Quick Guide for the Development of Compentecy-based Curricula for CVET-Programs and IVET-Programs in Countries without an existing IVET-System[1]

Developing CVET and IVET programs can be a challenging task when starting from the very beginning. In this short guide some important aspects shall be addressed and some practical advice shall be given.

The idea for this guide has been born when the Chamber of Crafts of Cologne asked for support in a project with partners in Uganda which deals with the development and implementation of vocational trainings in the crafts sector.

The initial discussion dealt with the question which model for documenting the knowledge and skills (needed for dealing/handling work demands) is suitable for the crafts sector in Uganda and from what experiences in Germany such a project can benefit.

This question lead to further questions that shall be addressed briefly:

1. Which structural principles may be beneficial for a successful development?
2. What steps have to be taken when creating the curriculum? Which conditions in the development process can foster the success of the IVET/CVET-program?

One first aspect of a successful new program refers to the expected benefit from the perspective of potential participants. For the field of vocational education and training this means that the participants and the enterprises sending the participants must have the impression that they benefit from the program on the job. This seemingly simple statement has a pile of implications: for the curricula and its implementation in the programs and for the development process.

Structural Principles for Curricula in the Crafts Sector

State-of-the-art curriculums in Germany follow the principle of competency-based structure. The core idea is not to create a list of theoretical contents, but to let the learning process start with the practical situations from the field of work. Starting with specific problem situations from their joblife makes the participants aware of their learning needs and motivates them. Moreover they deliver the context for applying the learnt skills and knowledge to a problem solution process.

These situations have to be the starting point in the curricula development as well.

When creating the document for the curriculum, it is useful to use a table with three columns (see next page), which is built up and read from the left-hand side to the right-hand side. The practical situations shall be described in the first column.

[1] IVET = Initial Vocational Education and Training; CVET = Continuing Vocational Education and Training

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Practical Situation	Competencies (Processes)	Content/Knowledge
....	...	...

Examples for practical situations in the crafts sector:

- *Setting up a workstation for the production of wooden furniture*
- *Producing parts of wooden furniture*

Each situation is to be specified by the processes that have to be mastered within the situations. These steps are the specific competencies which the participant of the program develops. The competencies are documented in the second column. Usually the steps follow the complete action model, e.g. the participants undergoes the steps of planning, implementation and controlling.
The third column reveals the necessary theoretical knowledge for this situation – or from the perspective of the training institution the content to be delivered within the learning situation.

Example

Practical Situation	Competencies (Processes)	Content/Knowledge
Setting up a workstation for the production of wooden furniture	• Cleaning, preparing workstation • Choosing tools and providing for the working process • Ensuring energy supply • Incorporating safety measures considering safety regulations and guidelines • Ensuring waste disposal	• Types of Tools • Safety regulations and guidelines • Regulations for disposal and recycling of material
Producing parts of wooden furniture	• Analysing and judging wood piles considering wood type, texture and moisture • Cutting to size pieces of woods in accordance with given measurements • Preparing parts for assembly • Putting together parts, especially by screwing, gluing and nailing • Checking quality of parts and functionality of furniture	• Wood Types and their properties • Influence of texture and moisture on the quality oft he product • Measurement units and sketches • Cutting techniques with different tools • Techniques of fitting together parts

A template of this table is provided at the end of the document.

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Steps in the Curriculum Development Process

Step 1: Finding experts for committee

As stated in the introduction the key factor for a successful program is the consideration of the ‚stakeholders' perspectives. These stakeholders are on the one hand the participants who want to develop or strengthen their competencies in a certain field of work. Moreover it is important to consider the view of (potential) employers too. Only IVET- or CVET-programs created in accordance with the needs on the job market tend to be sustainable.
Both perspectives are considered in Germany by the principle of participation. This means that representatives of the social partners (employer confederations and trade unions) are involved and agree on the competencies (requirements) in curricula.

When choosing experts for a committee it is important to chose open-minded people with a sense for future developments and a positive attitude towards the aim of qualifying people. Employer representatives with expanding enterprises (not necessarily big ones) who unterstand the importance of qualified people for the success of the enterprise can be of better support than solo-entrepreneurs fearing to build up competitors.

Moreover educational institutions such as vocational schools or private vocational institutions are possible partners. If – in case of a country without IVET system – the implementation of an IVET-system is considered, it may be advisable to involve the relevant decision-makers on the government level too.

Step 2: Analyzing working processes in different trades withing the crafts sector

After creating the committee it is important to analyse the core processes within each trade. This step provides the foundation for identifying the situations that have to be considered in the curriculum. Usually it is helpful to structure the core processes in the enterprises with the following scheme:

1. Analysing and understanding customer needs
2. Developing and planning solutions/products
3. Presenting and offering the solution/product
4. Planning and preparing the implementation of the solution
5. Executing the implementation or production
6. Controlling the result and handing/passing over result to customer

For each step the following questions have to be answered:

a) What are the practical situations?
b) Which level in the enterprise (employee, manager, owner) is dealing with which processes? (A result may be that more than one IVET- or CVET-program is necessary in the long run.

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Additionally there are managing processes that may be considered, if the CVET-program is on a higher level.
For instance are possible managing processes referring tot he following fields of work:

- Writing invoices, documenting payments and paying taxes
- Calculating Costs and judging the success of the enterprise
- Instructing and guiding employees and apprentices
- Optimizing processes
- Developing new and existing business fields

Step 3: Agreement on relevant situations for the intended program

Based on the process analysis the committee comes to an agreement on what situations the participants of the IVET/CVET-program shall be qualified for.
A good further outcome would be, if the analysis leads to the insight, that further qualifications for specialisation and for higher levels are necessary and have to be developed (possibly after completing the first program) too.

Step 4: Specifying the situations: competencies and content (colums two and three)

As demonstrated in the first part of this guide, each situation has to be described by the specific processes, which must be mastered. When thinking of the processes it is helpful raising the questions:

a) What are planning activities (e.g. analysing, developing, ...)?
b) What are implementing activities (e.g. producing, connecting, installing, ..)?
c) What are controlling activities (e.g. checking measurements, checking surfaces...)?

Step 5: Developing a concept for the implementation

Depending on the existing or non-existing IVET-structure this step may occur earlier when deciding on institutions to be involved. But latest at this stage the question must be raised which institution feels responsible for which part of the curriculum implementation.

If the program shall be successful and sustainable it is important to provide the participant with an environment to develop practical skills. Courses solely based on theoretical inputs will not lead to the intended learning outcomes – especially when it comes to crafts skills.
In Germany the combination of hands-on experience in enterprises and situation-orientated theoretical foundation in vocational schools has been successful for many years. Of course, the transfor of this model needs adaption, but the core principle may be realized by creating opportunities for workplace experiences on the one hand and theoretical background on the other hand.

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Titel of IVET/CVET Program: _____

Practical Situation	Competencies (Processes)	Content/Knowledge

Institution: _____