

## INTRODUCTION TO THE TEST ITEM DATABASE (TID)

### I. BACKGROUND INFORMATION

The TID was developed within the %Moldovan Occupational Standards, Assessment and Certification+ project, financed by SDC and jointly implemented by the Institute for Vocational Training, Labour Market and Social Policy - INBAS GmbH and the local NGO Institute for Professional Capacity Building . IFCP.

The project has been following a linking and matching approach where labour market demand is empirically defined by means of occupational profiles (required competencies) and the supply of labour (available competencies) assessed through a related system of tests (an upgraded version of skill testing). The testing system itself is governed by a large and growing number of individual test items, which will allow test designers to compose the actual tests with appropriate degrees of customisation and variation.

TID is a useful and handy electronic tool designed to establish, maintain and update the assessment instruments bank, where occupational profiles and the related test items can be stored, mapped and retrieved when needed. It also serves as an effective instrument for generation of test papers to be used for the assessment of competence.

The TID is equipped with a user friendly interface, which makes its handling rather simple, quick and efficient. It can be used by educational institutions, assessment centres, employers and other interested categories of clients.

Currently the TID in Moldova contains more than 1200 theoretical and practical test items for the following 8 occupations: *welder, pastry cook, textile cutter, plasterer, seamstress, cook, house painter* and *tractor operator*. They are available in three languages: English, Romanian and Russian.

### II. TEST ITEM DEVELOPMENT AND CLASSIFICATION

Test instruments are developed with clear reference to the duties and tasks of the occupational profile of the respective occupation and define the performance criteria related to them.

For each occupation a mix of 3 to 5 top practitioners and VET instructors are trained to develop high quality test items and are guided through a well-defined process of generating, reviewing and collectively validating the test items, before they are approved.

The test items produced are of two kinds: theoretical and practical. **Theoretical** test items assess the cognitive abilities of a candidate in a particular content area. **Practical** test items are realistic work assignments to be performed in a testing environment (or at real work places) and analyzed stage-by-stage during which both process and product are assessed.

In terms of format, three types of theoretical test items are preferred: short answer, multiple choice and matching test items. (In other words: The database does not facilitate essay and true/false type of items.)

In terms of content, the theoretical test items are of 3 complexity levels (a simplified and more practical re-grouping of B. Bloom's taxonomy):

- Complexity level 1 ( 1): **remembering** (memorizing and recall of data);
- Complexity level 2 ( 2): **functional understanding** (comprehension and application to new situations);
- Complexity level 3 ( 3): **problem solving** (analysis, synthesis and evaluation).

Practical test items are also rated according to complexity levels as follows:

- Complexity level 1 (P1): simple routine assignment;
- Complexity level 2 (P2): complex routine assignment;
- Complexity level 3 (P3): non-routine assignment, a challenge.

The practical test instruments are primarily complex routine assignments. Non-routine or challenge assignments are not addressed since they cannot be implemented due to their low cost-effectiveness and difficulty to repeatedly simulate a unique situation in a testing environment. Practical test items define performance criteria that are divided into **specific**, **observable** and **measurable** steps, undertaken to perform the assignment.

After the test items are reviewed and validated by the development team they are stored in the TID.

### III. TID OPERATION

With the TID users can easily compile a test paper for formative or summative assessments and customize it for different target groups.

#### Homepage

The actual work with the TID starts on the *Home* page, where the user is required to select the preferred language from the provided options. The other four buttons - *Occupational Profile*, *All Test Items*, *Test Items Statistics* and *Tests per Task* - placed on the instrument panel, next to the *Home* button, will become active only after an Occupational Profile was selected.

#### Occupational Profile Selection

Having selected the language, the user may proceed with selecting one of the 8 Occupational Profiles available in the TID. (NB: for the demo version the *house painter* profile has already been preselected, i.e. this step is not available.) After clicking the *Start* button, the system displays the selected Occupational Profile matrix with all its Duties and relevant Tasks. The light-grey colour of the cells means that the tasks placed in them are covered by a certain number of practical or written test items, while the dark-grey colour of the cells means that the tasks placed in them are not yet covered by any test items.

#### Test Item Selection

All tasks displayed in the matrix are active links and by clicking any of them the user obtains the list of assessment instruments (test items) that can be used to test the selected task in terms of knowledge or performance. Each test item presented on the page contains the following information: title, complexity level, time allocated and active links to the 2 versions of this specific test item: the candidatesq and the test panels versions, both available in PDF format for review, print or download. Moreover, the system provides the list of all the other tasks that can also be tested by this specific test item. (One should note here that especially the practical test items are typically involving a range of tasks. It is neither possible nor desirable to develop narrow, fragmented and isolated test items.) The

colour of these tasks in the matrix will change to yellow, once the test item is selected for assessment. The user may select (by clicking *SELECT ITEM*) the necessary number of test items to compile a test paper.

**Hint:** For a summative assessment of occupational skills it is highly recommended that the test items are selected in such a way that all tasks from the occupational profile are tested by the selected items. The occupational profile, in this case, will entirely turn yellow.

### **All Test Items Check**

By clicking the *All Test Items* button from the instrument panel, the user obtains the titles of all practical and theoretical test items available in the TID for this specific occupation. The detailed information of each test item can be accessed by clicking the appropriate link.

### **Test Items Statistics**

While selecting the necessary test items and compiling the test paper, the user may constantly check the current state of the test paper by accessing the *Test Items Statistics*. All test items selected so far are located on the *Test Items Statistics* page, reflecting their titles and active links (panels and candidates versions), statistical information regarding number of selected test items by type and by complexity level, time allocated per item and the entire test paper. When the selection of the test items for a test paper is completed, the user, by clicking *Download file*, may download them to a certain folder in his/her computer for further off-line usage.

### **Tests per Task**

The *Tests per Task* page presents all tasks included in the Occupational Profile and statistical information regarding the number of written and practical test items currently available in the TID.

### **Test Item Database Access**

In order to access a **demo version** of the TID please follow this link:

<http://www.demo-tid.inbas-sozialforschung.de>

You will need to register.

To get access to the **full version** you are kindly requested to contact the SDC officer in charge, Mr. Simon Junker ( [simon.junker@deza.admin.ch](mailto:simon.junker@deza.admin.ch) ).