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PROBLEM SOLVING IN STUDENT POLICE OFFICERS' PROFESSIONAL DEVELOPMENT

Paper presented at the I International scientific conference
„Legal, Sociological and Psychological Aspects of Human Safety”
of State Police College, Riga, Latvia, January 28th, 2011.

Abstract. Introduction. The success of human safety requires the ability of police officers in problem solving within continuing professional development to be considered. **Aim of the study.** To analyze problem based teaching and learning in tertiary education within continuing professional development. **Materials and methods.** The search for problem based teaching and learning involves a process of analyzing the meaning of key concepts as well as the empirical study conducted in Latvia in 2005-2006. **Results.** The theoretical findings of the research show a potential model for problem based teaching and learning indicating how the steps of the process are related, the empirical study demonstrates that problem based teaching and learning formed by the methodology of the development of the system of external and internal perspectives is efficient to contribute decisively to the student police officers' development. **Conclusion.** In order to increase the student police officers' learning outcomes it is necessary to promote student police officers' professional development guided by problem based teaching and learning, which supports a favourable learning environment and learners' needs as well as provides successful professional development in a multicultural environment.

Keywords: *professional development, problem solving, problem based teaching and learning in tertiary education*

Introduction

In order to provide human safety in a changing multicultural environment the ability of student police officers in problem solving in tertiary education has to be considered. However, the success of education for student police officers' continuing professional development requires problem based teaching and learning to be analyzed.

Aim of the study is to analyze problem based teaching and learning in tertiary education.

The meaning of the key concepts of *professional development* and *problem solving* are studied. Moreover, the study demonstrates how the key concepts are related to the idea of

problem based teaching and learning in tertiary education. Finally, the study presents how the steps of the process are related.

Problem based teaching and learning in tertiary education is formed by the methodology of the development of the system of external and internal perspectives as highlighted in Figure 1 (Ahrens, Zaščerinska 2010: 181).

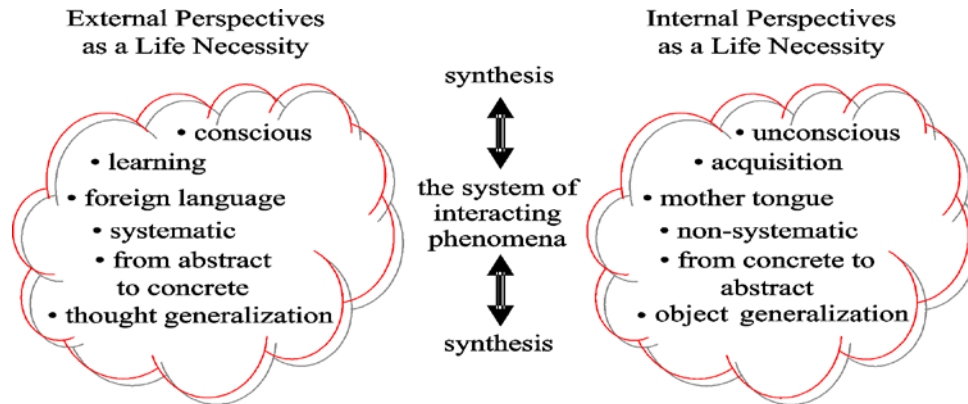


Figure 1: Development of the system of external and internal perspectives

1. Theoretical Framework

1.1 Defining Professional Development

Competence development is the prerequisite of professional development (Maslo 2006: 50). Professional development in pedagogy is a qualitative change taking place in the professional involving process, growth, expansion, and striving for perfection in his/her professional activity, with regard to the conditions, opportunities, and needs of society, and the situation of the profession (Kacapa 1999: 26). Moreover, continuing professional development is regarded as lifelong learning (European Commission 2004: 53). Development and, consequently, learning is based on solving a contradiction (Čehlova 2002: 9). Contradiction means two incompatible requirements set to one element/subject/thing/etc (Sokol 2002: 4). Contradiction creates contradictory individual needs (Grabovska 2006: 40), namely, the necessity in change and stability.

