

Moving beyond talk-and-chalk-teaching - a holistic didactical approach to teacher training through trilateral cooperation between Germany, Indonesia and Myanmar

Abstract

A highly qualified workforce is the key prerequisite for strengthening the international competitive economy. Based on long-standing and successful cooperation between Indonesia and Germany in the field of Technical and Vocational Education and Training (TVET), a trilateral cooperation in the field of further vocational teacher education with Myanmar has been established. Vocational teachers from Myanmar participate in selected occupational sectors in a work task-based and action-oriented training program, which is conducted by teacher trainers and instructors from Indonesia.

The program was commissioned by the German Ministry of Economic Cooperation and Development and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in cooperation with the main partners, the Indonesian Ministry of Education and Culture and the Ministry of Science and Technology in Myanmar.

The following article describes the didactical approach, its underlying theoretical foundation and the subsequent didactical design, which was implemented. The challenge for the practical implementation was to address two groups: the vocational teacher trainers from Indonesia and the vocational teachers from Myanmar. Finally, selected findings, which are based on observations, interviews, document analysis, and discussions during the practical implementation of the program, are presented.

1 The Project: Trilateral Cooperation in Technical Vocational Education and Training

Technical and Vocational Education and Training (TVET) is a crucial political area of continuous action especially in the emerging economies in Southeast Asia, who have industrialized their economies in the course of two or three decades. Skilled laborers are a precondition for competitiveness of industries and vocational teachers and instructors pose a central precondition for the education and training of skilled laborers (Schröder 2013). Consequently, vocational education and training can be regarded as a means to enhance economic development and thus to overcome unemployment, which will finally lead to substantial poverty reduction. In general, TVET is considered to contribute to the solution of the above mentioned societal challenges through aiming at the upgrading and development of vocational competences and qualifications of the learner, and the employability and productivity of the work force.

Collaboration between Indonesia and Germany was established 52 years ago. This mutual cooperation created a solid foundation for the implementation of a new approach to knowledge sharing and trilateral regional cooperation with Myanmar in the program “Trilateral Cooperation in Technical Vocational Education and Training” (GIZ 2015).

The program was commissioned by the German Ministry of Economic Cooperation and Development (BMZ) and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in cooperation with the project partners, the Indonesian Ministry of Education and Culture and the Ministry of Science and Technology in Myanmar. The program comprises of a series of activities focusing on supporting the development of Vocational Education in Myanmar mainly through workshops on a praxis-oriented further technical and vocational education and training for experienced vocational teachers from Myanmar, who will function as “multipliers” in Myanmar. The training of the multipliers is conducted at vocational colleges in Indonesia. The multipliers themselves are expected to offer technical workshops for vocational teachers and instructors in Myanmar. Based on the results of a demand analysis (fact finding mission and planning workshops), the training covers selected vocational fields, which range from automotive to welding. The training is designed to address specifically the development of praxis-oriented technical competences and up-to-date pedagogical competences through project work in vocational high schools (Skolah Menengah Kejuruan, SMK) and tertiary TVET institutes (Polytechnics) through hands-on work experience, which is acquired in in-company internship phases. Furthermore, the project aims at developing stronger ties between the three countries in the field of TVET.

Specifics of the cooperation project among Myanmar, Indonesia and Germany

The three countries Myanmar, Indonesia and Germany decided after a fact finding mission in November 2012 to cooperate in capacity building of TVET personnel, which includes vocational teachers, instructors and school managers. Initially the program started in 2012 with 15 participants from 3 sectors: machine tools, electronics and automotive. As a result of successful implementation the program was relaunched, additional vocations were included, and the didactical concept was considerably re-designed in June 2014. The continuation was based on a newly developed, project-based and processual didactical approach, which had been developed by the Chair of Vocational Pedagogy at Technical University of Dortmund/Germany in cooperation with experts from Indonesia. Twenty teacher trainers from Indonesia, which are selected expert teachers, and fifty teachers and instructors from Myanmar participated in the second series of training and workshops.

The core objective of the program is to enhance the capacity development of TVET personnel. The approach aims to strengthen the participants’ practical vocational competences through experience-based learning. The participants, who attend the workshop in Indonesia, will function as multipliers and thus transfer the newly acquired competences to other vocational teachers and instructors in Myanmar. Since the implementation of didactical innovation needs to be supported by administrative staff at vocational schools, the school managers

attend a workshop, which addresses their leading role in the successful implementation of didactical innovation at the organizational level.

