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ORIENTATION TO PERSONALITY QUALITIES WHILE DEVELOPING TRAINING COURSES AND SELECTING TEAMS FOR MULTIDISCIPLINARY INTERNATIONAL PROJECTS

Analyses of the issue concerning organisation of the multidisciplinary dialogue in the frame of the international educational projects is provided. Innovative approach to the development of the multidisciplinary training courses on the bases of personality profile is described. Original technique of ideal and real profiles overlay is proposed for the whole range of applications: identifying zones of the curriculum development; identifying zones of student cognitive and personality development; selecting balanced team; evaluating student training efficiency; evaluating training session; target training of the stuff; making decisions while selecting stuff; testing method validity and reliability; measuring synergetic effect.

Keywords: multidisciplinary training course, international team, personality profile, profile overlay technique, metacompetence, abilities and qualities, synergetic effect.

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ОРІЄНТАЦІЯ НА ОСОБИСТІСНІ ЯКОСТІ В РОЗРОБЦІ НАВЧАЛЬНИХ КУРСІВ ТА ФОРМУВАННІ КОМАНД МУЛЬТИДИСЦИПЛІНАРНИХ МІЖНАРОДНИХ ПРОЕКТІВ

Наведено аналіз проблеми організації мультидисциплінарного діалогу в межах освітянських міжнародних проектів. Описано підхід до розробки мультидисциплінарних навчальних курсів на основі будування особистісного профілю. Запропоновано інноваційну техніку накладання ідеального і реального профілів для різних впроваджень; визначення зони розробки навчального курсу; визначення зони розвитку студента; формування збалансованої команди; евалюація успішності навчання студента; евалюація ефективності учбових занять; цільова підготовка фахівців, прийняття рішень при відборі персоналу; перевірка валідності та надійності методик; вимірювання синергетичного ефекту.

Ключові слова: мультидисциплінарний навчальний курс, міжнародна команда, особистісний профіль; техніка накладання профілів, метакомпетентність, здатності та якості, синергетичний ефект.

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ОРИЕНТАЦИЯ НА ЛИЧНОСТНЫЕ КАЧЕСТВА В РАЗРАБОТКЕ УЧЕБНЫХ КУРСОВ И ФОРМИРОВАНИИ КОМАНД МУЛЬТИДИСЦИПЛИНАРНЫХ МЕЖДУНАРОДНЫХ ПРОЕКТОВ

Проведен анализ проблемы организации мультидисциплинарного диалога в рамках образовательных международных проектов. Описан подход к разработке мультидисциплинарных учебных курсов на основе построения личностных профилей. Предложена инновационная техника наложения идеального и реального профиля для ряда приложений: определение зоны разработки учебного курса; определение зоны развития студента; формирование сбалансированной команды; эвалюация успешности обучения студента; эвалюация эффективности учебных занятий; целевая подготовка специалистов; принятие решений при отборе персонала; проверка валидности и надежности методики; измерение синергетического эффекта.

Ключевые слова: мультидисциплинарный учебный курс, международная команда, личностный профиль; техника наложения профилей, метакомпетентность, способности и качества, синергетический эффект.

Introduction. New generation development in line with European standards and requirements is the urgent need of modern Ukraine. The development of a qualified professional as "an agent of positive changes" who is able to successful crisis management, problem solving and working in a synergetic team demands creating new paradigm of education that provides harmonic interaction with the existing environment.

International projects provide real educational polygon for sharing experience and piloting innovative approaches to UA students training. At the same time native psychological science accumulated a whole range of valuable investigation devoted to students cognitive and personality development. Unfortunately due to the language reason and lack of really efficient interaction with Western colleagues our achievements are not considered while realizing international project aims. To fill this gap it is necessary to find initially common language with our partners. Competence approach is a good basis that can be enriched by psychological investigation of student personality development.

Concrete case reflecting this kind of research within international project investigation can provide an innovative modal of psychological research on site.