1.2 Problem in Professional Development

Contradiction is a problem situation (Sokol 2007: 70) as well as a problem (Сорокин 1977: 131). Problem is defined to be a challenge and an opportunity (Sälsberg 2003: 35).

However, the methodology of the development of the system of external and internal perspectives reveals that the external perspective dominates in the *problem* definition. As an alternative, problem based on the methodology of the development of the system of external and internal perspectives, is hope and possibility based on the curriculum practice (Portelli 2010: 12) where the central process is teaching and learning.

1.3 Modelling Problem Solving in Tertiary Education

The essence and sequence of problem solving based on Vygotsky's zones of development (Vigotskis, 2002, 275) proceeds from teaching in Phase 1 to learning in Phase 3 through peer-learning in Phase 2 as depicted in Figure 2 (Zaščerinska, Ahrens 2010: 185).

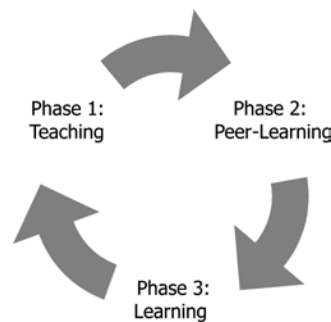


Figure 2: *Phases of problem solving*

Phase 1 is aimed at a safe environment for all the students. The present phase is organized in a frontal way involving the students to participate. Phase 2 is designed for the students' analysis of an open professional problem situation and their search for a solution based on students' peer-learning (Zaščerinska, Ahrens 2010: 185). Phase 3 emphasizes the students' self-regulation with use of assessment of the process and self-evaluation of the results. The students present their self-evaluation by the end of each class.

The psychological structure of activity as a joint activity modeled by the personality (Панов 2007: 178), the learning cycle (Maslo 2007: 59), research as a systematic process of inquiry (Nunan 1992: 3), the creative act (Мельникова 2003: 234-235), the process of problem solving (Sokol 2002: 12), inventive problem solving (Sokol 2002: 9), the process of accepting and obtaining values called interiorization (Любанов 2004: 39), the phases of the constructive process of social-cultural learning experience (Tiļļa 2003: 37) as well as the phases of organizing social-cultural learning (Tiļļa 2005: 83) form teaching and learning techniques of problem solving in tertiary education.

2. Empirical Study

2.1 Research Design

The qualitative evaluation research has been used in the research. The present qualitative evaluation research proceeds from exploration of the context of students' communicative competence in Phase 1 to data analysis and interpretation in Phase 3 through qualitative and quantitative data processing in Phase 2. The basic directions of the methodology of the present qualitative evaluation research are as follows:

- the aim of evaluation changes from diagnostic evaluation in Phase 1 to summative evaluation in Phase 3 through formative evaluation in Phase 2 as depicted in Figure 3,

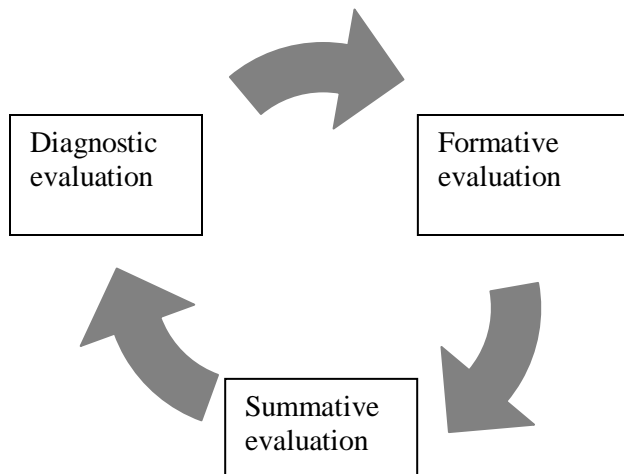


Figure 3: Aims of evaluation

- the type of evaluation proceeds from self-evaluation in Phase 1 to external evaluation in Phase 3 through internal evaluation in Phase 3 as shown in Figure 4,