Overall workshop structure of the training

The entire training for vocational teachers and instructors does not solely consist of technical workshops. The entire structure of the training was agreed on between the relevant bodies from line ministries of the participating countries:

Phase I: Introductory workshop (2 days)

The participants are provided with relevant information on their stay in Indonesia including intercultural information, basic language skills in Bahasa Indonesia (Indonesian language), general information on daily life in Indonesia and the Indonesian TVET-system. Furthermore, the two day workshop develops teambuilding within the group.

Phase II: Technical workshop (15 days)

The technical workshop is the core of the training. The renewed underlying didactical concept is project-based in combination with a holistic model of competence development. The series of workshops primarily aim at individual competence development with respect to practical vocational competences and holistic pedagogical competences, which will be explained in the following section of this article. Each training program consists of a series of modules. The program begins with an obligatory module on occupational health and work safety followed by a number of technical and vocational modules. The length and duration of the modules depend on the complexity of the underlying relevant work task.

The workshops are conducted by experienced teachers, who act as teacher trainers, from vocational schools in Indonesia, called *Sekolah Menengah Kejuruan* (SMK) and Polytechnics. Each vocational school is in charge of a small group of vocational teachers from Myanmar. Furthermore, the teacher trainers and instructors from Indonesia are responsible for the development of adequate learning materials for project-based and action-oriented competence development.

Phase III: Final Workshop (1 day)

The Final Workshop lasts for one day. Its purpose is to concede the participants the opportunity to review, to reflect and to determine their next steps. Finally, the participants and trainers draft and present a brief report using following guiding questions:

- What are the lessons learned the results, and the benefits from the technical workshops with respect to the development of modern pedagogical competences and practical vocational competences?
- What is the design of the individual and demand-oriented coaching program, which will follow up the training and support the transfer in Myanmar?
- Which input, which action, and which measures are required and could be addressed in future training programs?

Phase IV: Coaching Program (three month after actual training, 10 days)

As a result of the technical workshop, the participants from Myanmar are expected to develop a short training program. During this preparation of their training program they are supported and coached by their Indonesian instructors. Three month after the training in Indonesia, the vocational teachers from Myanmar adopt the role of trainers and multipliers. They conduct similar courses and train vocational teachers in Myanmar. During the initial course in Myanmar, they are coached by their Indonesian colleagues. The underlying idea is to develop a cascading model of multipliers, not only addressing competence development, but organisational development too.

Anticipated challenges and paradigmatic change of didactical approach

Although, the entire training program is aimed at developing the vocational and pedagogical competences of vocational teachers from Myanmar, implicitly the teacher trainers from Indonesia profited from the paradigmatic change of the didactical approach too. The underlying approach of using a holistic didactic approach, promoting an holistic understanding of competence development and attempting to employ a “natural” way of learning rather than the classical talk-and-chalk-methods were anticipated to pose a major challenge for the teacher trainers and instructors from Indonesia, who traditionally are used to apply rather “frontal” teaching methods. The program aims at being a capacity building program not only for colleagues from Myanmar, but also for the teacher trainers from Indonesia, who were prepared to adapt and to implement a new didactical approach.

Another major challenge was that the technical workshops not only focussed on providing new technical skills and knowledge, but as well on an action-oriented approach of organisation of learning, which exceeds by far the mere intention of combining work processes with learning process, as will be explained at a later point in the article. The question was, if it would be possible to simultaneously confront the target group with new technologies and with methods of self-reliant learning, or would this create an excessive demand?

Previously conducted training during the first teacher training program faced a major language barrier problem with respect to English language proficiency. Language problems seemingly pose a tremendous difficulty in frontal and input-based learning organisations in terms of learning outcomes. Would an action-oriented, project-based learning organisation help to overcome this obstacle?

The final challenge was to coach the Indonesian teacher trainers and instructors in their preparation. Would they be willing to adapt the new action-oriented didactical approach and would they be prepared to develop in advance adequate learning materials for use in project-based learning environment?

For the successful implementation of the Myanmar Vocational Teacher and Instructor workshop 2015 the above challenges had to be addressed and answers found.

