought to some level of conscious awareness. Not all that is comprehended in the process of knowing can be shared or communicated. What is shared, communicated and expressed in words or in actions becomes the knowledge of a discipline (Chinn & Kramer 2011:251).
Carper (1979) identified four patterns of knowing, namely empirical, ethical, personal and aesthetic.

- **Empirical** knowing refers to having knowledge about the science of a particular health discipline and expressing it in practice through scientific competence.

- **Ethical** knowing is having knowledge about and acting in accordance with the moral component of a health discipline. We demonstrate our ethical stance by our commitment to doing what is right, good and responsible according to our own value system and the value system of the profession.

- **Personal** knowing involves knowing one’s own self and ultimately knowing others. It is demonstrated through authentic existence based on self-knowledge and the ability to show empathy towards others.

- **Aesthetic** knowing involves a deep appreciation of the meaning of a situation and moving beyond the limits and circumstances of a particular moment. It is expressed by knowing what to do with and how to be in a moment without conscious deliberation, based on the ability to intuitively grasp the meaning of the situation (Chinn & Kramer, 2011).

Chinn and Kramer (2008) added a fifth pattern of knowing namely **emancipatory** knowing.

- **Emancipatory** knowing is a confluence of the previously discussed patterns of knowing. It represents the human capacity to critically examine the social, cultural and political status quo, and to figure out how and why it is the way it is. As such, emancipatory knowing is based on critical theory and pursues equality. The importance of emancipatory knowing to health care and health sciences education resides in its concern with equality; its pursuit of freedom from institutional and institutionalised socio-political contexts that sustain that which is unjust such as discrimination in any form. (Chinn & Kramer 2011:5).
We shall apply these patterns of knowing to the selection of curriculum content on HIV and AIDS. By using these patterns of knowing, the selection of appropriate curriculum content becomes relatively easy as we do not have to try to do this haphazardly. Here is an example of how educators could use these patterns of knowing to select curriculum content on HIV and AIDS.

Using the following as points of reference, specify curriculum content for HIV and AIDS:
- R.425: programme objectives (exit outcomes)
- R.425: subjects
- The patterns of knowing

To facilitate the empirical pattern of knowing we selected subject matter pertaining to:
- biological and natural sciences: anatomy and physiology of the immune system
- biological and natural sciences: pathophysiology of HIV infection and AIDS; the chain of infection and prevention of HIV infection
- biological and natural sciences: pharmacology (e.g. anti-retroviral treatment)
- social sciences: psychosocial implications of HIV and AIDS for the community and sufferer; cultural perspectives related to HIV and AIDS
- general nursing science: nursing care (preventive, promotive, curative, rehabilitative)

To facilitate ethical knowing related to AIDS, we included matters such as
- fundamental nursing science, ethos and professional practice: legislation related to HIV and AIDS
- fundamental nursing science, ethos and professional practice: ethical codes applied to HIV and AIDS
- fundamental nursing science, ethos and professional practice: ethical decision making
• fundamental nursing science, ethos and professional practice: handling ethical dilemmas
• fundamental nursing science, ethos and professional practice: conflict management and client advocacy

To facilitate **personal knowing**, learners must be exposed to issues and learning experiences that will enable them to

• identify their own preconceived ideas, judgemental attitudes and fears related to AIDS and persons who suffer from AIDS
• interact with HIV-positive patients and AIDS sufferers and critically evaluate their own attitudes towards these people and their circumstances

The learners require background knowledge pertaining to the social sciences (e.g. psychology) and ethos and professional practice. Personal knowing is important if we wish to help the learners to become empathic practitioners.

