

Project CodeVET

Recommendations and lessons learned for enhancing competence-based vocational education

The recommendations and lessons learned are addressed to all socially relevant groups involved in the planning, implementation and assessment of vocational education, both in the national context of China and Russia as well as for international community. These include school administrators, teachers, trainers, political actors, actors in development work, science and other actors.

General recommendations:

The competence-based approach (CBA) is to be implemented in the classrooms by individual teachers. Due to their vital role, they should be recognised as “agents of change” (Priestley et al. 2012). The successful implementation of various educational innovations, such as CBA in a classroom, depends on them. Specifically, it depends on how they understand the approaches, interpret the concepts that are central to them, and further translate their knowledge into teaching-learning processes (Misbah, pp. 19-20).

Most of the analysed curricula are linked to practice and labour market requirements through various mechanisms, which is a crucial aspect of CBA in Vocational Education and Training (VET). As for didactic guidelines for the implementation of the approach, most of the curricular documents do not contain comprehensive explanations. Along with this, teachers do not have a clear and common understanding of the competencies and CBA or of their implementation.

With the introduction of the approach on the level of learning objectives, teachers are faced with the challenging task to revise their teaching-learning approach and develop learning arrangements that allow for the achievement of competencies.

In this respect:

- Investigating teachers understanding of the competence-based vocational education and their attitudes toward this is important. Discrepancies between teachers’ beliefs and the concepts underpinning the principles of competence-based education should be identified so as to resolve them.
- Therefore, clarification of the notions of competence and CBA as well as didactic principles of its implementation is necessary for teachers to have a clear understanding of what is expected of them. The research results indicate an absence of homogeneous understanding of competence and principles of its implementation as well as a great deal of confusion regarding these constructs within national contexts. Teachers having a comprehensive understanding of the CBA in their national context could facilitate its implementation in their teaching practice.

Considering the heterogeneous perspectives on competence and competence-based vocational education, a facilitation of national specific understanding is recommended.

- Since some of the teachers have their own comprehensive understanding of the competence-based vocational education and its principles, discourse and exchange at the level of individual VET institutions, across institutions and on national level should be facilitated. This will allow for knowledge transfer, specifically allowing for sharing and consolidating the existing heterogeneous experiences and good practices of teachers and organisations in the implementation of competency-based vocational education.
- With respect to the previous point, the existing expertise, among other aspects, could be used to further develop a national-specific understanding of the competence-based vocational education and its implementations principles as a mix of bottom up and down-top processes.
- In both Russia and China, the focus is on defining competencies as intended learning outcomes in the curricular documents. The specific recommendations for achieving the intended learning outcomes are very limited in the prescribed curricula. Development of general guiding principles of teaching and learning within CBA as well as more profound explanations or didactic guidelines for competence-oriented teaching could be formulated as orientation support for the teachers. These can be created at the national level and additionally integrated into curricula or in the accompanying documents.
- Teachers should be better prepared for the implementation of the CBA during their professional education and training processes. They should also receive support during their teaching practice. Therefore, information, support and the qualifications on offer should be expanded and further developed.
- The trainings on offer should be expanded. Moreover, the possibility for teachers to gain not only theoretical and subject knowledge but also practical experience in the business context or similar contexts should be provided. This would be especially helpful for teachers without previous professional experience in the professional area of the program they teach. Teachers who are missing real enterprise/practice experience should be empowered and motivated to develop these and other skills.
- The bureaucratic load connected to planning, preparing and post-processing teaching-learning processes should be reduced to provide teachers with extra time. This time can be used for teachers to educate themselves about vocational educational innovations and planning to integrate these into their teaching practice. This time can also be used for evaluation and reflection on their success.
- Scientific discourse, which currently mainly focuses on CBA in general and academic education and CBA in general should be further developed with a focus on vocational education. The empirical research providing evidence about the current state of implementation of the CBA and its effectiveness is especially useful. This research could allow for more informed policy

development aimed at enhancing competence-based vocational education, further curriculum development and the development of specific interventions for implementation of the approach.

National context specific recommendations:

Based on the research results, some specific recommendations and lessons learned are offered for each national context.

For the Russian context:

- The same competencies are defined as intended learning outcomes in different curriculum elements (different courses, disciplines) and can therefore be seen as a cross-curricular intended learning outcomes. As such, the collaboration between teachers in planning teaching-learning arrangements is essential to allow for effective development of such competencies.
- Although the curriculum foresees a significant amount of workplace training (either in specially equipped facilities of the college or in companies), in reality the organisation of workplace training is reported to be unsatisfactory. Employers should be offered incentives and support for participation in the organisation of in-company training within the vocational training programs.
- The task of operationalising competencies, more precisely into the three elements of knowledge, skills and practical experience is located at the school level. On the one hand, this offers room for pedagogical planning and freedom, on the other hand, it presents a potential challenge for teachers who have less experience with a construct of competences when they have to perform the task of juxtaposing competences and their constituent elements.
- Greater transparency and reflection on learning goals or intended learning outcomes (i.e., competencies) communicated with students could be facilitated to allow for a more reflective learning process. This will give students the opportunity to notice and explore the development of their own competencies.
- Adaptation of the learning environment is required: The only direct reference to the didactic implementation of competence orientation in analysed curricula refers to the use of active and interactive learning methods. From the observations, it is clear that learning environments must be adapted, because the implementation of the methods could not always be implemented by the teachers due to the infrastructure. For example, we found that the learning environment prevents the organisation of cooperative learning forms.

For the Chinese context:

- Although the competencies are well-defined as intended learning outcomes in the curricular documents, there is still a weak link between the targeted competencies and related learning activities. The integration of intended learning outcomes and arrangements of learning activities needs to be strengthened during the curriculum planning process.

- The integration of theoretical learning and practical training is well emphasised in the curricular documents and well recognised by teachers. However, the practical learning and training are implemented to different extents because teachers have different levels of practical experience. As such, more time and support should be provided for the teachers who are responsible for the professional parts of the programs to expand or enrich their practical experience related to the industry, especially for those who have hardly worked in enterprises.
- While the application of the modular curriculum structure was emphasised in curricular documents, the structured modules in most analysed programs were still discipline-oriented courses. In addition, the understanding of modular learning varies between teachers. Interdisciplinary integration between the courses should be the core of the modular program. It is essential for curriculum developers and teachers, who are responsible for the professional parts of the programs, to rethink the concept of modules and interdisciplinary integration in the curriculum to implement them effectively in practice.
- The discrepancy in resource allocation between vocational colleges in different regions (such as teacher allocation, practical training infrastructure construction, etc.), is worthy of attention as it could greatly influence the implementation of a competence-based VET curriculum.
- The curricular documents at the college level include statements that students' performance and their abilities to discover, analyse, and solve professional practical problems in typical work situations should be assessed during the learning process. However, more explicit prescriptions about the assessment focusing on students' development of competencies should be integrated in curricular documents. This will provide teachers with clear guidance for the organisation of such an assessment in or after the teaching and learning processes.