Factors that Influence the Educational Process

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Abstract
Traditionally, the educational process includes teaching and learning. The advancement of the educational process complements it with such a social innovation as peer-learning. The educational process is formed by factors external and internal which are revealed by the novel contribution of research. The aim of the study is to analyse factors that influence the educational process by means of qualitative evaluation research. The meaning of key concepts of educational process, teaching, peer-learning, learning and factors is studied. The present research was conducted during the English as a Foreign Language course within the professional development’s program Crimes of the Kaliningrad Branch of St. Petersburg University of Ministry of the Interior of Russia, Kaliningrad, Russia, 2012–2013. The findings of the research reveal that factors forming communication positively influence the educational process. The conclusion has been drawn that the external factors and, particularly, factors forming communication influence the educational process in the English as a foreign language course. Directions of further research are proposed as well.

Keywords
Factors; Educational Process; Teaching; Peer-Learning; Learning; Development of the System of External and Internal Perspectives

Introduction
The educational process having become the dominant response to challenges in all the domains of modern life, focuses on finding efficient and sustainable solutions that create value for society in general, rather than individuals and private companies. Traditionally, the educational process includes teaching and learning. The advancement of the educational process complements it with such a social innovation as peer-learning which is a highly important mechanism of social change (Loogma, 2011, 1). However, the educational process is formed by factors. The aim of the present research is to analyse factors that influence the educational process.

Materials and Methods
In pedagogy, external and internal factors are differentiated (Lasmanis, 1997, 36). However, the present research focuses on the analysis of external and internal factors as the system of external and internal perspectives.

The research question is as follows: what factors influence the educational process in higher education?

The methodological approach – the development of the system of external and internal perspectives – of the present research proceeds (Zaščerinska, 2011a, 135)

- from the external perspective
- through the phase of unity of external and internal perspectives (the system of interacting phenomena)
- to the internal perspective.

FIG. 1 PHASES OF THE METHODOLOGICAL APPROACH
The methodology of the development of the system of external and internal perspectives determines the implementation of the educational process to proceed in three following phases as shown in Figure 2:

- from the external perspective or teaching
- through the phase of the unity of external and internal perspectives and/or the system of interacting phenomena or peer-learning
to the internal perspective or learning.

<table>
<thead>
<tr>
<th>Phase 1: External perspective or teaching</th>
<th>Phase 2: The phase of the unity of external and internal perspective or peer-learning</th>
<th>Phase 3: Internal perspective or teaching</th>
</tr>
</thead>
</table>

**FIG. 2 INTER-CONNECTIONS BETWEEN THE METHODOLOGY OF THE DEVELOPMENT OF EXTERNAL AND INTERNAL PERSPECTIVES AND EDUCATIONAL PROCESS**

The methodological background of the present research is based on the System-Constructivist theory introduced as the New or Social Constructivism Pedagogical theory. The System-Constructivist theory and, consequently, the System-Constructivist approach to learning introduced by Reich (Reich, 2005) emphasize that human being’s point of view depends on the subjective aspect:

- everyone has his/her own system of external and internal perspectives (Ahrens, Zaščerinska, 2010, 182) that is a complex open system (Rudzinska, 2008, 366) and
- experience plays core role in the knowledge construction process (Maslo, 2007, 39).

The meaning of key concepts of educational process, teaching, peer-learning, learning and factors is studied. Moreover, the study has demonstrated how the key concepts are related to the idea of the development of the system of external and internal perspectives and has shown a potential model for development, indicating how the steps of the process are related following a logical chain: revealing social innovation → defining the educational process → outlining factors → empirical study within a multicultural environment.

The empirical research is aimed at analyzing factors that influence the educational process in higher education by qualitative evaluation research. The present research was conducted during the implementation of the English as a Foreign Language course within the professional development’s program Crimes of the Kaliningrad Branch of St. Petersburg University of Ministry of the Interior of Russia, Kaliningrad, Russia, 2012–2013. Methods of data processing comprise qualitative data (frequencies of students’ expressison in observations) processing using AQUAD 6.0 software, methods of data analysis – structuring content analysis.