2 Change in vocational didactics – holistic competence development and a change of the learning-teaching-paradigm

What underlying “idea of man” leads to self-reliantly acting individuals that are creative, innovative, and open for lifelong learning: a concept that implies a continuous change? What constitutes individuals that act responsibly in private, vocational and societal contexts? And if vocational education and training aims at such valuable individuals, how does vocational education need to change with respect to learning organisation and a new learner-teacher-relationship, especially since it is well known that mere knowledge-based inputs are not necessarily a sufficient basis for fostering the individuals’ competent action?

2.1 Holistic model of Vocational Action Competence

The overall objective of vocational education and training, which is underlying the Myanmar Vocational Teacher and Instructor workshops, derives from the German system of technical and vocational education and training. The German TVET-system is based on a competence model which is applied in all vocational training and education activities and in vocational research. It is the underlying principle of vocational pedagogy as a scientific discipline, of vocational curricula (KMK 2014), and of training regulations. Furthermore, it is defined in the 1st paragraph of the Vocational Training Act (BMBF 2005) as the main objective of vocational education and training, which contributes vastly to aligning different forms of practical implementations in research, in vocational schools, in training centres, and in companies.

The model of Vocational Action Competence is to be regarded as a holistic structure with interdependent dimensions and sub-competences. It aims at a holistic development of humans, not only with respect to technical knowledge, skills and competences, but as well with respect to social and personal competences (Roth 1971). The notion of competence development extends the pedagogical perspective, which aims at a holistic development of the individual, and embraces the recently prevalent perspective of the post-Taylorist organization of industry with a demand for self-reliantly acting skilled labourers.

Arising from real business demands, the notion of competence presents a crucial expansion that places the individual at the centre of the vocational education process. The goal of vocational competence development is to make a person capable of independent activities in a private, professional and societal context. The competences of concern here are skills, methods, knowledge, attitudes and values whose acquisition, development and implementation will apply to that person’s entire life (Dehnbostel 2001) and also be transferable, regardless of where they were acquired.

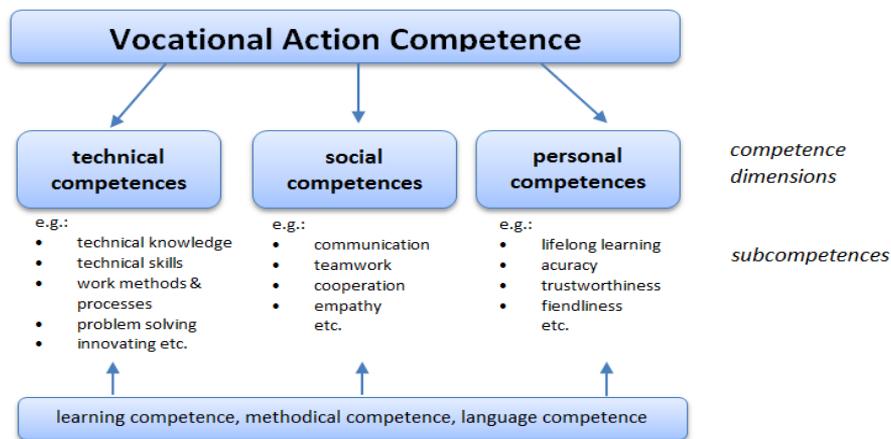


Figure 1: Holistic Model of Vocational Action Competence (Schröder 2004)

Competence in vocational activities is defined as a unit of three competence dimensions – technical, social and personal. Method, learning and language competence are regarded as integral elements of all of the aforementioned competence dimensions (KMK 2011). The relevance of sub-competences and their prioritization depends on the requirements of the vocational profile.

In the *recommendations for the preparation of framework curricula for vocational lessons* (KMK 2011) the three competence dimensions are defined as follows:

- *“Technical competence (Fachkompetenz) is the readiness and ability, based on specialist knowledge and ability, to independently assess and solve tasks and problems in a correct, goal-oriented, methodological manner.*
- *Personal competence (Selbstkompetenz) describes the readiness and ability as an individual personality to deal with development opportunities, demands and restrictions in family, professional and public life. Furthermore to think through and assess one’s own gifts in order to develop them and accommodate them and progress in one’s life scheme. It should encompass personal properties such as independence, critical ability, self-confidence, reliability, responsibility and a sense of duty. To all of these aspects a thought-out vision of the world and a self-determined connection to values are integral and essential.*
- *Social competence (Sozialkompetenz) describes the readiness and ability to form social relationships, to show interest and understand tensions and to understand how one makes oneself comprehensible and discuss with others in a rational and responsible way. To all this the development of social responsibility and solidarity are essential” (KMK 2011)*

