

# III. Competency-based training with a gender approach

1. Curriculum design within the framework of lifelong education and of training for employability
2. The design phase
3. Curriculum design in competency-based training
  - **An experience in design**
    - A. The Dual Training Programme for Nursing Aides under a competency approach
      1. Contextualisation of the experience
      2. Building a vocational profile
      3. The Training Programme



## 1. Curriculum design within a framework of lifelong education and of training for employability

Once the occupational profile has been developed and the activities and results to be attained in a productive activity have been identified, the next and essential step in vocational training is to ask how learning and the development of these competencies are facilitated. Competency-based training (CBT) seeks to provide an answer to this central question.

“Competency-based training (CBT) can be understood to mean an open and flexible process of development of occupational competencies that, based on the competencies identified, provides curriculum design, pedagogical processes, didactic materials and occupational practices and activities in order to develop in participants capacities for them to become members of society as citizens and workers”<sup>1</sup>

In order for the occupational or vocational life of individuals to be developed, it needs to be permanently nourished with new knowledge and specialisations. However, basically, it needs a new kind of learning. One that, in times of change and uncertainty, is capable of enhancing the employability of individuals in terms of access, maintenance, mobility or generation of employment and that may no longer be circumscribed to a stage at the beginning of vocational life but that must be an on-going process.

A lifelong education implies that it be conceived as structured around a vertical axis which lasts as long as life itself for the individual, and a horizontal axis whereby all the spaces in the course of that life become educational. To make lifelong education possible, mechanisms are required that allow continuous training to be brought about and, as has been seen, at present it is the competency approach that is turning out to be the most effective. Moreover, it cannot be the sum of

---

<sup>1</sup> Irigoien, M; Vargas, F, *Competencia Laboral: Manual de conceptos, métodos y aplicaciones en el sector salud*, Cinterfor/ILO, Montevideo, 2002.

specific training actions. A lifelong education implies that individuals know how to achieve the results required for their professional performance but also that they understand how their *modus operandi* is inscribed in a wider conceptual frame of reference. That means to learn and understand the reasons of their actions, the implications and impacts of their actions and to develop the ability to connect new knowledge, transfer it to other situations, adapt themselves to new occupational contexts.

It is from this multidimensional conception of competency, already referred to in Chapter II, that the development of key competencies for employability acquires central importance in training processes and, as of now, must be present in all the phases of curriculum planning and, unquestionably, in those of diagnosis and design.

Employability<sup>2</sup> has many dimensions and to address it from the vantage point of training implies to prioritise the cultural and personal dimensions, which individuals are able to influence. Moreover, it means to make visible its close relationship with social integration and gender equity.

Gender, employability and citizenship are interdependent concepts which bring to bear personal and relational dimensions of learning and which are articulated in the concrete life contexts of each individual. The result are differences and inequities in the possibilities to access resources, in employment opportunities or generation of productive activities, in participation and decision-making regarding issues pertaining to their community or to the group to which they belong.

Moreover, in daily living and in households, machines are incorporated that require efficient readings and varied knowledge. The technification of urban life and of housework, that changes family life and community relations, and even changes life styles, also demands qualifications and effective knowledge. Nowadays, in order to exercise citizenship consciously and work, the ability to understand

---

<sup>2</sup> See definition in Chapter I.

the different contexts is required, as well as the valuing of complexity and diversity, the systemic addressing of reality, teamwork, solidarity, participation, self-care and care of others, etc.

What, then, are these key competencies for employability, from a gender perspective and supporting the integration of the most disadvantaged sectors with a low level of schooling, one of the main obstacles of which is precisely how to prove competencies?

Abstracting from the different available categorisations, the following competencies are considered a priority:

- ➔ **basic competencies referred to learning how to learn**, including oral and written expression, applied mathematics, the capacity to locate and understand, in a critical way, data on reality, observe, work out election criteria, make decisions, etc.
- ➔ **cross-cutting competencies: to learn how to do**, in the sense of mobilizing and adapting knowledge and capacities to new circumstances. These are especially important for women because they broaden alternatives and provide mobility. Among them the following can be highlighted: the capacity to anticipate threats and opportunities, to integrate and develop a systemic vision of reality, which includes controlling and correcting tasks, to organise, plan, manage the task, resources and, especially, time and information. Also included among them are the acquisition of a technological culture (working and applying the technology to the task and to daily life) and, especially important, the capacity to undertake, which is a condition of employability in the present context.
- ➔ **attitudinal competencies: to learn how to be**, strengthen identity and eliminate self-limitations. In our societies, self-esteem and respect appear to be very tied to keeping a job, whatever it may be, and unemployment leads to isolation and personal and family conflicts. For women they are fundamental to overcome mental and social barriers that limit their positioning and empowerment. Among them priority should be attributed to personal skills (reinforcing personal and gender identity and security, self-responsibility and protagonist attitudes in the process itself of employment/ training, autonomy) and interpersonal

or social skills: (team work, responsibility and self-regulation, personal relationships, bargaining capacity, knowing how to listen and communicate, handling diversity, emotional discrimination in work situations, etc.

- **technical/sector** competencies that also refer to **learning how to do** and that for women mean diversifying, valuing old competencies developed in other ambits and creating new competencies for new employment niches.

“Baggage” of this kind allows men and women to address productive work with cross-cutting and attitudinal competencies to build a polyvalent occupational profile that allows them to face the diversity and heterogeneity of the models and ways of working that are winning recognition.