**Theoretical Framework**

The present part of the contribution focuses on the definitions of social innovation, educational process and factors that influence the educational process.

**Social Innovation**

A general conception of social innovation is determined as innovative activities and services that are motivated by the goal of meeting a social need and predominantly developed and diffused through organisations whose primary purposes are social (Mulgan, Tucker, Ali, Sanders, 2007, 3). The study of the social innovation concept and pedagogical perspective on social innovation has started for about two centuries ago (Mulgan, Tucker, Ali, Sanders, 2007, 9–11; Arendale, 2007, 33) as demonstrated in Table 1.

**TABLE 1 SOCIAL INNOVATION IN PEDAGOGY IN DIFFERENT HISTORICAL PERIODS**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Historical period</th>
<th>Author of the approach</th>
<th>Educational settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1837</td>
<td>Friedrich Froebel’s ideas</td>
<td>The first kindergarten</td>
</tr>
<tr>
<td>2</td>
<td>19th and early 20th century</td>
<td>Barnardos</td>
<td>Child care</td>
</tr>
<tr>
<td>3</td>
<td>1945</td>
<td>Not defined</td>
<td>Schooling systems and institutions, networks of adult education colleges, driving schools</td>
</tr>
<tr>
<td>4</td>
<td>the mid 1990s</td>
<td>the City University of New York</td>
<td>Peer-led team learning</td>
</tr>
</tbody>
</table>

**The Educational Process**

In pedagogy, the educational process is characterized by its cyclic nature (Maslo, 2006, 27). The cycle of the educational process is divided into phases in order to organize the institutionalized process of higher education (Čehlova, 2002, 22). The cycle of the educational process involves three stages implemented in a certain sequence as shown in Figure 3 by Zaščerinska and Ahrens (Ahrens & Zaščerinska, 2010, 185):

- from teaching in Phase 1
- through peer-learning in Phase 2
to learning in Phase 3. Such social innovation as peer-learning in the cycle of the educational process is a sub-phase between teaching and learning. Peer-learning bridges the gap between teaching and learning.

The educational process is implemented as follows (Zaščerinska, 2011b, 105–106):

- **Phase 1 Teaching** is aimed at a safe environment for all the students. In order to provide a safe environment, the essence of constructive social interaction and its organizational regulations are considered by both the educator and students. The present phase is organized in a frontal way involving the students to participate.
- **Phase 2 Peer-Learning** is designed for the students’ analysis of an open academic problem situation and their search for a solution. The same materials can be prepared for all of the group students. This phase involves the students to act in peers.
- **Phase 3 Learning** emphasizes the students’ self-regulation with use of assessment on the process and self-evaluation on the results.

As the component of educational process, factors that influence the educational process have to be considered.

**Factors that Influence the Educational Process**

Factor, defined as a reason of the research subject change (Lasmanis, 1997, 36), is considered by Lasmanis (Lasmanis, 1997, 36) to be as

- external and
- internal.

External factors in pedagogy are determined as surroundings and resources.

Internal factors in pedagogy are considered as aims of the student’s activity, motivation, interest, skills and experience.

<table>
<thead>
<tr>
<th>Factors that Influence the Educational Process</th>
<th>External</th>
<th>Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td>factors forming communication:</td>
<td></td>
<td></td>
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<tr>
<td>- aural medium</td>
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<td></td>
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<tr>
<td>- socio-cultural factors</td>
<td></td>
<td></td>
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<tr>
<td>- non-verbal communication system</td>
<td></td>
<td></td>
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<tr>
<td>educator’s purposeful activity</td>
<td></td>
<td></td>
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<tr>
<td>learning factors:</td>
<td></td>
<td></td>
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<tr>
<td>- age of students</td>
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<td>- affective factors</td>
<td></td>
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<td>- motivation</td>
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<tr>
<td>- learning experience</td>
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</tbody>
</table>

External factors in pedagogy include factors that form communication and educator’s purposeful activity, and internal factors comprise learning factors (Ahrens, Zaščerinska, Bassus, 2011, 765) as shown in Table 2.