Competence development is defined as the individual ability for self-directed and self-reliant learning and is founded on a certain structural image of the learning person. Thus performance as a surface structure will be contrasted analytically with human behaviour regarding perceivable acts of competence as a deep structure which encompasses the levels of thinking,

acting and attitude patterns and those that underlie the surface structure. Competence development aims, in this respect, for a long-term transformation of this deep structure by confrontation with the environment (Heursen 1983). With a view to competent dealing at work activities, competence does not just have potential but also contains a “decision-making competence” to apply a designated competence appropriately (Zimmer 1998).

Competence development as the key objective of vocational education offers the opportunity to anchor action-oriented, individualised and holistic teaching and development potentials. Thereby competence supporting teaching forms and situations, first and foremost, keep the competences active. This is achieved by means of the activities themselves, they are situationally specific and are not acquired merely by instruction alone. This method recognises the fact that individual self-direction and learning from experience crucially influences intended competence development. This means that for further vocational training, major emphasis has to be placed on experience learning, informal learning and especially on learning in the work process (Dehnbostel & Rohs 2003).

In referring back to the fields of activity of vocational education addressed in the introduction the following consequences arise:

- the didactic-methodological organisation of the vocational learning process is derived from the respective requirements of the work experience in the light of future development tendencies. Work process orientation and activity orientation in real and holistic activity situations are the constitutive fundamental element of the competence oriented didactic-methodological approach.
- the development of curricula takes real activity fields as their object and implements them in the field of learning. They enable a self-directed and an active competence development process in work projects.
- work and learning spaces whether in formal educational facilities or in enterprises enable access to vocationally relevant practice and theory. The implementation of vocation-specific projects and work tasks must, in the ideal case, be facilitated under real operational conditions and linked to relevant theoretical input.
- learning arrangements must be formed in such a way that independent learning in ideal types or real operational work tasks is made possible. Through these projects or learning and work-tasks, methodologies can be attained.
- likewise vocational examinations have to be activity and work-process oriented on the basis of holistically real or ideal-typical work tasks in which the appropriate development of complexity for learning progress is reflected.

And finally:

- The teacher training must take into consideration the previously described vocational pedagogic requirements of a modern vocational education. This methodological-didactic focus must also be integrated into university education and mere lecturing at the expense of learning by doing reduced to an absolute minimum.

The demands of modern vocational pedagogical orientation do not only refer to formal educational establishments. The praxis of operational education can actually encash these requirements.

2.2 Didactical approach and practical operation

In order to achieve the main objective, which is the learner's sustainable development of vocational action competences, the didactical approach of action-oriented learning is widely applied in the formal sector of vocational education and training in Germany (Jank & Meyer 1991). Although in-company competence development strategies follow a more informal and experience-based approach, modern developments, such as in workprocess embedded competence development called "Learning in the Process of Work" (see Dehnbostel 2007, Schröder 2009), are based on similar didactical approaches. In consequence, action-oriented learning as a didactical approach aims at competence development of individual learners in simulated or real working environments. The learning organization is based on work tasks. Work- and learning processes meld together (Schröder 2009). Although action-oriented learning, either in formal or in in-formal learning settings, has a variety of theoretical foundations, its underlying principles are identical. Action-oriented learning is often understood as antagonistic to walk-and-chalk-methods and input learning environments. A similar approach, called CDIO (conceive-develop-implement-operate), is widely employed in action-oriented engineering learning environments (Chalmers University of Technology 2013). Additional similarities exist in the processual principles of Organisational Development and Action Research, which makes action-oriented learning a perfect supplement at didactical levels.

The most important principles of action-oriented learning are:

Adequate involvement of all stakeholders

The involvement of all stakeholders in the learning- and development process is a precondition for sustainable change. Learning i.e. competence development, can be regarded as a change process. The teacher is responsible for the learning process, but seeks to delegate as much responsibility as possible to the learners and strives for a mutual agreement. In an adequate action-oriented learning setting the learner is involved in planning, implementation and reflection, basically in all phases of the process according to the degree of competence development. It is astonishing to see what resources the learner can activate, what knowledge and competences are already available within a group of learners and how creativity and innovation is enforced. Sometimes the teacher has to accept that the learner has a better idea or solution. As a precondition it is necessary to establish an anxiety free atmosphere in which hierarchies can be bridged and overcome. The teaching person needs to be patient and supportive. Learners are sometimes over-excited with new levels of freedom. Should this goal be achieved then innovations and quality can be developed.