For 17 years we actively participated in the multidisciplinary international projects. Most of them were devoted to the development of the innovative curricula on the bases of sharing experience between European and Ukrainian experts. The greatest problem was to find common language in order to harmonies different approaches for creating really system training courses. For this

purpose various kind of activities and instruments were used including original questionnaires, tests and matrix.

Competence approach that was considered as the most prospective revealed essential discrepancies explained by local economic situation and cultural environment. This conclusion was made on the bases of special investigation aimed at comparison of competence profiles built by EU and UA partners. At the same time it was discovered that the most understandable notion within cross-cultural domain occurred personality abilities and qualities.

UA partners proposed original approach for using the level of abilities and qualities development as the criteria for qualitative and quantitative analyses of the training course efficiency. Innovative technique of personality profiles overlay was elaborated. As a result orientation to the development of competences in one package with students' personality turned to be very efficient for collaborative development of multidisciplinary curriculum. Unfortunately researches belonging to the so-called Dispositional approach were discredited due to indefinite criteria for qualities selection as well as situational nature of their manifestation. At the same time the most famous methods of measuring was developed within this approach. So we consider that new investigations of abilities and qualities can add to competence approach enriching training efficiency by personality factor.

The aim of the article is to share experience gained within multidisciplinary international projects aimed at development of multidisciplinary training courses curricula. It is proposed psychological research that integrates personality factor into student development within competence approach.

Discussion. International European projects can serve as an efficient educational polygon for solving our problems on the bases of sharing experience within "training of the trainers" program. European project "Sustainable Urban Development Based on Eco-Humanistic Principles & Advanced Technologies without Losing Identity - SEHUD" helped to develop innovative methodology of students and trainers development as agents of positive changes in the urban development. It is remarkable that students cognitive and personality development was considered in synergy and came from the process of concrete training discipline mastering on the bases of "cognitive accomplishment".

The efficient interaction with European partners was based on the common scale allowing measuring the level of students' competences, abilities and qualities development. It was a real challenge to find clear criteria for measuring student's personality development as a holistic entity. In the very beginning it was identified three general criteria: 1) attitude to the reality (sense), 2) reflection of the reality (knowledge), 3) interaction with the reality (behavioral strategies). Being integrated these factors manifest themselves as personal abilities and qualities.

In the process of identifying the set of professional, research and generic competences, abilities and qualities we came across well known problem of "the bag of virtues" that concerns the indefinite approach to the selection of the required qualities as well as their dependence on the situational factors. Historically these definite issues caused rejecting Dispositional approach and preferring Cognitive one. But we consider that cognitive development is in synergetic interdependence with personality development. There is no contradiction. If we consider cognitive development in the context of professional, social and existential senses its final outcomes are the abilities and the qualities. It is explained by the fact that due to the psychological reason the successful ways of actions aimed at personal senses realization has a tendency to be used more frequently. As a result they are automated and integrate into the individual resources as the abilities and qualities. That is why we consider that the level of the abilities and qualities development can serve as reliable criteria of the personality development efficiency.

As to the problem of "the bag of virtues" it was solved by selecting actual abilities and qualities limited by society demand within definite historical period of development. Modern world of changes survives the period of intensive social and technological transformations that causes definite demands to the modern professionals development on the meta-level when: 1) professional meta-competence determines the development of the meta-ability for making decisions, 2) social meta-competence determines the development of the meta-ability for the synergetic interaction; 3) existential meta-competence determines the development of the meta-ability for self-development.

Generalizing information from the advertisements with demands to modern specialists, the study of successful people biographies, the analyses of social surveys allowed identifying the selection of qualities that are actual for modern dynamic conditions of transformations. They are: objectivity, proactivity, autonomy, responsibility, empathy, flexibility and creativity [6].

A special instrument for qualitative and quantitative analyses of the personality development in terms of abilities and qualities was developed on the bases of the acquired results. This instrument was presented in the format of personality profile that allows using technique of profiles overlaying to monitor the dynamics of individual development, to compare the levels of different people development, to match the level of the individual development with the group development as a whole. In addition this technique allows evidently matching as well as measuring divergence between 'Ideal Self', 'Real Self' and 'Socially Eligible Self'. It is also possible to display and measure the difference directly between the levels of concrete individuals development as well as between individual and average data of the group development in the context of standard demands elaborated by the public opinion [7].