To facilitate **aesthetic knowing**, you could make a selection from the following relevant resources to devise learning activities which facilitate an appreciation of what it means to be human in the face of HIV and AIDS. Both PLHIV and carers and nurse can be involved in:

• artwork (e.g. painting and sculpturing)
• poetry (e.g. writing poems and prose around the theme of HIV/AIDS, suffering, life, death and the like))
• music (e.g. composing, and participating in song and singing on related themes)
• novels (e.g. reading and analysing novels about the lives and struggles of HIV and AIDS sufferers)

To facilitate the **emancipatory pattern of knowing** we will not select any additional subject matter pertaining HIV and AIDS, however, we will look at ways in which to engage students with the community, including:

• Action plans
• Manifestoes
• Critical analysis of social policy
• Envisioning the future

These will aim at bringing about: social equity and empowerment to PLHIV, sustainability of efforts made towards PLHIV demystification of issues relating to HIV and AIDS.

**Activity 5.5:** What other content related to HIV and AIDS, not mentioned by us, would you include in a health sciences curriculum?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **1. TECHNOLOGY** | Availability Rapid result testing devices
| | Availability of data recording and storage devices |
| **2. ENVIRONMENT/INFECTION CONTROL AND PREVENTION** | Proper waste disposal services
| | Prevention of hazards through needle stick injuries.
| | Proper use of PPE’S (personal protective equipment)
| | Proper hand hygiene |
| **3. BEHAVIOUR** | Prevention of sexually transmitted diseases through proper behaviour, i.e. abstinence, one sexual partner, use of condoms.
| | Safe sexual practices, i.e. use of condoms.
| | Sex workers services |
| **4. EDUCATION** | Public campaigns for the transmission information.
| | Support groups.
| | Use of media
| | Posters |
| **5. NUTRITION** | Diet education
| | Dietician involvement and referral.
| | Screening of disadvantaged patients.
| | Self-help projects, i.e. growing of vegetable gardens, boiling of water, hand hygiene. |
| **6. COMMUNICATION** | Referral system.
| | Confidentiality of information.
| | Counselling - pre and post HIV testing. |
5.5.3.2 Outlining the basic themes

Curriculum committees often organise curriculum content around themes to enhance integration in the curriculum and avoid fragmented content delivery which will lead to superficial learning. We discuss this in more detail in section 6.3.1.3.

If we look at the content and conceptual framework one can compile for the HIV/AIDS-module, the content can easily be organised into the following themes:

- AIDS as a biomedical phenomenon
- AIDS as a psycho-social phenomenon
- AIDS as a socio-cultural phenomenon
- AIDS as a socio-political phenomenon
- AIDS as a legal-ethical phenomenon
- Social or community involvement with regard to HIV and AIDS

5.5.3.3 Identifying alternative content

The curriculum committee specifies alternative content in addition to the core content for a specific theme. The alternative content represents valid examples of the theme, but it is not essential to understand the basic principles related to the theme. The alternative content is useful to provide the learners with enriching learning experiences.

The alternative content is specified in terms of electives. A basket of electives is provided and the learners have the freedom to choose any combination of the electives. Each learner's combination is a reflection of his or her unique learning needs and interests. The inclusion of electives also enables the learners to choose content which will improve their understanding of the prevailing issues in their communities. Electives such as political studies, cultural studies and epidemiological studies are all good options.

5.5.4 Selecting teaching strategies and learning opportunities

An important point to remember is that curriculum content and teaching strategies and learning opportunities should not be viewed in isolation. The two dimensions of...
selecting curriculum content and teaching the content are continuously interacting. The content only acquires significance once it is transmitted to the learners in some way and the learners utilise available learning opportunities to enhance their learning.

When the curriculum committee is deciding which content should be included in a meso-curriculum, they should also consider the sources of content and how the content could be accessed and learnt by learners.

It is important to remember that although the choice of content may satisfy all the selection criteria, learning may not necessarily follow. Similarly, significant teaching methods cannot raise insignificant content to the level of worthwhile learning. Content and method must be significant before effective learning can be achieved.

Curriculum content can be accessed and learnt in various ways. We approach this issue by again referring to the patterns of knowing.

- **Empirical knowing**
Relates to mastery of factual subject matter, modes of inquiry and technical or clinical skills. Subject matter can be accessed by reading books, journal articles or information on the internet. Other ways of accessing subject content is to view specialised DVDs or work through educational computer software (computer-assisted learning).