Participatory learning and teaching design

The equal participation of trainees in the planning, decision-making, implementation and evaluation creates a basis for self-reliant learning processes and responsible acting in action-oriented learning settings. Participatory methods activate the learner's existing competences and enhance the learner's motivation, creativity and capacity to innovate. Experience shows that the involvement of all stakeholders on equal terms increases the common learning effect and a new developments' sustainability via common acceptance within a change process.

Reflection as a basis for the generation of knowledge

Experience-based learning in action-oriented learning setting is not limited to the learner's acquisition of technical knowledge and skills. Research on informal learning shows, that most of our knowledge is of an implicit or tacit nature (Polyani 1985). Reflection is a prerequisite for the use of informal competence development and the explication of implicit knowledge, that is to say existing unconscious competences. Reflection is a prerequisite for individual learning in action-oriented learning settings.

Methodical-structured, cyclical approaches

A methodically structured approach, adapted to the conditions, which repeats itself in light variations advances the efficacy of cooperation and learning of a social group and gives rise to new developments. The differing structures as a rule are comprised of variations in the sequence of tasks - problem analysis, planning, carrying out or adaptation, quality assurance and reflection. This approach follows a cyclic method, which enables the results of an evaluation to be reflected upon and fed into improved working methods.

Social support via teacher trainer or colleagues and their new role

The various work- and learning-processes are accompanied by appropriate forms of social support. In any given case it is the teacher trainer, who is functioning as a classical teacher and a learning facilitator, combining input and process. Central to the success is the inductive approach that assists and strengthens in guiding the learning and realising the activity potential rather than that ushered in by a top down procedure. The all important task is to strengthen the potential of people to advance their insight of certain specific changes and ways of behaving. The teacher trainer has to extend his classical role of an input-focused teacher towards the consulting role of a coach i.e. learning facilitator.

The organisation of work task-based and action-oriented learning settings

The major challenge in establishing action-oriented learning settings is to accept that the combined work- and learning-process is the main constitutive element of the learning setting. The process results from a work task legitimated by the according vocational profile, or – if available – a work task-based vocational curriculum or training regulation.

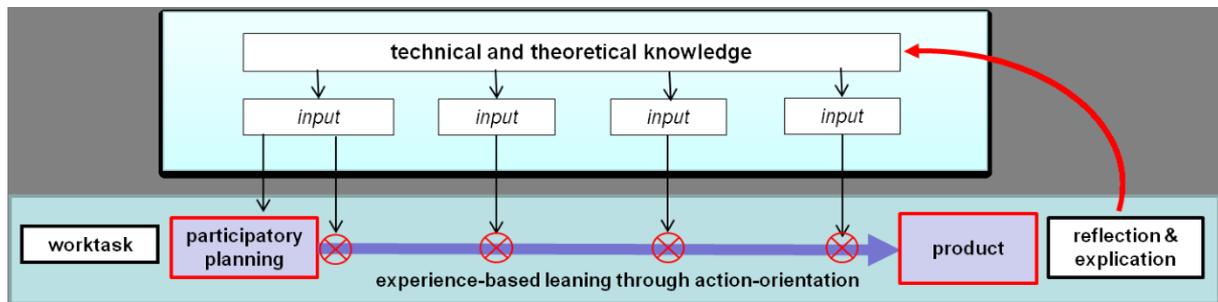


Figure 2: Didactical process of combining theoretical input with experiential learning (Schröder 2015)

The work task is selected by the teacher or learning facilitator according to the learner's degree of competence development. During the participatory planning phase the learners plan and shape their work processes and their intended final result (product), if not given by the work task. During the process the learner's eventually face unanticipated problems, which they need to solve. The necessity to solve a problem is the perfect point of time to integrate inputs with relevant and demand-oriented knowledge. In a final phase the work and learning process is being reflected upon and experiential knowledge is being referred to existing stocks of systemized knowledge.

Since the work task and the work process determine the learning process, classical methods of a knowledge-related didactical reduction cannot be applied. Other criteria need to be regarded in order to ensure that the learner is neither overcharged nor undercharged with respect to the *degree of competence development*.