In present employment reality, what training can do is to support each unemployed person so that this person can become a detector of opportunities, going from service receiver status, from being a searcher for a scarce and insufficient job, to being a builder of his or her strategy of employability.<sup>3</sup>

In this framework, FORMUJER has produced the **Training for Employability and Citizenship Modules**<sup>4</sup> as inputs for the production of its curriculum proposals.

Departing from the conviction that every human being must act, both in their condition as a citizen and as a worker, in three fundamental dimensions: relations with themselves, with others (family life and participation in the wider social space) and with the environment, the Modules address training for

<sup>3</sup> Salle, María Angeles, *La empleabilidad como un proyecto personal y social: algunas reflexiones y experiencias*." Document submitted to the International Seminar on Exchange of Experiences and FORMUJER/INA-IDB Programme Follow-up Workshop, San José, Costa Rica, November 2000.

<sup>4</sup> Guzmán, V, Irigoín, M: *Módulos de formación para la empleabilidad y la ciudadanía*, FORMUJER, Cinterfor/ILO, Montevideo, 2000.

employability and citizenship in a coordinated set that incorporates the personal and relational dimensions of learning as a teaching strategy. They are thought out to articulate with Career Guidance activities, encouraging in each person the definition and management of a viable personal project of employment and training centred on enhancing employability.

This material is conceived to be developed in mixed courses. However, each exercise encourages appropriation according to the specific needs and experiences of women and men, in such a way that capacity acquisition is processed together with gender analysis applied to practical situations and to address problems. They consist of a Guide for the teacher and applied classroom exercises, which adapt to different realities. They also include evaluation proposals with suggestions for their application and correction. They are oriented towards developing fundamental capacities and skills to acquire, in the case of employability, self-confidence, strengthening the feeling of belonging to a group and improving the capacity to identify and solve problems; and, in the case of citizenship, strengthening personal autonomy, the acknowledgment and exercising of rights and responsibilities and selected aspects relating to participation and leadership.

## 2. The design phase

The combination of the competencies identified (Chapter II), with training with a lifelong approach and for employability, from a gender perspective, becomes operational in the curriculum design phase. And if this design is to be in keeping with existing demand both of the labour market and of users of the service, it is necessary to ensure:

- Institutional commitment
- Participation of all agents needed for its development
- Participation of target groups
- Training in a gender approach provided to technical and administrative teams
- Quality management during the whole process
- Resources needed

This phase involves teamwork in which curriculum specialists and players from the world of work, experts in contents, beneficiaries, etc., can combine and supplement their contributions: CBT curriculum design cannot be carried out in an isolated manner, as a laboratory exercise.

### 3. Curriculum design in competency-based training

In the first place, curriculum design is a cultural selection process that involves taking complicated decisions on what is to be included or not included in the curriculum.<sup>5</sup>

In order to guide this selection process it is fundamental to situate the training intervention within the framework of permanent training, in the sense that the curriculum is not “everything”. It is not the first training experience (even though it may be from the formal viewpoint), nor will it be the last in the life of individuals.

There are several possible models of CBT curriculum design, but they all have as a reference the competencies valued and meaningful to employment, which in turn identify field knowledge, skills and behaviours that are relevant. In the same way, they agree that it must be an open and integrating process, and that all the elements of design that research has been demonstrating to be positive should be used, taking the input of the competencies without casting aside the socio-cultural inputs that a curriculum must have. Likewise, the FORMUJER experience in training low income women shows that aspects such as the valuation of learning, the increasing development of their autonomy and self-confidence, viewed as structuring axes of training, facilitate and reinforce the learning process and the development of occupational competencies and employability.

Starting from the competencies, **the selection process that curriculum design implies is ordered from the beginning around performance** and not, as usually occurs in traditional training, oriented towards supply and having an academic bias, beginning with the contents of a discipline or of what a group of academics considers must be learned or, in the worst case, in terms of installed capacity in the training institution.

We start by prioritising the competencies that, conditional upon productive sector requirements, points of departure and the characteristics of the target

---

<sup>5</sup> For further information, see Vargas, F., *Competencia Laboral...*, *op.cit.*

population, gender relations and economic and institutional conditionings, must necessarily be addressed in the training process with the perspective of increasing the employability of the beneficiaries, both male and female. **Defining the main and “entry” competencies does not mean limiting training by placing a “ceiling” to possibilities and opportunities of developing the competencies but, on the contrary, to start with an open working hypothesis, that will be revised and enriched by the protagonists of the training process.**

Although the planning and design process is not incumbent upon a mathematical formula or a series of consecutive steps to obtain a precise result, and its ordering depends on the model adopted, once the referent of competencies has been obtained and specified, the process follows similar courses, determining:

- Name and duration of the course,
- participant selection criteria,
- modular organisation,
- learning objectives,
- selection and organisation of contents,
- teaching methodologies and strategies,
- evaluation modalities and criteria.

Whatever may be the order adopted, planning must be comprehensive and include from context consideration to reflection on teaching-pedagogical instruments, methodologies and procedures that intervene in the process.

Determining the name and duration of the training programme

The name of the programme must provide an idea of the competencies that will be developed in the participants and the sector in which the programme will be conducted. It can be based on units or elements of competency defined, on their coverage, or can recover the name of one of the functions. The duration of the programmes depends on the area, on the competencies that individuals must be able to prove to comply with the established standard and on the relationship between modular organisation and the profile of persons. Modular programmes allow greater flexibility, in entries and exits, in the case of women and, due to their responsibilities in the private area, this flexibility facilitates their access and permanence and the recognition and valuation of prior learning.

### Defining the entry level of the participants

Whether it is necessary to establish certain entry criteria will be defined according to area and course; if so conditions for entry will have to be established, such as age, educational levels, experience, etc. It is possible that many women will have to take levelling courses when they enter traditionally masculine areas.