Educators could also transmit subject content to learners through teaching strategies such as lectures and group discussions. Remember that it is not sufficient to merely learn and memorise factual subject matter. It is necessary also to develop the learners' intellectual abilities. Recent trends call for teaching strategies which enable the learners to construct knowledge through the processes of inquiry, to discover relevant information, manage vast amounts of information and construct knowledge by attributing meaning to the subject matter. All this can be facilitated through the project and case study methods, especially of a problem-solving nature. This can be combined with community-based and collaborative learning approaches.

Learners acquire technical skills by attending demonstrations, practising the skills they have learnt and applying those skills in a clinical setting under the educator's guidance. Keeping a reflective journal will help the learners to learn from their clinical experiences. In order to learn how to provide comprehensive health care, the learners should be exposed to community, curative, palliative and rehabilitative health care settings.

Revise the sections on theoretical and clinical teaching strategies in the first and second level health sciences education modules.

Revise the section on service learning in Billings and Halstead (2012:188). Note the appropriateness of Kolb's learning theory and the incorporation of reflection in a service learning approach.

- **The ethical pattern of knowing**
Can be facilitated by ensuring that learners master the legislation and ethical principles that regulate and guide their practice. The learners also need to acquire skills such as ethical decision making and conflict management. Teaching methods relevant to the ethical pattern of knowing include case studies and role-play which focus on ethical issues. Another useful strategy is computer-assisted learning.
involving simulated clinical situations which require the resolution of ethical dilemmas. Computer simulations enable the learner to consider various strategies to resolve an ethical dilemma; there is no possibility that harm can come to a patient if the learner applies inappropriate measures.

- The **personal** pattern of knowing
  Lends itself to learning experiences which lead to increased self-knowledge in learners. Value clarification exercises, group discussions or role-plays are appropriate teaching methods which enable the learners to engage in dialogue with others and engage in self-reflection.

- The **aesthetic** pattern of knowing
  Calls for creative teaching methods such as storytelling, imagery, use of literature analogies and metaphor analysis. Other useful strategies are to organise field trips to art exhibitions related to the topic under consideration, and interpreting relevant songs or poetry.

- The **emancipatory** pattern of knowing
  Suitable teaching methods and learning opportunities for classroom and clinical learning experiences which should be applied to teach the module on HIV and AIDS could include the following:
  - computer assisted learning
  - computer simulations
  - lectures
  - group discussions
  - projects
  - case studies
  - problem solving
  - collaborative learning
  - role-play
  - value clarification exercises
  - storytelling
- imagery
- literature analogies and metaphor analysis
- interpreting artwork, songs and poetry
- demonstrations and practising
- service learning in community, curative, palliative and rehabilitative health care settings
- reflective journal

Remember there are a huge variety of sources available to assist you in enhancing your teaching skills.

5.5.5 Specifying a learning assessment strategy
A meso-curriculum should give an indication of the learning assessment approach which is followed in the educational institution. Remember that the meso-curriculum must be congruent with the macro-curriculum, which is the national level curriculum. It is therefore necessary to revisit R.425 again.

Refer back to R.425. Summarise the guidelines in R.425 relating to learning assessment.
R.425 states that
- theoretical examinations shall be conducted in all subjects
- a minimum examination mark 50% is required to pass each subject
• clinical examinations shall be conducted in addition to the theoretical examinations in the case of nursing science subjects with practical components
• the learners should obtain a 50% pass mark for the theoretical and clinical examinations
• the theoretical and clinical examination marks shall count separately (ie combining the marks of the theoretical and clinical examinations and calculating an average mark is not allowed)

The above requirements must be built into the meso-curriculum.

You already have knowledge about learning assessment approaches, methods and instruments. You already have the skills to compile tests and examinations and to develop clinical assessment instruments at the level of the micro-curriculum. In this section you are required to draw on your previous knowledge and skills.

(1) Revise the learning assessment content which you learnt in the first and second level modules. Pay particular attention to the learning assessment activities which you completed in the practica module.


**Activity 5.6:** Propose a learning assessment strategy to be adopted in an educational institution. Use table 5.2 as a guideline.