In action-oriented learning settings, learners need to enjoy a certain *degree of freedom* in order to make their own decisions.

The learning process in return should offer a certain *complexity* and a *variety of new problems* to be solved. Complexity and problems have to be increased gradually following the increasing degree of competence development. As an approximation, 2/3rd of the task should be routine and 1/3rd new.

Social support will decrease with increasing competence, which applies as well for the didactical transformation of documents into learning materials. Increasingly, real documents such as real technical drawings, data sheets, brochures, etc. will be used in their original form.

3 Didactical design: process, elements and roles

The specific challenge of the project was to transfer the theoretical approaches and elements into a practice-oriented didactical design that functions on cascading two levels: firstly, the teacher trainers from Indonesia were to be trained and coached during the development of adequate training materials, and then these would be used by the colleagues from Myanmar.

The following process was developed with the team who were in charge of the program and its organization and implementation. The entire process aimed at supporting the teacher trainers and the target group in acting reliably, making the process experiential, and thus, transferable.

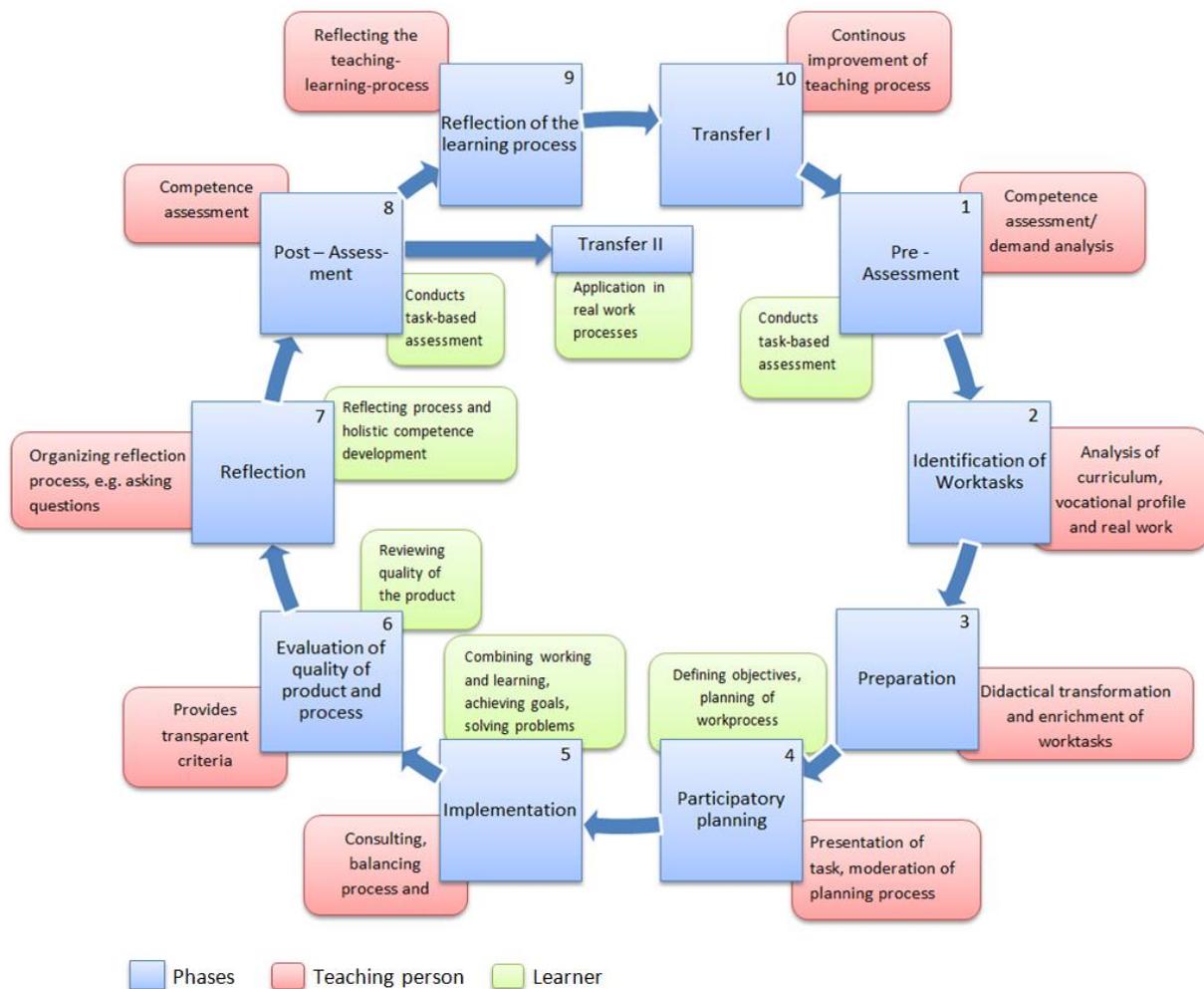


Figure 3: The didactical design – Process, elements and roles of teaching persons and learners

The entire process begins with a *pre-assessment*. After having explored the entire legal frame with respect to training regulations and vocational curricula, the teacher trainer employs a work task-based and action-oriented form of pre-assessment, in order to find out what knowledge, skills and competences the learner has acquired and to define the degree of competence development.

Suitable *work tasks*, which correspond with the learner's degree of competence development, are selected. Furthermore, the work tasks refer to the occupational profile of the learners, the curriculum and the training regulations.

During the *preparation* phase, the teacher trainer transforms the work task didactically. The teacher trainer has to analyze which competences are required and which materials, tools, and documents or learning materials are needed.

In the *participatory planning* phase, teacher trainer and learner discuss the aims, results, and the process, and make decisions about the training. The learners take responsibility for the tasks and their own work and learning processes.

During the *implementation* of the work process, which is mainly driven by the learner, the main task of the teacher trainer is to balance the process and inputs. Ideally, problems that occur during the process pose excellent situations for an efficient and demand-oriented input.

The *evaluation of the quality of work*, which refers to the quality of the finished product or result of the task, concludes the working process. This evaluation is preferably conducted by the learners themselves, using the given quality criteria.

The *reflection* phase focuses on the entire learning process and is not only limited to subject-bound and technical competences; it also refers to social and personal competences. The teacher supports the learner in becoming aware of the newly acquired knowledge, skills and competence with respect to all competence dimensions.