### Modular organisation

CBT privileges the modular criterion because it allows a possible scenario in which individuals can manage and own their learning process, building their own training itinerary through curricular meshes or networks.

“..the module concept seeks flexibility through a capacity to combine one element with another, at the same time as it preserves an independence that allows it to exist on its own”.<sup>6</sup>

To order and sequence learning in a modular structure that is not necessarily linear, it is necessary to reflect on what knowledge, skills, attitudes, the person requires in the context conditions, to demonstrate competency, and what factors facilitate learning.

Among others, AMOD and SCID methodologies<sup>7</sup> provide guidance to reorganise these components into significant units, in such a way as to obtain teaching modules from experience in real work situations.

The method of ordering competencies according to how difficult they are allows possible learning sequences to be visualised by specific subjects, that can be regrouped into learning “packages” of increasing levels of complexity and autonomy.

<sup>6</sup> Irigoin, M; Vargas, F., *Competencia Laboral.., Op.cit*

<sup>7</sup> See Chapter II, experience 1.

### Learning objectives

These are the results to be attained and they are expressed in terms of observable changes, in the knowledge, the being and the know-how of the participants. The objectives of the course must be set forth in inclusive language and considering expressly the participation of men and women. In the different levels of objectives, i.e., general, terminal (by module), partial (theme units) or specific (contents), basic technical and cross-cutting competencies, the development of which is sought, must value all the actions that men and women carry out in their activity, whether they are considered female or male, without assigning them a value or a hierarchy by gender biases.

The training contents are deduced on the basis of specific objectives. One possibility is to establish them following the analysis of types of competencies and taking into account that:

- ➔ there are differences in what men and women learn in domestic and public settings, in formal education and in life experiences. These differences will have to be acknowledged, valuing them in the same way, and if necessary, compensating for the lack of one or another type of knowledge or experience;
- ➔ women or men may require more practice time in the workshop or to do certain exercises, so that flexibility in terms of times and schedules must be provided for;
- ➔ the training strategy must incorporate flexibility criteria in training that allows providing individualised teaching that facilitates learning at the pace of each participant, using a diversity of pedagogical methods;
- ➔ in order to support and respond to the specificities of the participants, permanent co-ordination among the different players involved (guidance providers, persons in charge of gender programmes, teachers who teach employability and citizenship modules, etc.) is fundamental.

### Selection and organisation of contents

On the basis of modular organisation and the competencies to which the latter refers, reflection is conducted and the aspects to be developed to achieve expected performance are identified.

Even at the risk of incurring in oppressive repetition, it is worthwhile to sound an alert regarding the inclusion of, not only conceptual contents, but also of procedural and attitudinal contents. In this sense, an important contribution was made by Philippe Zarifian when he suggested service competency which he explains by stating that "... it is above all an opening and an internal transformation of already existing trades and activities. To develop a service competency is to ask oneself and know, in our professional actions, what impact they will have, directly or indirectly, on the way in which the product (the good or the service) will benefit, *usefully*, its beneficiaries..."<sup>8</sup>

From the standpoint of the combination of competency and gender approaches and the focus on employability and citizenship, Zarifian's statements are specially relevant:

- ➔ "...to develop a service competency is also to show, in their relations with others, *civility*, i.e., respect and generosity towards the other. The service is not unilateral: there is always a bargaining, reciprocity and agreement part..."<sup>9</sup>
- ➔ "...service competence is still very poorly identified as such and is very little acknowledged. Without a doubt, we must see in this an effect and a cause at the same time, of the sexual division of labour: the sectors in which this competency is requested most openly, i.e., those that have direct contact with the users, are strongly feminised sectors. Acknowledgment of professionalism in service activities is also a way to bring to bear, more globally (and for both sexes), the importance of competence in service."

8 Zarifian, Philippe. *El modelo de competencia y sus consecuencias sobre el trabajo y los oficios profesionales* in Papeles de la oficina técnica No. 8, Cinterfor/ILO, Montevideo, 1999.

9 Zarifian, P., *Éloge de la civilité*, edición L'Harmattan, Paris, 1997.

### Teaching methodologies and strategies

One of the keys to insertion and permanence in the world of work is today more related to problem-solving possibilities and the development of learning strategies than to mastering large volumes of information. It is because of this that an educational model based exclusively on transmission of knowledge is already insufficient to face the new challenges of society and especially the production sectors.

Within this framework, it is important to develop didactics that consider the differentiated processes of learning and recognise the need to adapt training proposals to the needs, paces and conditions of individuals and the productive contexts in which they perform.

CBT design requires a methodology that allows the principles on which this approach is supported to be applied in practice.

Teaching approaches based on *problem solving* are appropriate to develop occupational competencies insofar as they allow the individual to come into contact with real work situations, providing the problems designed as a teaching device are closely related to the problems of professional practice, and fulfil a series of conditions among which the following can be highlighted:

- are important and significant in the productive context
- require convergence of learning of different types for their solution
- present various alternatives for solution

In turn, *project development* turns out to be a methodology of great potential for the development of competencies, in particular the key competencies for employability, since it allows a series of them to be brought to bear in an articulated manner. However, it is important to highlight that competency-based training does not imply eliminating traditional teaching methods such as presentations and the various forms of group work.

As has been mentioned in Chapter I, it is important to introduce in practices and exercises actions addressed to modify certain cultural patterns that value differentially the knowledge, skills and abilities that women and men develop. Likewise, if earlier learning has privileged a differentiated development of certain competencies for men and women, this reality must be kept in mind and an analysis must be made of whether it is necessary to compensate this segmentation by including certain joint learning spaces, and others only for women or only for men.