Factors that influence communication involve (Shumin, 1997, 8)

- aural medium,
- socio-cultural factors and
- non-verbal communication system.

In order to organize purposeful activity, educator has to take into consideration several areas (Kramiņa, 2000, 75) of teaching activity:

- careful preparation of material and seeking repetition of information,
- careful clarification of the task before undertaking it,
- determine whether the activity should fit into the general progression of the syllabus or whether it should be an independent activity aimed at satisfying the study purpose of certain individual learners,
- finding out whether it fits in with other and parallel teaching situations,
- negotiating a balance between task needs and individual or group needs,
- planning how varied the types of activities should be,
- competition as a stimulus and not as a hostile activity,
- scoring the activity results to help the learners to be aware of their progress and ensuring sensitivity to any emotional or cultural blockages which might interfere with the learners’ confidence to use the knowledge in relation to the particular topic, situation or functional purpose.

Finally, there is a range of learning factors. Learning achievements depend on (Shumin, 1997, 9)

- the age of students,
- affective factors, namely,
  - emotions,
  - self-esteem,
  - empathy,
  - anxiety,
  - attitude,
  - motivation, and
- learning experience.
Empirical Study

The present part of the contribution reveals the research design, description of the educator’s contribution and findings of the empirical study.

Research Design

The research questions are as follows: which of three factors and how do they influence the educational process in higher education? Hence, the research is aimed at analyzing factors that influence the educational process in higher education.

Interpretative research paradigm which corresponds to the nature of humanistic pedagogy (Luka, 2008, 52) has been used in the present empirical study. Interpretative paradigm is characterized by the researchers’ practical interest in the research question (Cohen, Manion et. al., 2003).

Qualitative evaluation research used for the analysis allows the construction of only few cases (Mayring, 2007, 6). Moreover, the cases themselves are not of interest, only the conclusions and transfers we can draw from this material (Mayring, 2007, 6). Selecting the cases for the case study comprises use of information-oriented sampling, as opposed to random sampling (Flyvbjerg, 2006, 229). This is because an average case is often not the richest in information. In addition, it is often more important to clarify the deeper causes behind a given problem and its consequences than to describe the symptoms of the problem and how frequently they occur (Flyvbjerg, 2006, 229).

The present research was conducted during the implementation of the English as a Foreign Language course within the professional development’s program Crimes of the Kaliningrad Branch of St. Petersburg University of Ministry of the Interior of Russia, Kaliningrad, Russia, 2012–2013. The sample involved 18 respondents composed of 17 males and one female, which was a typical representation to the proportion of male and female students in the police education in Russia. The age of the sample was from 18 to 35. The students’ mother tongue, namely, Russian, was considered to contribute to successful foreign language learning and become an instrument of bringing the students together more closely.

What seems very positive is that the students are willing to learn languages. All the students have indicated that they participated in the English as a Foreign Language course in order to get experience of learning English as a foreign language.

The sample is multicultural as the respondents with different cultural backgrounds and diverse educational approaches from different parts of Kaliningrad, Russia, were chosen. That emphasizes the study of individual contribution to the development of student police officers’ communicative competence within the English as a Foreign Language course (Luka, Ludborza, Maslo, 2009, 5). Hence, the group’s socio-cultural context (age, field of study and work, language level, mother tongue) is heterogeneous.

Educator’s Contribution

The aim of the English as a Foreign Language course is to improve student police officers’ communicative competence for the participation in international professional and research activities widening the students’ social experience, namely, experience in

- social interaction and
- cognitive activity.

The educational process described above in the present contribution is integrated into the English as a Foreign Language course within the professional development’s program Crimes of the Kaliningrad Branch of St. Petersburg University of Ministry of the Interior of Russia, Kaliningrad, Russia, 2012–2013.