Remember that the actual development of tests, examinations and clinical assessment instruments is done on the micro-curriculum level, which is not required here.

**Table 5.4: A learning assessment strategy**

<table>
<thead>
<tr>
<th>Assessment approach</th>
<th>Theoretical assessments</th>
<th>Clinical assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative</td>
<td>• Mind maps</td>
<td>• Role play</td>
</tr>
<tr>
<td></td>
<td>• Assignments</td>
<td>• Group discussion</td>
</tr>
<tr>
<td>Summative</td>
<td>• Examinations</td>
<td>• Demonstration</td>
</tr>
</tbody>
</table>
Compare your assessment strategies with the strategies listed in Billings and Halstead (2012:448).

Note that the meso-curriculum will also specify how the year mark will be calculated. It is also necessary to stipulate which weight will be allocated to the year mark and the examination mark to calculate the final mark at the end of each level of the educational programme.

5.5.6 Overview of the module on comprehensive health care for the management of HIV and AIDS

At this point it is necessary to complete the outline of our meso-level module on comprehensive health care for the management of HIV and AIDS. Extend the meso-curriculum by completing the sheet below.

Box 5.3

<table>
<thead>
<tr>
<th>Name of the module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive health care for the management of HIV and AIDS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>One semester</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of theoretical hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of clinical hours</th>
</tr>
</thead>
</table>

Portfolio
Verbal questioning
Checklist
Module outcome:
Upon completion of this module the learner will be able to provide holistic and comprehensive health care for the management of HIV and AIDS in individuals and communities.

Module content:

Teaching methods:

Clinical allocation:

Formative assessments:
- Theoretical:
- Clinical:
- Calculation of the year mark:

Summative assessments:
- Theoretical:
- Clinical:
- Calculation of the final mark:

Pass requirements:

5.6  CURRICULUM DEVELOPMENT AT MICRO LEVEL

In section 5.4 we developed a module, namely comprehensive health care for the management of HIV and AIDS at the meso level of curriculum development. Educators interpret the meso-curriculum when they develop lesson plans, learning contracts and formative and summative assessment tools.
Activity 5.7: As stated before, you are already familiar with curriculum development at micro level. For this reason this section will only comprise a revision activity. *(Revise the practica module of the Health Sciences Education course. Pay particular attention to the development of lesson plans.)*

In this section you will interpret the meso-curriculum in box 5.3 and develop a lesson plan which is congruent with the meso-curriculum. Take into consideration the guidelines on how to develop a lesson plan which have been incorporated in the practica module of the Health Sciences Education course. Also take note of the comments of the lecturer who evaluated the lesson plans which you developed when you did the practica module. Paste it in the space provided below.

Lesson Plan.

Name of the module: HIV and AIDS Management

Duration: One semester

Credits: 12 credits

Number of theoretical hours: 80 hours

Number of clinical hours: 40 hours

Introduction

Objectives:

Content:

- Pathophysiology
- Incidence
- Signs and symptoms
- Diagnostic tests and procedures
- Management, both medical and surgical
Summary:

Resources consulted:

Teaching Methods:
- Formal lecture
- Group discussions
- Role Play

Clinical Placement:
- Primary Health Care
- General Medical Nursing Units
- Maternity
- Comprehensive Health Care Centres
- Family Planning Clinics

Formative Assessment:
- 50% theory
- 50% clinical

Summative Assessment:
- 50% theory
- 50% clinical

Pass Requirements:
- Above 50% Passed the module
- Between 45-49% Supplementary exam
- Below 45% Fail, to repeat the module.
5.7 SUMMARY

In this study unit you learnt that there are three levels of curriculum development, namely the macro, meso and micro levels of development. You interpreted a macro-curriculum to develop a meso-curriculum. Furthermore, you interpreted a meso-curriculum to develop a micro-curriculum. In the next study unit we revisit curriculum design.