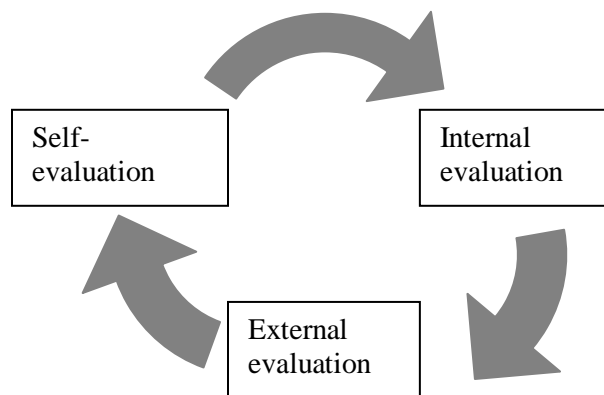


Figure 4: Types of evaluation

- relevant methods of data obtaining move from the context analysis in Phase 1 to evaluation in phase 3 through observation in Phase 2 as demonstrated in Figure 5.

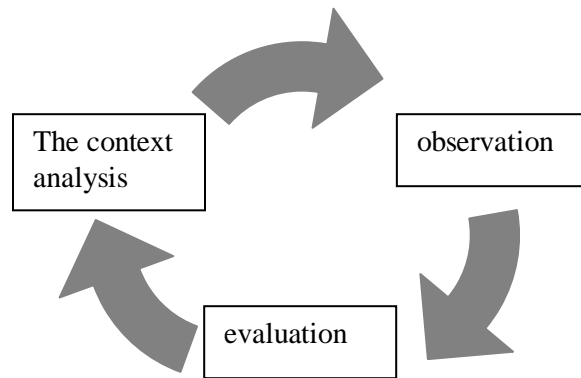


Figure 5: Relevant methods of data obtaining

Interpretative research paradigm which corresponds to the nature of humanistic pedagogy (Lūka 2008: 52) has been determined for the research.

The present research was conducted during the implementation of English for Specific Purposes studies in the *English as a foreign language* course within the education program *Police work* with the qualification *Rank and file police officer* of Police Academy of Latvia in 2005-2006 to examine efficiency of English for Specific Purposes studies for the development of student police officers' communicative competence in order to promote the quality of studies. The research question is as follows: has the educator's contribution been efficient to promote the development of students' communicative competence.

The aim of the *English as a foreign language* course is to improve students' communicative competence as part of professional development for the participation in international research activities.

The subjects of the present research are 31 respondents, namely, nine researchers, two language educators and 20 student police officers. The group consisted of 14 males and six females which is a typical representation to the proportion of males and females in police in Latvia. Since the respondents represent different upbringing backgrounds and diverse educational approaches (Gulbe 2008: 79), the group of 20 student police officers is multicultural. English is a foreign language for all the students in the group. In accordance with the students' self-evaluation the levels of English for Specific Purposes in the pre-survey are presented as follows:

- one student gained Level 1 (very low),
- four students reached Level 2 (low),
- eight students had Level 3 (critical),
- three students obtained Level 4 (average) and
- four students took Level 5 (optimal).

2.2 Findings of the Research

2.2.1 Analysis of the Student's Self-Evaluation of the Research Results

In order to find out how each student's communicative competence changed after the implementation of English for Specific Purposes studies the analysis of the students' self-evaluation of the communicative competence within *English as a foreign language* course comprised the structured interviews of three questions, namely, what is your attitude to English for Specific Purposes studies? What have you learned? How can you apply this knowledge in your professional field? The aim of the interviews was to reveal the students' view on English for Specific Purposes studies for the development of students' communicative competence.

For example, **Student F3** is thankful to the educator and the students for giving a positive experience, thereby developing the system of external and internal perspectives: "Thank you, our teacher and other participants. My attitude is positive. I really like my being here". Student *F6* emphasizes use of the positive experience in implementing English for Specific Purposes studies, thereby developing the system of external and internal perspectives: "I like the English lessons, because these lessons are important to improve our skills. The lecturer speaks in English very well, and I should have experience how to make a presentation".

The analysis of the structured interviews shows that the implementation of English for Specific Purposes studies promoted the students' development.