This instrument also allows identifying and analyzing the correlation between personality and cognitive development. The reflection of the student's individual cognitive scheme in the format of sense-cognitive structure allows matching its quantitative and qualitative changes with the qualitative and quantitative changes of the personality profile. It is possible to reveal existing correlations and interdependences on the bases of this matching. This application of the profile opens the possibility of using abilities and qualities as an indicator of the cognitive and personality development. It serves reliable criteria for evaluating the personality holistic level of development. This approach allows proving synergetic interrelation between cognitive and personality development that justify hypothesis concerning the possibility of personality development via knowledge.

There is one more application of the personality profile construction technique. The object of the analyses can become not only the level of the personality development reflected in the length of the segment marked on the profile axis and the development zone, reflected by the length of the remaining segment of the axis but also the configuration of the profile itself. It can vividly reflect the state of balance between personal senses and individual resources [8].

In addition the matching of the profiles configurations in the context of the development (in dynamics) provides a clear representation of the synergetic effect reflected in the profile perimeter equalization [7].

More than that, the configuration in essence represents the personality type that allows system analyses by dividing test in accordance with personality types. This method helps to get the whole range of additional interesting data that show how personality can be changed, saved or leveled under the influence of different strategies. There were discovered the configurations of the individual profiles that correspond to the different types of personality. They were provisionally identified as 'philosopher', 'warrior', 'merchant' (under the influence of Plato "Republic") as well as 'engineer' and 'artist'. Special analyses showed that in our educational environment the majority of student belong to the indefinite type and 'merchants' while the minority belong to 'philosophers' and 'artists'. It is an interesting fact that traditional education has a tendency to level the type (to equalize the profile). Otherwise the Eco-Humanistic Technology of Self-Development saves the individuality developing it without leveling [8].

The possibility of comparison and measuring allows using technique of personality profiles construction in any application where matching of objects is needed directly or in the context of recognized requirements. It can be a whole range of situations like: 1) any selection based on competition of the stuff or students; 2) gathering well balanced team; 3) comparison of the deci-

sion making efficiency; 4) matching actual conditions with the standard requirements.

The technique of personality profile matching by means of overlay can be easily realized in digital format. It is an efficient tool for psychological research that can be used for testing validity and reliability of the methods. For example in our research devoted to the principle of personality self-development (EHTSD) the profiles constructed on the bases of the acknowledged procedures of Cattell and Lyrie were matched on volume and configuration with EHTSD profiles reflecting personality qualities selected on the bases of their actuality for dynamic transformations. This allowed using data received by well-known reliable methodology for the aims of our research [7].

The representation of the research data in the format of personality profile has a whole range of useful applications. The experience gained within our psychological research was shared with European partners for evaluating not only students' personality development but also for evaluation didactic value of training materials and quality of training sessions within European projects HUREMA, SEHUD and SEHSI. This approach helped not only evaluate efficiency of student development and quality of training materials and sessions but also gave opportunity to compare different points of view at the objects of evaluation. The comparison of the profiles built by students, trainers and experts discovered differences in opinions that reflected the expectations of the process participants that caused problems concerning the efficiency of training.

Technique of personality profile construction helped to find common language and solve problems caused by cross-cultural differences. European education projects deal with innovative curriculum development in the actual field of knowledge. European partners are expected to share their experience within "training trainers program" but in many cases differences in methodological approaches, terms, education environment as well as understanding local conditions and needs lead to problems in collaborative work. For overcoming these difficulties we proposed to European and Ukrainian partners to build students competence and personality ideal profiles in order to match them and harmonize.