*** Remember to upload all your artifacts (those wonderful mind-maps and other content that you have created) to your e-portfolio!!! ***

BE STRONG ENOUGH TO STAND ALONE, SMART ENOUGH TO KNOW WHEN YOU NEED HELP, AND BRAVE ENOUGH TO ASK FOR IT.

BillyCox.com
DEVELOPING HEALTH SCIENCES CURRICULA: PRINCIPLES AND PROCESS

Only workbook for HSE 3704 Study Unit 6
“The success of tomorrow’s students will be built upon the education we design today”

Dr Linda Price
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Study Unit 6: APPROACHES TO CURRICULUM DESIGN

6.1 OVERVIEW

In the previous study units you learnt what a curriculum is and how to conduct curriculum development. In this study unit, we add depth to our discussions by giving particular attention to curriculum design. Note that this study unit builds on the knowledge which you gained when you studied study units 3 and 5. In this study unit we explain that various approaches to curriculum design exist. The curriculum committee usually selects a particular approach and proceed through the stage of curriculum design by applying the principles relevant to the chosen approach.

After you have worked through this study unit, you will be able to conceptualise the different approaches to curriculum design and select an appropriate approach to create a particular type of curriculum, based on your ability to:

- describe the main characteristics of the content-centred, competency-based and problem-based designs
- describe the strengths and limitations of the content-centred, competency-based and problem-based designs.

The prescribed reading for this study unit is:

We will also refer you to appropriate sections of the recommended book by Billings and Halstead (2012), as indicated in the reading activities.

It is advisable to read one or more of the books or articles listed in the list of references and suggested readings at the end of this study guide or any relevant literature of your choice. This will enrich your learning experience.
6.2 INTRODUCTION

We trust that you already have a general idea about what curriculum development entails. At this point our attention is directed at curriculum design, which we discuss in more depth.

There are certain principles that guide curriculum design, such as:

- Alignment and Coherence
- Scope
- Sequence
- Continuity
- Integration

You can read more about it [here](#).

6.3 APPROACHES TO CURRICULUM DESIGN

You will remember that we said that the design stage of the process of curriculum development also involves organisation and sequencing of curriculum content. At this point we intend to elaborate further. It would be a good idea to revise what you already know about organising and sequencing the curriculum. This knowledge underpins what we are about to discuss in this study unit.

Keep study unit 3 at hand. Pay particular attention to organising and sequencing the curriculum content. Also consult Billings and Halstead (2012: Chapter 8 and 9). Pay particular attention to:

- the premises of curriculum design
- designing the curriculum (blocking course content, integrating course content).

Curriculum design can be approached in many different ways. We will introduce you to three main designs, namely the content-centred design, the competency-based design and the problem-centred design.
6.3.1 The content-centred design

The approaches associated with the content-centred design are

- the subject-centred approach
- the subject discipline approach
- the study field approach

In addition to these approaches, we will discuss the **integrated curriculum**.

After completing this section, you should be able to distinguish between subject centred designs (collection type curriculum) and the integrated design (integrated curriculum). Add depth to our discussions by integrating the discussions in the prescribed book with our discussion in this section of the study guide.

**Activity 6.1**: Use the table below to compare the different content-centred approaches with one another. Use this table to contribute to the discussion on the discussion forum.

<table>
<thead>
<tr>
<th></th>
<th>Subject-centred approach</th>
<th>Subject discipline approach</th>
<th>Study field approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approach</strong></td>
<td>Traditional / Direct</td>
<td>Content centred</td>
<td>Integrated approach</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Subject-focussed</td>
<td>Conceptual structure</td>
<td>Broad themes</td>
</tr>
<tr>
<td><strong>Subjects (Ideally suited for)</strong></td>
<td>Anatomy, Physiology, Microbiology, Pathophysiology, Psychology, Sociology</td>
<td>Anatomy, Physiology, Pathophysiology, Applied chemistry, Applied microbiology and pharmacology</td>
<td>Physiology</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>Prescriptive</td>
<td>Pre-planned</td>
<td>Descriptive</td>
</tr>
<tr>
<td><strong>Structuring of Content</strong></td>
<td>Systematically</td>
<td>Concepts</td>
<td>Integration of various subjects</td>
</tr>
<tr>
<td></td>
<td>Hierarchical sequence</td>
<td>Principles</td>
<td></td>
</tr>
<tr>
<td><strong>Sequence of content</strong></td>
<td>Simple → complex.</td>
<td>Abstract</td>
<td>Conceptual meaningful structure</td>
</tr>
<tr>
<td></td>
<td>Concrete → abstract</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Articulation</strong></td>
<td>Specifying prerequisites and co-requisites</td>
<td>Learning of related subjects</td>
<td>Learning of related concepts</td>
</tr>
</tbody>
</table>
### Advantages