2.2.2 Analysis of the Internal Evaluation of the Research Results

In order to find out how each student's communicative competence changed after the implementation of English for Specific Purposes studies the analysis of the internal evaluation of the students' communicative competence, namely, evaluation by the students and educators

of the educational establishment (Hahele 2006: 151), comprised the data processing, analysis, interpretation and analysis of the results of Survey 1 and 2 of 20 student police officers.

The *Mean* results demonstrate that the level of the students' communicative competence has changed in Survey 2 (4,65) in comparison with Survey 1 (3,25).

The results of two surveys demonstrate the positive changes in comparison with Survey 1. Hence, English for Specific Purposes studies influenced the development of the students' communicative competence.

2.2.3 Analysis of the External Evaluation of the Research Results

The analysis of the external evaluation comprises nine researchers from different countries. It should be marked that all the researchers participated in the external evaluation of the research results are professors in the fields connected with educational research. All the nine researchers have decisively contributed to their fields of research. For example, the present research employs the finding of a researcher of the present sample on the *quasi-concept*. The other investigates the use of external and internal perspectives in empirical studies, namely, the external perspective means viewing the world from the researcher's or scientist's view and the internal perspective – from the subject's view. All the nine researchers have got extensive experience in teaching through English for Specific Purposes. Three researchers provide teaching English for Specific Purposes to the students of educational sciences at tertiary level.

The analysis of the external evaluation of the research results comprised the non-structured interview of one question, namely, what is the researchers' view on the present research on English for Specific Purposes studies for the development of students' communicative competence. The aim of the non-structured interviews was to reveal the researchers' view on English for Specific Purposes studies for the development of students' communicative competence.

For example, Researcher *EER3* considered the organization model of English for Specific Purposes studies for the development of students' communicative competence to be a transformative methodology. The researcher stressed the following advantages of the present transformative methodology: focus of establishing a system, the fascinating idea of positioning the *quasi-concept* within the *quasi-autonomous zone*, viewing the overall personality of the

learner, the fact that educators can indeed change the typical classroom environment, and that the theory could be highly successful in practice, good point to connect the external with the internal, Vygotsky's Law of Development selected, the unique approach, namely, the basic directions of the development of the organization model of tertiary problem based teaching and learning designed by the author of the present research move from existing concept to concept through quasi-concept that determine the essence and sequence of the implementation of the organization model for problem solving, developing newer constructs that will truly help the student to internalize new material and the student having the "ability to create knowledge".

The data analysis reveals that the respondents evaluate English for Specific Purposes studies for the development of students' communicative competence positively. Thus, English for Specific Purposes studies enhances the student police officers' communicative competence.

Conclusions

The findings of the research allow drawing conclusions on the efficiency of problem based teaching and learning formed by the methodology of the development of the system of external and internal perspectives in tertiary education for the improvement of students' communicative competence.

Data validity has been provided by the method and data triangulation whereas the validity of the qualitative evaluation research has been shown by the use of the mixed methods' approach to the data processing and analysis. Validity and reliability of the research results have been demonstrated by involving other researchers into the empirical study in several stages of the conducted research. As well as the external validity has been revealed by the international co-operation. Therein, the researchers' external evaluation validates the findings of the present research on English for Specific Purposes studies for the development of students' communicative competence.

The present research has *limitations*. A limitation is the empirical study conducted by involving the students and educators of one tertiary institution. Therein, the results of the study cannot be representative for the whole country. As well as the empirical study marks the opportunities of the development of students' communicative competence. Nevertheless, the results of the research may be used as a basis of problem solving at tertiary level of other

tertiary institutions. If the results of other tertiary institutions had been available for analysis, different results could have been attained. There is a possibility to continue the study.

The following hypothesis for further studies is put forth: in order to increase the students' communicative competence and learning outcomes it is necessary to promote students' communicative competence guided by problem based teaching and learning formed by the methodology of the development of the system of external and internal perspectives in tertiary education, which supports a favourable learning environment and learners' needs as well as provides successful professional development in a multicultural environment.

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