The process finishes with a *post-assessment*, which follows the same logic as the pre-assessment. It serves as an evaluation of the learners' progress in competences development and lays out a basis for ongoing teaching activities.

The *reflection on the teaching and learning process* is conducted by the teacher trainer himself in order to ensure that his own working process improves continuously.

Finally, both the teacher trainer and the learner are asked to transfer their newly acquired competences into practice; the teacher trainer transfers the results of his reflection into ongoing teaching activities and the learner into his own work processes, which is teaching in the case of the target group from Myanmar.

4 Findings and significant experiences during the implementation of the program

The following are the main findings with respect to the implementation of the beforehand described approach and resulting recommendations.

The recent series of technical workshops were based on a completely different approach, which demanded a paradigmatic shift from both the teacher trainers and the teachers from Myanmar in their role as learners.

Before the workshop, there was some anxiety that the teacher trainers and teachers would feel uncomfortable and reject the given action-oriented and work task-based approach. This proved to be a wrong assumption. All involved teacher trainers from Indonesia and vocational teachers from Myanmar proved to be open-minded, willing to become subject of experiential

learning processes themselves, and ambitious to *implement the new approach* successfully. All participants from the Myanmar Vocational Teacher and Instructor workshop 2015 stated that in their opinion the approach is suitable for vocational education and its implementation should be further developed. Both groups stated that they profited from experiencing this holistic competence- and action-oriented approach.

The *participatory planning phase* was, in almost all workshops, a success factor and thus an element that involved the participants from the beginning of the workshops. Both groups, teacher trainers and vocational teachers in their role as learners, were equally involved in planning and establishing a work and learning organization. The teacher trainers and the learners got acquainted with each other and established an atmosphere that allowed them to act on an equal comfort level. The participants and the teacher trainers combined this phase with the pre-assessment instruments. The demands were analyzed and common goals defined.

Due to the *language problem* in a purely communicative phase participants used all possible means of technical communication like technical drawings, using symbols and often even body language, in order to overcome the language barrier. It was observed that mutual communication at the basis of technical communication was very effective. The participants stated that the most important effect of the participatory planning phase was that they felt that their demands, wishes, and goals were taken seriously and were accepted. They became a subject of the entire work and learning process, rather than being the object of an instruction process.