- Prepares learners to cope with different demands and social change.
- New developments can be applied to many situations.
- Makes it possible to identify structures.
- Able to blend knowledge and concepts to concrete facts.

### Disadvantages

- Fragmentation of content.
- Uniqueness of learners ignored.
- Curriculum overload.
- Focus on mastering of factual subject matter.
- Leads to superficial learning.
- Complex problem-solving not taught.
- Very abstract.
- Learners fail to learn important concrete facts.

### 6.3.1.1 The subject-centred design

The subject-centred approach is the traditional approach and is probably still the most widespread one used in health sciences education in some countries. This approach outlines subjects or subject topics that the learner must learn and the minimum time period which should be spent on each subject or topic (Ornstein & Levine 2006:415). Examples of subjects which are included in health sciences curricula are anatomy, physiology, microbiology, pathophysiology, psychology and sociology. The subjects are clearly defined and distinguished, and organised in a hierarchical sequence.

The subjects are organised in such a manner that learners are able to systematically master the required content. The curriculum sequence is planned to ensure, for instance, a progression from simple to complex, or concrete to abstract. Articulation is often applied by specifying prerequisites and co-requisites. The learners are required to pass anatomy and physiology before they are allowed to register for pathophysiology. This is because an understanding of the structure of the human
body and how the body works is necessary to grasp the pathophysiological processes associated with disease.

The main criticism against this approach is the possibility of fragmentation in the curriculum, as the different subjects are often taught in isolation. This occurs if horizontal and vertical articulation is not optimised. Another criticism levelled at this approach is that all learners study the same material in the same setting within the same time frame. This implies that all learners are seen as similar in the sense that they learn in the same manner and at the same rate. Of course, this is untrue. This approach is also criticised for leading to an overloaded curriculum since there is a tendency to add new subject matter to existing subject matter, rather than to omit outdated subject matter, during curriculum revisions.

Despite its limitations, the subject-centred curriculum has survived for many decades and is considered to have considerable scientific merit. However, we need to ask ourselves whether it is a suitable approach for teaching learners how to deal with complex and ever-changing health care settings, as it tends to support a focus on mastering of factual subject matter and could lead to superficial learning.

Activity 6.2: Read this short article by DreamBox Learn. Why are the traditionalists so much in favour of this teaching method? Add that to your comparative table.

### A Subject Centred Classroom Design: A Comparative study

<table>
<thead>
<tr>
<th>Allan Ornstein</th>
<th>Parker Palmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Subjects are a logical way to organize and interpret data.</td>
<td>1. It allows teachers and students to come together.</td>
</tr>
<tr>
<td>2. It is easy for leaners to remember information for future use.</td>
<td>2. It is useful for pursuit of knowledge in the name of an engaging and enriching subject.</td>
</tr>
<tr>
<td>3. Teachers are trained as subject matter specialists.</td>
<td>3. It has a capability to integrate same ideas with several subjects around the common theme.</td>
</tr>
<tr>
<td>4. Textbooks and other materials are organized by subjects.</td>
<td>4. Subject centred teaching is very difficult to change.</td>
</tr>
<tr>
<td>5. It easy to search for information on</td>
<td></td>
</tr>
</tbody>
</table>
5. It allows literature review for research purposes.