There is another series of aspects and problems that are linked to the determination of methodologies and strategies (such as hidden and obviated curricula, inclusive language, training of trainers, design of materials, identification of resources, etc.) that are located on a diffuse border between this phase of design and the implementation phase and that, simply due to an option of focalisation of FORMUJER publications, are not addressed in this one.

#### Evaluation modalities and criteria

In CBT evaluation takes as its base the performance criteria identified for each competency element, so that mechanisms have to be designed that allow performance to be proved at the individual level. Its scope must cover both the lecture and the practical phases of teaching/learning, since in both cases knowledge, skills, abilities and attitudes are developed that are brought to bear in performance in the face of situations in the labour field. Moreover, it is important to keep in mind that the evaluation of competencies seeks to facilitate the demonstration of learning acquired independently of the spheres of its acquisition, and not be restricted to measurement of what a person does not know.

CBT curriculum design is in full development and in the process of construction. With the repeated but no less certain intention of contributing to this reflection, an experience of curriculum design is provided below as undertaken in the execution of FORMUJER.



# An experience in design

- A. The Dual Training Programme for Nursing Aides under a competencies approach
  - 1. Contextualisation of the experience
  - 2. Building a vocational profile
  - 3. The Training Programme



## A. The Dual Training Programme for Nursing Aides under a competency approach

### 1. Contextualisation of the experience

The FORMUJER/Bolivia Programme was launched in the first of the three countries to initiate activities (1998). At the time, the occupational competency approach was just beginning to establish itself in the debate on how to improve vocational training and make it more important and more relevant for the labour market and for the world of work. Nonetheless, its executing entity, the National Institute for Labour Training (INFOCAL) agreed enthusiastically with the regional proposal and decided to take advantage of the execution of the Programme to join efforts in the construction of knowledge bases and in the development of methodologies that, within the frame of reference of occupational competency, would guide curriculum review and updating.

The INFOCAL Foundation is a non-profit private institution of the public weal conceived as a national system made up by an Executive Bureau (DEN) and nine Departmental Foundations with technical and financial autonomy, the purpose of which is to provide technical vocational training and skills development in the various productive and service activities.

There are important regional differences because each Foundation reflects the economic and social situation of its department. The greatest amount of enterprises– and therefore the greatest amount of employers' contributions –are to be found in the three departments of the central axis of the country (La Paz, Cochabamba and Santa Cruz). Because of this a Regional Strengthening Fund has been organised to strengthen and encourage the growth of the Foundations with the least income.

During the six years prior to the implementation of the FORMUJER Programme, the Foundation had worked on the improvement of training from a gender perspective, which led it basically to make female participation in vocational training possible in all areas and to offer some additional guidance and skills development services in the gender approach. Although it was possible to introduce the subject in the institutional work agenda at this stage, practice showed that the methodologies employed were not altogether effective for this complex

network of individuals and visions to acquire the competencies required to carry out a collective and conscious process that would change the institution in a sustainable manner. Working from a gender perspective requires the development of wide, open processes that impact on the attitudes and views of individuals belonging to both the technical teams and the users of the service.

Because of this, one of the central axes of the execution of FORMUJER in Bolivia was to support the methodological and organisational innovation processes in the INFOCAL system, with the central objective of implementing high quality and relevant training policies, the institutional mission of which would be gender equity and an articulating axis of the training supply of which would be training for employability and citizenship. Among the strategies developed for fulfilling this objective, one of the most important was the development of a conceptual and instrumental frame of reference for competency training, to guide curriculum change; firstly, in training pilot projects financed directly by FORMUJER, and later in the aggregate supply and, especially, in the dual training modality.

Various lines of work were implemented to that effect, among which the following can be highlighted:

- a) mainstreaming the gender perspective in all institutional *modus operandi*. To do this, systematic staff training and sensitisation actions were undertaken, as well as sensitisation in gender of the participants of the training actions through their inclusion in the curricula;
- b) market studies carried out for nine occupational areas previously identified on the basis of entrepreneurial sector demand;
- c) technical and teaching staff training in occupational competency and gender subjects, which implied holding workshops with international experts supported by Cinterfor/ILO, constant channelling of information from FORMUJER on methodologies of identification that were being experimented with in the world, and the development of systematic self-investigation and training activities by the DEN and, especially, the La Paz Foundation;
- d) implementation of DACUM workshops for competency identification which, in turn, were framed within a larger and comprehensive strategy of articulation with the productive sector.

At the same time, FORMUJER was promoting the introduction of training for employability, for which it drafted the Training Modules for Employability and Citizenship.<sup>1</sup> This methodology –in which teaching teams were trained that, in turn, took on the responsibility of experimenting with it, adapting it to the contexts of each Foundation and acting as institutional multipliers– greatly impacted technical work and, articulating with competency–based training, became the conceptual and instrumental frame of reference for curriculum change in INFOCAL. The five departmental centres that executed FORMUJER are at present committed to incorporating the Modules, not only in the programme courses, but also in the different training modalities they offer.

The result of the feedback among all these working strategies was the development of a teaching and operational transfer method for curriculum design. Today the Foundation has a methodology to transfer identified occupational competencies to the learning referent, that is being disseminated to the INFOCAL system, and has developed competency–based curricula in the textile, gastronomy and nursing aide areas. Those developments are being validated through courses that are being executed in INFOCAL, La Paz.

The objective of this chapter is precisely to share an example of the methodology and experience developed.