During the *practical implementation* of the workshop, it could be observed that both groups, the teacher trainers and the vocational teachers as learners, were highly motivated and were both enthusiastically involved in achieving their targets with respect to the quality of the products and work processes. It appeared that the degree of discussions which arose, were intense and target-oriented. It was interesting to observe that the *language barrier* was less relevant in experiential work and learning processes. Certainly, English as lingua franca is still not the perfect means of communication, but messages were transferred more successfully than through mere instruction.

The teacher trainers developed an interest in working as demand-oriented as possible. They showed a tremendous flexibility and skipped prepared theoretical input in order to avoid redundancies, when they observed that the learner had learned during the work-process. This awareness was often achieved through discussions among participants and between participants and teacher trainers during the work process.

The design of the work tasks was based on two considerations: (a) competence needed by the industry to execute the real job, and (b) participants' personal competence level. The program basically developed highly personalized and individualized work tasks. This created a maximum benefit for the participants, who became more focused on reaching their own learning target.

The most impressive change observed was in the comparison with the “normal” theoretical and instructional class. Due to the integration of theoretical inputs into the process, the *participants’ interest* was at a high level, when an input phase was offered. The input phases were well integrated into the working process and demand oriented. The participants showed a high level of involvement and motivation in their work. Debating, sharing experiences, expressing opinion openly, accepting different opinions and commonly striving for the best solution created a highly *innovative* and *productive learning atmosphere*. The participants openly discussed and decided on next steps, necessary and relevant knowledge relevant to the input phases, and on how to reach their learning targets. It was a regular occurrence that work tasks had to be adjusted during the course of the process. Teacher trainers and participants showed the necessary *flexibility* to implement adjustments.

The participants sometimes decided to voluntarily work over hours, in order to *achieve the self-defined goals, milestones* and, *quality criteria*, which the group had commonly agreed on in the planning phase. This attitude was remarkable, especially if compared with behavior in classroom situations with learners, who are often desperately expecting the end of the lesson. The high level of motivation, ambitions and involvement is best illustrated by a participant’s statement: “The moment we start to work towards our common goals and are confronted with interesting things, our daily problems are completely forgotten.”

The *reflection* and *evaluation* aspects, especially the self-reflection, was new to the participants, but very soon became a supportive core activity, which initiated a lot of discussions among the participants. The participants shared their views, developed common quality standards, and made became aware of their increase in competence development. The participants stated that this form of *self-evaluation* supported them in gaining a sound awareness of their own competences. The participants said that since they didn’t have the feeling of being externally judged and evaluated, the impact on their competence development was higher. A statement the participants often said: “*This is me, my situation and I need your advice and comment for my personal improvement*”. The participants developed the habit of learning from each other by commenting, giving advice and sharing their knowledge and opinion openly.

The teacher trainers stated that they believe in the success of the new didactical approach. They said that the preparation is more intensive, but during the implementation phase it is more relaxed for them and they have more time available to support and observe the learner. They said that they can be more focused on working individually with the participant. They believe that this way of teaching is more effective with respect to competences and outcome and that it is easier to evaluate the progress achieved by the participants.

5 Conclusion and recommendation

Finally, a person who is working for the program, stated a perfect summary that probably summarizes the program at its best: “*Somehow it appears to be an unexpected miracle on three levels:*”

- *The teacher trainers from Indonesia neither hesitated to nor had problems with adapting the new work task- and action-oriented approach,*
- *they had no difficulties in immediately training the teachers from Myanmar in using and applying this new approach,*
- *nor had the teachers from Myanmar any difficulties in adapting and applying the approach”.*

Furthermore, the overall feedback from the teachers from Myanmar was that they see the main effect in learning, experiencing and adapting the new didactical approach.

Work process-oriented competence development in technical and vocational education and training proves to provide the learner with a lot more learning chances than a classical chalk-and-talk-method can possibly achieve.

It appears to be close to the natural way of learning. It sparks the learners’ interest and motivation. The learners want to achieve their goals, they are ambitious and they want to understand how things function, how work processes need to be organized. The learners come from societal backgrounds in which they learned to listen, to obey and to talk, only when being asked. It was amazing to experience, how communicative they were, how eager to discuss and to use communication as a means of learning from each other. And isn’t a bilateral or multilateral, interest-driven communication – be it based on a common language or not – the most efficient way to learn?

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