Phase 1 Teaching is aimed at a safe environment for all the students. To achieve this, the essence of constructive social interaction and its organizational regulations have been considered by both the educator and the students. The present phase was organized to involve the students to participate in the English as a Foreign Language course. The frontal method comprised the introduction of the e-platform in the NiceNet environment (www.nicenet.org) to support the students to become familiar with the e-platform with the educator’s assistance in the first phase of the educational process. Further, the students used their knowledge and skills in working with the e-platform in the NiceNet environment (www.nicenet.org) for dealing with the course materials. Furthermore, the use of methods of communication games and information-gap activities emphasized the rational of the students’ previous experience and provided the students with the opportunities to search for a variety of information source and to obtain the techniques of information compiling.

The Preparing a Good Introduction to a Presentation information-gap activity by Buckmaster (Buckmaster, 2004, 1) was analyzed in details. The students’ ability
to make presentations for the specific purposes in English is one of the expected results. The *Preparing a Good Introduction to a Presentation* information-gap activity is aimed at specialized training in fluent and accurate starting the students’ presentations for the specific purposes in English with the focus on reading, writing, listening and speaking, asking and answering questions, searching for the information with use of Web 3.0 if necessary. The preparatory phase of the educational process within the *English as a Foreign Language* course includes e-mailing the students the task. The *Preparing a Good Introduction to a Presentation* information-gap activity comprised the following procedure:

- **Stage 1** was aimed at asking the students to read out the task and at discussing the task in the whole group. There were no difficulties to understand the task because the students did similar exercises while being pupils at secondary school.
- **Stage 2** assumed the students to implement the task individually and/or in peers. If necessary, they searched for the translation of unknown words with use of Web 3.0 in order to complete the given sentences. The *English as a Foreign Language* classes were held in a computer classroom with the Internet connection available. The students shared the resources available on Web 3.0 with pleasure.
- **Stage 3** dealt with sharing the students’ experience in reordering and completing the sentences with the group’s participants. The students managed to complete the sentences without any difficulty. However, the sentence order was given by the students in a variety of combinations.
- **Stage 4** was designed to compare the student discoveries with the findings of other students. All the students were helpful and friendly during the present stage of the studies: if there was a difficulty to find an idea on reordering the sentences, expression or word, the students could get the necessary assistance from the groupmates and the educator. The observation revealed that word order, auxiliary verbs caused some difficulties for the particular students. The educator used the following ways to correct errors and mistakes: hinting, reformulating and repeating.
- **Stage 5** was devoted to re-completing the task by each student in the classroom. It was carried out by the students with an interest: the students re-asked some questions. For example, they were interested in whether the sentence *On behalf of the Senate of the University of Tartu may I welcome you to the General Annual Meeting* is really the second among the six sentences or the sentence *This morning I would like to outline our strategy for getting more partners in the European Union* is definitely the fifth one.

**Phase 2 Peer-Learning** was designed for the students’ analysis of an open academic problem situation and their search for a solution. The present phase was oriented to the students’ acts in peers. The methods, namely, role plays, simulations, dialogues, prepared talks and discussions (Zaščerinska, 2009a; 2009b; 2009c), provided the exchange of forms and methods of the students’ activity (Laiveniece, 2000, 121). The same materials were prepared for all of the group students but the materials, learning styles and opportunities were different (Maslo, 2006, 30).

The prepared talk on the topic of the students’ thesis that has been analyzed in detail was aimed at specialized training in fluent and accurate student making presentations for the specific purposes in English with the focus on reading, writing, listening and speaking, asking and answering questions, searching for information with use of Web 3.0 if necessary. The preparatory stage includes e-mailing the students the task to prepare a presentation in English on the topic of the students’ thesis at the beginning of the second semester of the *English as a Foreign Language* course, clarifying whether the students are able to work within the PowerPoint programme while the placement test takes place at the beginning of the second semester of the *English as a Foreign Language* course, an English class with the emphasis on making a successful presentation for the academic purposes in English that involves the discussion on the presentation aims, its structure, materials, its procedure, use of the PowerPoint programme, making the presentations on *Successful Police Officer* with use of the PowerPoint programme.