As a result real competence and personality profiles of Ukrainian students were built and matched with harmonized ideal profiles that reflected European professional and social demands to efficient specialist. The discovered gaps were identified as zones of development that provided strategic orientation for developing innovative curriculum. This approach provided not only qualitative orientation but also quantitative measuring that was transformed into the data of the training materials volume as well as the terms of training with considering individual peculiarities of the students. This format served as specific orientation in self-management of the process of self-development where students

could identify zone, level and dynamics of their own development. It is remarkable that all this process took place on the meta-level where meta-cognitive approach was aimed at the development of meta-abilities and meta-qualities on the bases of meta-senses.

In addition this personality profiles matching approach was applied for developing network with European industrial and business partners that participated in the project for sharing experience in selecting stuff for their organizations on the bases of the required criteria. We helped them in building personality profiles for making decision while selecting stuff or gathering balanced teams. At the same time these profiles became an efficient instrument for tuning existing curriculums to industrial and building demands for aimed training of future stuff. The most significant achievement of this approach is to discover and to measure the synergetic effect in the selection process.

For identifying SEHUD competence profiles the project team (experts from Cambridge University, Milan Polytechnics, Saragossa University, Lyon National Institute of Applied Science, Technological Educational Institute of Athens, Polytechnic Institute of Guarda, Varna Free University "Chernorizets Hrabar", Paris Association of Exchange & Consulting in International Technologies, Kharkiv National University of Civil Engineering & Architecture, Prydneprovska State Academy of Civil Engineering & Architecture, Kyiv National University of Construction & Architecture, Lviv Polytechnic National University, Institute of Architecture, Odessa State Academy of Civil Engineering & Architecture) made analysis of modern labor market & society needs and requirements in the context of city sustainable development. SEHUD methodologist has developed the structured interview for experts in Urban Development (UD) both in practical & academic fields and organized their interaction on the bases of brainstorm technique.

A series of multidisciplinary workshops and discussions were held. As a result the project "Problem tree" and "Object tree" were identified in the context of urgent needs in sustainable urban development. "UD specialist ideal profile" for student's development as well as "SEHUD project team profile" for the project HR development was built in graphic form with descriptors of key competencies, abilities and qualities. The strategic approach to student development was based on the idea of human-environment synergetic interaction [4]. It was agreed to develop metacognitive competence that allowed converting training into self-developmental process that is directed, monitored and controlled by the student in accordance with individual aims, resources and conditions. Student played proactive role in self-development due to metacognitive approach that allowed converting everydayness into educational polygon [7].

So within international projects personality profiles served as tools for:

1) developing Urban Development (UD) curricula for MSc, PhD, LLL;

2) evaluation of SEHUD curricula efficiency based on comparison of ideal & real profiles as well as profiles of UD experts.

3) evaluation of personal development: regular feedback provided by specially designed tools invested into self-control, self-evaluation and self-management of the training process. Original technique of individual sense-cognitive schemes matching allowed not only visualize student zone of individual development but also measure it [8].

To make a bridge between EU and UA approaches it was decided to organize a communication between Ukrainian course units' authors and European experts and university lecturers; to acquaint them with the work and existing experience. Specially developed questionnaire was sent to all developers of course units and experts. The questionnaire was devoted to identification of experience in the field of sustainable city development; existence of training materials for USD training course; the identification of the experience in the development and/or management of the LLL Program at the universities; presentation of any experience in organizing e-learning, developing electronic teaching material, distance and blended learning courses creation, testing, and integration into learning process e-components; indication of existence of contacts with universities and organizations (Universities, Business Organization, Municipality, etc.) which were potentially willing to participate in the SEHUD project network.

Ukrainian methodologists' team made investigation in the field of USD competences identification. They selected, developed and summarized data obtained by EU and UA experts in the format of interim tables describing generic, professional and research competences, abilities and qualities. EU and UA academic, research, business, industrial and managerial experts from all participating organizations were proposed to range the competences, abilities and qualities using criteria of importance. Then data obtained by EU and UA experts were summarized in the format of final comparative tables describing generic, professional and research competences, abilities and qualities for MSc, PhD & LLL students in USD.