The Dual Training Programme for Nursing Aides for the competency approach, addressed by INFOCAL La Paz, with the co-operation of Swisscontact,<sup>2</sup> was intended to prepare the apprentices so that, according to the requirements of the context, they could be competitive in the occupation they performed, effectively handling their autonomy, bargaining capacity and self-management, and being sensitised on the gender perspective.

Execution has been going on for a year, with three enrolments of apprentices adding up to a total of 67, of which 65 are women and two are men. Duration is two and a half calendar years and a fourth enrolment is expected in February 2003, for which there are quite a large number of candidates. Only 11 persons have dropped out, mainly women with family responsibilities.

---

1 Guzmán, V.; Irigoín, M., *Módulos de.., op.cit.*

2 For more information, see the Introduction.

Although validation has not yet been completed and adjustments in some modules are expected, as well as an evaluation of impact, the results have been very satisfactory in terms of acceptance and requests from the Health Centres to take part in the Programme by receiving apprentices.

Following the methodology developed, the process of competency-based curriculum design was subdivided into two important phases:

- ➔ building the vocational profile
- ➔ drafting the training programme or curriculum.

## 2. Building a vocational profile

### Training needs

Once the fundamental need to respond to the new demands of the contemporary world have been accepted, the base assumption is that training must be open and flexible, that it must foster equity and, above all, that it must be more closely linked to the productive sectors. The challenge, then, is to increase adaptation and provide a quicker response to the needs for change, to increase the quality and relevance of the programmes and to improve the link between training and changes in the productive structure.

In the experience to which reference is being made, a market survey was carried out as well as a need assesment. The results determined that one of the great fallacies was that Nursing Aides were not holistic in their focus on training, and that in dealing with patients/clients, difficulties of different kinds were perceived, among which insufficient communication, verticalist behaviours and little mastery of the techniques of nursing intervention were highlighted.

### The vocational profile

On the basis of this detection of needs, a vocational profile was defined that articulates the set of performance criteria an individual must demonstrate in the occupational field once he/ she has graduated from training.

In the methodology implemented by INFOCAL, the following sequence was applied to determine this profile:

- Implementation of DACUM workshop
- Review and validation of DACUM chart or map
- Description of steps, knowledge, tools and performance criteria
- Identification of cross-cutting competencies

#### *Implementation of DACUM workshop*

The DACUM workshop involves bringing together a small group specialised in an occupational field or area and subjecting it to intense brain-storming under the leadership of an experienced facilitator, in order that it may identify the areas of competency of the profession or occupation. The result involves working out a chart or map containing the identification of functions, tasks and steps and the behaviours and attitudes needed for successful performance in the occupation. It is supplemented by a specification of general knowledge and skills and with a list of machines and tools needed for the job. It also allows for a brief analysis of the concerns and misgivings of the expert workers regarding the occupation.

The conclusion was that Nursing Aides should be qualified technicians prepared to attend to and care for patients, with professional quality and ethics, having a solid theoretical basis in areas of anatomy/physiology, knowledge of diverse pathologies with their respective clinical manifestations, diagnoses, treatments and nursing interventions needed. They had to be capable of identifying and solving problematic situations, as well as the needs of patients with different pathologies, to be able to handle communication to orient and execute national health programmes, bringing together and sensitising heterogeneous groups, and to handle performance criteria clearly established with reference to patient care

and attention, assist health work teams, physicians, licensees in nursing, paramedics, etc. They also had to prepare and handle surgical material, taking into account technical standards and preservation of the environment.

*Review and validation of the DACUM map*

Once the map is obtained, it is reviewed and adjusted in the laboratory together with two experts and put in a sequential order. The result of this is sent to the enterprises for their review and validation.

In the case of Nursing Aides, six priority functions were identified that become the areas of competency:

- A. Reception of patients for their hospitalisation
- B. Attention of patients in hospital areas
- C. Assistance to health work team
- D. Handling of surgical material and inputs
- E. Out patient/community service
- F. Health area guidance

*Description of steps, knowledge, tools and performance criteria*

When the enterprises have returned and approved the map, a “sequential educational reordering” is done by using the AMOD method, and the steps of each of the tasks identified are described.

SCID (Systematic Curriculum Design) tables –in an adaptation by INFOCAL– are used for describing the steps, to specify the function, tasks and steps.

As can be seen in the table below, for each step the knowledge and skills needed, tools and performance criteria are identified. The latter allow the results of successful performance and quality requirements for same to be established.

## Nursing Aide

### Description of steps, knowledge, tools and performance criteria

#### Area de competence A.

Reception of patient for outpatient service or hospitalisation

#### TASK A1: Receive the shift according to information flow

STEPS	KNOWLEDGE	TOOLS	PERFORMANCE CRITERIA
1. Listens attentively to the previous shift's oral information, asks precise questions, makes notes of specific information and is informed by patient documentation	Documentation. Handling Nursing Sheet. Nursing: miscellaneous. Pathologies. Knows how to communicate. Teamwork.	Documentation	1. Is well informed on events of the previous shift and work expected for his/her shift.
2. Plans, under supervision of his/her immediate chief, personal and group work, including new tasks of the day	Client service: Human relations. Knows how to transmit and receive orders. Teamwork.	Documentation	2. Plans his/her work to achieve a satisfactory flow for the persons involved.