6.3.1.2 The subject discipline design

Another content-centred design approach is the subject discipline design. In this design, various subjects are grouped together into broader subject disciplines such as scientific studies, social studies and nursing sciences (Ornstein & Levine 2006:415-416). For instance, scientific studies consist of content related to anatomy, physiology, pathophysiology, applied chemistry, applied microbiology and pharmacology. Sociology, medical anthropology and current global trends in health and development are incorporated into the discipline of social studies. The discipline of language incorporates scientific writing skills and communication skills.

The focus would then be on developing, in learners, insights into the conceptual structure and processes within a discipline. Curriculum content is not presented in the form of factual content. The structure of the discipline is brought to the fore by communicating the concepts and principles of the discipline, and the relationships between various concepts and principles. This is believed to enhance the learner's ability to think critically.

We say that we teach the learners the structure of the scientific discipline. The term structure refers to the basic, interrelated patterns and ideas of a discipline. By learning a discipline's structure, learners develop insights into the relationships between issues and phenomena. The focus is on knowledge that could be applied in many situations. Examples of this type of knowledge are the meanings and application of relevant concepts, methods of inquiry, problem-solving processes and care principles that are relevant in the given discipline. The focus of this design is therefore to teach learners to think critically and solve problems, to conduct research and to report on research findings.

Inquiry into different disciplines is abstract; therefore this type of design supports a more abstract approach to curriculum content than the subject-centred design. This
design is suitable for preparing learners to cope with different demands and social changes that require adaptability on the part of the health care professional. One of the main criticisms levelled at this approach is that the curriculum is so abstract that learners may fail to learn important concrete facts that they will need to become competent health care professionals.

6.3.1.3 The study field design: the integrated curriculum

The study field design is aimed at trying to eliminate fragmentation of content in the curriculum. The curriculum is organised according to broad themes and the specific content of various subjects or disciplines has to be studied to gain insights into the various themes. The themes are chosen to closely reflect the phenomena which the learners will encounter in real life, which enhances the relevance of the curriculum. For instance, the learners are sure to encounter phenomena such as pain, fever and disability, while they are unlikely to encounter a phenomenon called physiology. However, they require knowledge about physiology in order to understand and manage pain, fever and disability.

This approach supports integration of the various subjects or subject disciplines. Curriculum integration means that curriculum elements are fused into a conceptually meaningful structure and a unified whole. The integrated approach emphasises the learning of related concepts and the relationships between various concepts which make up the theme, as opposed to memorising isolated clusters of factual matter.

This curriculum design makes it possible to identify structure and use the structure to blend the knowledge and concepts peculiar to the theme. From a content point of view, integration means the production of a functionally complete whole. This requires that each content unit included in the health sciences curriculum should have a clear relationship to every other content unit, thus bringing together elements from different subjects to present distinct perspectives.

This example shows how we use a concept such as pain as a core around which we can develop biological, psychological, socio-anthropological, scientific and patient care concepts. Figure 6.1 is an example of a concept map to illustrate the
relationships between all the concepts relating to pain. Curriculum committees often use concept maps such as this one when they select curriculum content.

![Concept map](image)

Figure 56-6: Concept map

Advocates of the integrated design argue that, with careful planning, integrated curricula can bring the experience of health sciences education closer to the world of actual practice. We can streamline educational programmes by eliminating redundant areas and strengthening those of greatest importance. Learning is made more meaningful for learners when scientific and clinical principles are fused.

The integrated approach, too, has its critics. Some authors believe that a truly integrated curriculum is difficult, if not impossible, to find. Many "integrated" curricula are merely collections of discrete subjects. Alternatively, a truly integrated curriculum may fail to develop in learners a sound understanding of each subject and subject disciplines. While the unifying concept enhances a holistic view on the issue at hand, this approach may result in fragmented methods of mastering the essence of a subject or discipline and its underlying principles and processes. This is because individual subjects or disciplines are not presented to learners as a distinct entity and the result may be a lack of depth.
6.3.2 The competency-based design

A competency-based curriculum is organised around functions or competencies required for the practice of a profession in a specified setting. In other words, this design is centred on all the skills required to prepare the learners to practise their profession competently. The principles of this design resemble the key objectives of outcomes-based education, which are to equip learners with knowledge and skills that lead to specific competencies. This design is currently applied in South Africa.