As a result key competences, abilities and qualities were selected and personality profiles were produced. Understanding what competences, abilities and qualities should be developed in the frame of integrated USD curriculum was achieved. Gaps in EU and UA profiles identified zones of collaborative development. All results were reflected in a format of presentations, reports and articles that helped to analyze commonness and diversities. Concrete practical education technology was used for developing student generic competences, abilities and qualities [1]. Comparative analysis of the identified profiles was useful for organizing dialogue between EU and UA partners for developing synergetic

curriculum of sustainable urban development based on eco-humanistic principles.

All summarized materials were used for development of syllabuses on the bases of USD competence, abilities and qualities profiles. Syllabus was developed in the format of template for course unit authors to provide student's orientation in the course in terms of competences, abilities and qualities. It was an integral part of USD training package. 30 syllabuses have been developed and tested within SEHUD pilot phase successfully. Each unit contains a description of the competencies, abilities and qualities that can be developed during training [2].

It is interesting to note that on the bases of SEHUD competence, abilities and qualities profiles the Multidisciplinary International Project Team (MIPT) was selected. Case studies of HR development within European project were presented in the implemented within project technics and interactive seminars. It was defined that MIPT would perform 6 functions corresponding to the roles of 1) project coordinators, 2) methodologist, 3) authors of training course units, 4) trainers, 5) evaluators, 6) IT experts. Every role implied competences, abilities and qualities for improvement within training at EU organizations and performance during project development process.

They were competences, abilities and qualities of: 1) coordinators for project management; 2) methodologist for development and implementation of the advanced educational technologies; 3) the authors of training courses target field of UD; 4) trainers for providing UD training process based on advanced educational technologies; 5) evaluators for monitoring advanced evaluation technologies; 6) IT experts for providing advanced educational (e-learning), interaction (on-line teamwork) and UD IT technologies. This approach to the selection of the team-MIPT helped to realize the project objectives efficiently.

Integrating academic & professional expertise MIPT were mobilized for overviewing existing UA curricula in the context of discovered "SEHUD competence, abilities and qualities profile" with qualification descriptors on the bases of SEHUD questionnaire specially developed for this purpose by methodologist team. It was decided to develop a computer program providing self-developing SEHUD training resource by summarizing the scope of teaching materials available at the EU & UA universities and identifying the list of materials that can be integrated into SEHUD curriculum.

On the bases of the results obtained the SEHUD training of the trainers program for project developers at EU universities & enterprises was developed. The key principles of training deal with providing optimal and proactive participants' activity based on their existential (everydayness) experience [5]. It was expected to be presented as a curriculum aimed at developing competences, abilities and qualities of Ukrainian project developers in accordance with their

function in the project on the bases of SEHUD competence, abilities and qualities profiles. It included lecturers, workshops, master classes, role plays & simulations, schools for sharing know-how & experience at EU universities & organizations.

For developing USD curriculum it was also proposed to concentrate on the development of UD practitioners' profiles for academic partners.

Conclusions. Multidisciplinary dialogue in the frame of international project based on the comparative analysis of competence profiles (generic, professional, research) built by EU and UA experts discovered the commonest notion within cross-cultural domain - personality abilities and qualities. Personality profiles were used as a basis for developing EU-UA synergetic curriculum of sustainable urban development based on eco-humanistic principles.

This concrete case became exemplary psychological research within international project that can provide an innovative modal of psychological research on site. The operative outcomes in the format of innovative methodology, strategy and tools for multidisciplinary multicultural dialogue, principles of synergetic interaction based on competences and personality approach in one package proved to be efficient for collaborative development of multidisciplinary curriculum. A whole variety of modes for solving similar problems were produced.

It was proposed: 1) original approach for using the level of abilities and qualities development as the criteria for qualitative and quantitative analyses of the training efficiency; 2) innovative approach to the development of multidisciplinary training courses on the basis of the personality profile to enrich already recognized competence approach; 3) original technique of ideal and real profiles overlay that can be used for the whole range of applications: identifying zones of the curriculum development; identifying zones of student cognitive and personality development; selecting balanced team; evaluating student training efficiency; evaluating training session; target training of the stuff; making decisions for selecting stuff; testing method validity and reliability; measuring synergetic effect.

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