#### TASK A2: Control material and inputs according to list and speciality

STEPS	KNOWLEDGE	TOOLS	PERFORMANCE CRITERIA
1. Checks material and inputs according to list and speciality.	Statistics and applied accounting. Computer sciences. Handling Kardex and inputs	Material and inputs according to list. Documentation indicated.	
2. Requests material and inputs required and takes care that they are supplied.	Nursing: AVD safety. (hygiene, stores materials). Documentation required.	Documentation	1 and 2. Is responsible for preparing material and inputs to be used according to technical standards for the shift.
3. Takes part in the production of swabs, gauze, etc.	Nursing: AVD safety (hygiene). Precision in fine motor function.	Gauze, cotton wool.	3. Actively takes part in the production of material with hygiene standards.

**TASK A3: Receive an outpatient/client, initiate the patient's medical history, prepare the patient for a medical evaluation**

STEPS	KNOWLEDGE	TOOLS	PERFORMANCE CRITERIA
1. Receives the patient for office visit, briefly explains to patient the steps needed for admission for visit, introduces him/herself by name, position and working area.	Client services. Human relations. Knows how to communicate.		Complies with established introduction standards and satisfies the information needs of the patient/client.
2. Prepares medical histories for new patients/clients, either scheduled or unforeseen.	The same.	The same.	Prepares new medical histories requested by physician according to internal rules.
3. Records personal data on patient/client.	Client service. Human relations. Patient's rights (protection of personal data). Computation. Documentation indicated. Know how to communicate.	Documentation indicated.	Records precisely and according to documentation standards patient/client personal data in the clinical history.
4. Prepares the patient/client psychologically and physically for medical evaluation.	Patient's rights. Basic Psychology. Nursing: Concepts of assistance in health procedures.	Doctor's office material and equipment, as applicable.	Informs patient/client clearly on the medical evaluation so that he/she can co-operate positively, and assists him/her according to nursing standards.

**TASK A4: Receive patients/clients for hospitalisation with basic and necessary information, prepare and initiate medical history**

STEPS	KNOWLEDGE	TOOLS	PERFORMANCE CRITERIA
1. Receives patient/client and his/her relatives at the reception or other indicated place, introduces him/herself and accompanies patient/client to his/her unit, showing him/her the most important facilities.	Client service. Human relations. Know how to communicate Sensitising.	Wheel chair Stretcher.	Accompanies and briefly informs patient/client on the institution's facilities.
2. Shows patient/client the facilities of his/her unit, bathroom and location of nursing station, explains the general scheduling of a day and provides a brief report of the next actions planned for the patient/client's treatment.	Client service Human relations. Know how to communicate. Sensitising.		Briefly informs patient/client on rules and facilities of the institution that are most needed, as well as on nursing assistance for patient/client's treatment.

STEPS	KNOWLEDGE	TOOLS	PERFORMANCE CRITERIA
3. Patient/client interview on some specifics such as diets, need for nursing assistance on a daily basis, etc.	Human relations. Interpersonal communication Client service. Know how to communicate. Sensitising.	Documentation.	Has basic information on patient/client to establish good relations between client and nursing staff and proceed positively in the patient/client's welfare.
4. Initiates and prepares medical histories for new patients/ clients either scheduled or unexpected.	The same	The same	Prepares new clinical histories as requested by physician according to internal rules.
5. Records personal data of patient / client.	Client service. Human relations. Patient's rights (protection of personal data). Computation. Documentation indicated. Know how to communicate.	Documentation indicated.	Records precisely and according to documentation standards the personal data of the patient/ client in the clinical history.

#### TASK A5: Control vital signs, weight and height according to established standards

STEPS	KNOWLEDGE	TOOLS	PERFORMANCE CRITERIA
1. Controls and records patient/client's vital signs according to established standards.	Nursing: Concepts of vital signs, Anatomy/ Physiology. Human relations. Know how to transmit and receive orders. Know how to communicate.	Equipment/ Material: Thermometer Tensiometer Stethoscope, Clock, Documentation.	Controls and makes a note of patient/ client's vital signs according to technical standards and internal rules of the area.
2. Controls and records patient/client's height and weight according to established standards.	Concept of weight and height Human relations. Know how to transmit and receive orders. Know how to communicate.	Scales for adults, Height meter, Documentation.	Controls and makes a note of patient/client's height and weight according to technical standards and internal rules of the area.
3. Handles equipment/ instruments to check vital signs, height and weight according to safety and product maintenance indications.	Nursing Use of equipment and basic materials. Hygiene.	Equipment and materials the same as step 1. Cleaning and maintenance solutions and materials.	Cares for and treats the equipment and instruments with care so that they last and function effectively as expected.

*Identification of cross-cutting competencies*

**On the basis of the list of knowledge and behaviour needed for an occupation, cross-cutting competencies are identified that, when working out the training programme, give shape to the block of cross-cutting modules.**

AREAS OF COMPETENCE	CROSS-CUTTING COMPETENCIES	CONTENTS	HOURS
Diagnose	Get to know oneself	Get to know oneself (System of attributes) Self-acceptance Gender identity Rights and responsibilities; recognition and action Balance of competencies Occupational project design	40
	Locate oneself in the context	Explore the working world The situation of women and men in the working world How the enterprise is organised	30
Relate	Communicate	The process of communication Non-verbal communication. Active listening Interpersonal and group communication Communication in extreme situations Participation and leadership	30
	Belonging or social linkages and co-operation	Identify tasks and responsibilities of specific job Support networks Teamwork (gender vision)	20
	Managing feelings and emotions	Subordination Rational perception of setting Expressing feelings Self-mastery strategies Effective management of personal energy	16
Face to face	Responding to the labour context	Assertiveness and bargaining skills The decision to get involved Designing one's own plan of action Problem solving techniques Planning and administration of time	36
	Making decisions	Creativity Initiative Making decisions Supporting autonomy	20

Some supplementary contents are also developed, such as:

- Basic principles of quality
- Basic concepts regarding labour laws
- General principles of occupational safety
- Conservation and preservation of the environment

Once the matrix has been structured, a new general review of all inputs is done to later reflect them in the training programme.