The competency-based curriculum design assumes that we are able to define and express clearly the many roles and functions involved in health sciences practice. Careful delineation of these components of health care practice is the first and most critical step in designing a competency-based curriculum.

The key components of a competency-based approach to professional education (Suttun & Arbon 1994:391) are the following:

- a list of competencies that specify the expected professional role performance
- specified standards for each competency as a benchmark for achievement
- appropriate educational programmes to facilitate the development of competencies in learners
- assessment methods for each competency or set of competencies

You need to read through a section which you studied when you worked through study unit 4. This is "The role of outcomes and competencies in curriculum frameworks" (Billings & Halstead 2012). Also read the ICM (2012) article for a more comprehensive overview.

The authors’ discussion on how to identify competencies and outcomes for critical thinking is particularly relevant to this part of the study guide. The authors explain how the curriculum committee starts at the programme’s end, namely the core characteristics which the graduates should display. These core characteristics are specified in terms of essential qualities (e.g. critical thinking) which the graduate should possess. The authors also explain how the curriculum committee use the essential qualities (e.g. critical thinking) as a point of departure and work toward the
beginning of the curriculum by identifying the competencies which the learners should master at each programme level. These competencies are eventually translated into the format of learning outcomes which the learners should achieve. The following is an example of a competency-based design based on the competencies that nurses need for paediatric nursing science.

Figure 6-7: A competency-based design for paediatric nursing care

Activity 6.3: Using this example, draw up a similar framework for your field of practice. Ask a colleague to check whether you have included all the necessary competencies. Add your framework in the space provided below as well as in your e-portfolio. Comment on at least 2 colleagues’/co-students’ framework
6.3.3 The problem-centred design

The problem-centred curriculum design centres on life problems which the learners are likely to encounter in real life. This design is similar to the study field design. As is the case with the study field design, the problem-centred design supports **curriculum integration**. The curriculum centres on major issues of concern, for example pain, fever, immobility while having to cope with chronic health problems, and knowledge deficits. In search of solutions, the learners are required to apply knowledge gained by studying different disciplines such as nursing (or medicine), natural sciences, human sciences and social sciences.

The **broad curriculum outline**, similar to that of the study field design, is developed (refer to figure 6.1). The problem-solving design differs from the study field design in the sense that much care is taken to ensure that problem-based learning occurs. This is achieved by developing problem **scenarios** for each concept in the curriculum outline and documenting the scenarios. The scenarios are incorporated into the meso-curriculum.
Educators use these problem scenarios at the micro level of curriculum development when they apply problem-based learning strategies. Problems can be set in the form of projects and assignments. The learners are guided towards developing their learning, inquiry, information processing and application, and decision-making skills. The learners require these skills to successfully solve problems which they encounter. Self-directed learning and also collaborative learning methods are appropriate to applying the problem-centred curriculum.

The criticisms which are levelled against the study field design also apply to this design. This design is also criticised as being too time-consuming for both the educator and the learner.

This concludes our discussions on approaches to curriculum design. In the following study unit we discuss curriculum evaluation, a formal investigation to judge the worth and effectiveness of an existing curriculum.

**Activity 6.4:** If you have to design a curriculum, which approach would you select? Motivate your answer.

1. Competency based approach
2. Reasons:
   - It is centred in all skills required to practice the profession competently.
   - It is similar to OBE approach. OBE approach is the one currently in use in South Africa.
   - The competences are written to specify the levels of achievement the learner should demonstrate.
   - It also serves a benchmark for achievement.
   - It also helps to develop appropriate educational programmes to facilitate the development of competencies in learners.
   - The assessment, methods for each required assessment are specified in this approach.
6.4 SUMMARY

In this study unit we explained which types of curricula can be developed and ways in which a curriculum can be structured. This concludes our discussions of how to develop a curriculum. We trust that you now understand the curriculum development process, the levels at which curriculum development occurs and the outcomes of a curriculum development project.