### 3. The training programme

Identification and characteristics of modular areas

According to the methodology adopted by INFOCAL, three types of modules are identified for each area of competencies:

- **Basic modules:** are worked on in the laboratory with the aid of experts in the occupation; they act as a basis and constitute the conceptual theoretical referent of the training.

- **Technical modules:** are identified on the basis of the functions specified in the DACUM map and constitute the technical peculiarity of the training.

- **Cross-cutting modules:** refer to procedural and attitudinal competencies that are brought to bear in occupational performance; constitute a conceptual and value referent and are framed within the socio-affective field of training. They are taught through an adaptation of the FORMUJER **Employability and Citizenship Modules** done by INFOCAL teaching teams.

### Teaching profile

The teaching profile requires a teacher-learning facilitator with the following competencies and characteristics:

- capacity to handle heterogeneous groups and individual learning processes;
- initiative, creativity, bargaining capacity, autonomy and capacity to adapt to change and situations;
- wide occupational experience in the nursing field and in a teaching capacity in the competency-based training approach;
- training in gender and capacity to work in a classroom on “unlearning” old thinking, feeling and action habits.

### Name and general objective of the programme

The name must describe both the occupational profile and the modality and approach of the training to be developed.

In this case the modality is dual (enterprise/ training centre co-operation) and the competency approach is mainstreamed by gender.

The general objective established for Nursing Aides was:

- Receive and attend to patients/ clients according to established technical standards, assist the work team, as well as handle surgical material according to hygiene, asepsis and bio-safety standards.
- Prepare and begin vaccination booklets and cards and statistics, as well as provide guidance to patients/clients in primary health policies.
- Perform functions in response to the occupational context, make decisions, possess bargaining skills and handle him/herself autonomously in the framework of gender equity relations.

### Modular areas and hourly workload

**As has been stated, modular areas correspond to main working spaces.**

In the example provided the modular areas were defined as:

- A. Receiving patient/client for outpatient attention or hospitalisation
- Competency: Handles efficiently different types of clinical documentation and ensures the protection of patient personal data. Receives verbal and written information and clearly and effectively transmits problems on time in the workplace. Takes pains to treat and attend to patients well, with gender equity.
- Workload: 164 hours
- B. Patient/client attention in hospital areas
- Competency: Provides nursing assistance to patients in their daily activities, with discretion, responsibility and sufficient knowledge of various pathologies. Takes care of hygiene, asepsis, antisepsis and bio-safety. Works in a team and shows an active and effective listening attitude in interpersonal relations, both with men and with women
- Workload: 393 hours.
- C. Assistance to health work team
- Competency: Assists the health team with safety and quality. Handles surgical material responsibly. Prepares the patient/ client physically and psychologically for different types of surgery or treatments. Knows and controls responsibly possible physical consequences for the patient after the latter has been subjected to surgery or treatment, and reacts with precision and gender sensitivity in cases arising.
- Workload: 198 hours

D. Handling surgical material

Competency: Handles surgical instruments with precision and efficiency. Handles different sterilising machines and has basic knowledge regarding their operation.

Workload: 245 hours.

E. Public health service

Competency: Is familiar with the equipment and maintains the doctors' offices according to speciality and technical standards. Attends to outpatients/ clients with empathy and respect, gender sensitised; handles outpatients/ clients' documents and those of public institutions of the health area in a professional manner. Works with a certain amount of autonomy, solves problems and adapts to changes as they arise.

Workload: 118 hours.

F. Guidance in the health area

Competency: Guides and informs the patient/ client on various aspects of the health area according to planning. Is familiar with, informs on and disseminates different national and departmental health and prevention programmes, using communication techniques, basic psychology and gender equity.

Workload: 82 hours.

### Evaluation criteria

**Evaluation criteria are addressed with reference to production.**

**Evaluations for the technical modules are determined on the basis of the matrix, where performance criteria are established; the latter are the base for making evaluations.**

**Evaluations are performed on three occasions:**

- a) **at the beginning of training: the *diagnosis evaluation* that allows general aspects and learning expectations to be known regarding the group with which work will be undertaken.**

- b) during the teaching/ learning process: **training or process evaluation** explores the achievement of performance criteria and allows the training process to be gradually readjusted.
- c) in the **final evaluation**: the learning objectives are checked to see whether they have been achieved and the results are measured in products and/or services provided.

The theoretical aspects are measured in writing and psychomotor mastery is explored through practical activities. In evaluations of cross-cutting modules a test is taken at the beginning, choosing the skill to be developed, as for example, “Problem solving”; the development and application of skills is observed during the process; at the end of the process a test is once more provided to be filled in by the apprentices and is checked and compared with the initial test and the process observation guides to see if the apprentice has developed or is developing the skills sought.<sup>3</sup>

For the insertion into the enterprise phase, FORMUJER was instrumental in producing specific follow-up and evaluation instruments, and the development and application of social skills is co-ordinated with the health centre monitor to perform the follow-up in order.

---

<sup>3</sup> See Guzmán, V., Irigoin, M., *Módulos de formación.., Instrumentos de evaluación, op. cit.*

## Curricular net

The curricular net works according to the DACUM map. It is divided in areas of competency, the tasks make up the technical modules and the steps are learning units.

## I. Semester

## Area of competence A:

## Reception of patient/ client for outpatient visit or hospitalisation

Technical modules	Hours	Basic module	Hours	Cross-cutting module	Hours
A1 Reception of shift according to information flow	10	Anatomy I	1	Self knowledge Self-acceptance Gender identity Rights and responsibilities: recognition and action Balance of competencies Occupational project design	40
A2 Control of material and inputs	10	Introduction	7		
A3 Reception of patient for outpatient visit	7	Osteology	3		
A4 Reception of patient for hospitalisation	19	Arthrology	6		
A5 Control and recording of vital signs, weight and height	26	Miology	4		
		Blood	4		
		Heart	3		
		Blood vessel system	4		
		Blood circulation	6		
		Respiratory system	8		
		Digestive system	2		
		Pancreas	4		
		Liver and bile system			
Total	72	Total	52	Total	40
Total hours areas of comp. A					164

**Area of competence B:****Patient/ client attention in hospital area**

Technical modules	Hours	Basic module	Hours	Cross-cutting module	Hours	
B1 Respond in person to a patient's call	4	Urinary system	7	Locating oneself in the labour context	30	
B2 Comfort of a patient's unit	20	Nervous system	9	Exploring the labour world		
B3 Mobilisation of the patient	13	Endocrine system	8	Location of women and men in the labour world		
B4 Maintaining a patient's hygiene	30	Male genital system	4	How is the enterprise organised		
B5 Help feed the patient	14	Sensorial organs and accessories	9	Participation and leadership	20	
B6 Taking samples for the laboratory	13	Cytology and Hystology	5	Belonging and co-operation		
B7 Help in giving medication	25	First Aid	20	Identifying tasks and responsibilities of an individual job		
B8 Observing the condition of the patient	15	Obstetrics	40	Teamwork (gender view)		
B9 Nursing actions according to physician's instructions	20	<b>Internal Medicine</b> Respiratory ailments	12	Support networks		
B10 Participation in medical visit	10	Digestive system pathologies and diabetes	22			
		Pharmacology	25			
		Microbiology	18			
Total	164	Total	179	Total		50
Total hours Area of comp. B						393
Reviews/Examinations					10	
Total hours semester					567	

## II. Semester

### Area of competence C:

#### Assistance to work team

Technical modules	Hours	Basic module	Hours	Cross-cutting module	Hours
C1 Preparing patient for surgery and post-surgical care	30	<b>Surgery</b> Fractures Surgery and diseases of the digestive system	10 8	<u>Communicate</u> The communication process Non-verbal communication	30
C2 Take patient to service required	5	Anal diseases Acute abdomen	8 4	Active listening Interpersonal and group communication	
C3 Check the material or equipment to be used	9	Intestinal volvulus	5	Communication in extreme situations	
		Traumatism of the brain	5	<u>Managing feelings and emotions</u>	16
		Pediatrics	20	Subordination (worker/ employer relationship)	
		<b>Gynecology</b> Non-tumour gynecological pathology	9	Rational perception of setting	
		Malignant and benign female tumours	10	Expression of feelings	
		Gyneco-obstetric diagnosis	6	Self-mastery strategies	
		Family planning	5	Effective management of personal energy	
		<b>Internal medicine</b> Cardiovascular diseases	10		
		Endocrinal diseases	8		
Total	44	Total	108	Total	46
				Total hours Area competence C	198
				Reviews/Examinations	9
				<b>Total hours semester</b>	<b>207</b>

**III. Semester****Area of competence D:****Handling surgical material**

Technical modules	Hours	Basic module	Hours	Cross-cutting module	Hours
D1 Handling material required according to service and institution	24	Neurology	20	<u>Respond to the occupational context</u> Assertiveness and bargaining skills Design one's own plan of action Problem solving techniques Time planning and administration	36
		Physics/Chemistry	12		
		General pathology	10		
D2 Assemble surgical material according to service requirement	20	Decision to get involved with STDs (Sexually transmitted diseases)	25		
D3 Distribute the material by service as required	10	<b>Internal Medicine</b>			
		Urology	12		
		Psychiatry*	32		
		Geriatrics*	32		
		Evolutionary psychology	12		
Total	54	Total	155	Total	36
* These subjects are addressed in workshops lasting four days, which increases the total			Total hours Area competence D		245
			Reviews/examinations		8
			Total hours semester		253

**IV. Semester****Area of competence E:****Public Health Service Nursing Aide**

Technical modules	Hours	Basic module	Hours	Cross-cutting module	Hours
E1 Preparing vaccination booklets, cards, and statistics	8	Epidemiology	18	<u>Make decisions</u> Creativity Initiative Decision-making Supporting autonomy	20
		Parasitology	16		
E2 Calibration of scales and preparation of biologicals for vaccination	10	Nutrition	22		
		Computation	10		
E3 Vaccinating children and adults according to established standards	14				
Total	32	Total	66	Total	20
					118

**Area of competence F:****Guidance in the health area**

Technical modules	Hours	Basic module	Hours	Cross-cutting module	Hours
F1 Guiding adult patients/clients according to health problems in specific cases and general aspects	20	Pathologies referring to national preventive actions	14	Reflection on praxis	4
		Statistics	16	Basic concepts of legislation	3
				Occupational safety principles	6
F2 Guiding child and adolescent patients/clients according to health needs and problems	10			Bio-safety/ environment	9
Total	30	Total	30	Total	22
Total hours area of competence F					82
Review/examinations					7
Total hours semester					207

**Infrastructure, equipment and accessories needed**

**Includes identifying logistic and input conditions required to ensure the quality of the teaching/ learning process for all participants.**