The prepared talk on the topic of the students’ thesis comprises the following procedure:

- **Stage 1** was aimed at a student’s presentation to his/her groupmates about his/her thesis with use of the PowerPoint programme. The students assisted each other in the technical area of presenting with use of the PowerPoint programme when there were some problems with the technical equipment, namely, new
version of the PowerPoint programme of the student’s presentation was not suitable to the PowerPoint programme available in the computer classroom, transferring the presentation from the students’ flash to the desktop of the computer, etc. opening the presentation files saved in the programmes different from the programmes available in the classroom, and re-connecting the projector from the classroom computer to the private computer, etc.

- Stage 2 assumed the students to switch the roles of speakers and listeners and to repeat the activity.
- Stage 3 was devoted to the discussion on the students’ presentations. The discussion revealed that the students while further practising a presentation would take into consideration:

  o pronunciation of the academic terminology: the students know how to spell the term, however, they do not pay a lot of attention to its pronunciation;
  o time limit for the academic presentation, namely, 10 minutes in the English as a Foreign Language course, whereas the students’ presentations took 15–20 minutes;
  o slide limit for the academic presentation: there were 10 slides set as a requirement in the English as a Foreign Language course, whereas the students prepared 12–25 slides to emphasize the significance of the content of their thesis;
  o to put only key words or phrases on a slide, not the whole sentence or text;
  o non-verbal aspects of communication: the students’ location and distance within the public zone while making a presentation whereas some of the presenting students were standing at a classroom’s wall, to vary the pace and pitch of his/her voice, irritating nervous habits such as running his/her fingers through his/her hair or clicking the fingers or a pen, etc. not to turn his/her back on the audience in order to read the text of the presentation from the screen on the wall, not to cross his/her arms and to look into each other’s eyes;
  o to bring an answer to a question subsequently if there is no possibility to reply immediately: for example, the presentation took a longer time than suggested.

**Phase 3** *Learning* emphasized the students’ self-regulation with the use of assessment of the process and self-evaluation of the results. Nevertheless, the lecture did not coincide with the cycle of the educational process, and the students presented their self-evaluation by the end of each class. The self-evaluation comprised three questions as following:

- What is your attitude to English studies?
- What have you learned in English studies?
- How can you apply this knowledge in your academic field?

The present phase of the educational process was organized in an individual way. However, the students expressed their willingness to share the experience obtained in the classroom by the end of each lecture.

**Findings of the Research**

The qualitative evaluation research involved the analysis of the students’ observations.

The aim of the observavtions was to reveal the students’ evaluation of the English as a Foreign Language course.

The students’ expressions from the observations were systematized according to eight constructs, namely, double four constructs of external factors and of internal factors, that is, factors forming communication including aural medium, socio-cultural factors and non-verbal communication system, educator’s purposeful activity and learning factors comprising age of students, affective factors, motivation and learning experience.

The data were processed applying AQUAD 6.0 software. The determined codes were systematized into meta-codes corresponding to a dimension of the factor, namely, external and internal factor. It was discovered that not all meta-codes and codes could be traced in the students’ observations, for example, time for the educational process within the English as a Foreign Language course limited. Moreover, the students’ expressions in the observations could not be systematized according to the following codes:

- socio-cultural factors and
- motivation.

Most of the students’ expressions are categorized as to the meta-code *Factors forming communication*, namely, aural medium, whereas the students participated in
the whole English as a Foreign Language course. No negative expressions were found, leading to a conclusion that the factors positively influenced the educational process within the English as a Foreign Language in police education. Frequencies were determined to reveal the factors of most frequency obtained in the course of observation of the students. The survey showed that the students had paid their attention to the external factors most frequently. For example, a student emphasized the positive evaluation of communication in the implementation of the educational process within the English as a Foreign Language course, thereby developing the system of external and internal perspectives: “the English course was interesting, with many discussions among the participants with different cultural and educational backgrounds. We had a good experience. My attitude is positive. I think communication is one of the most important and dynamic activities in the English as a Foreign Language course. It is very useful to develop this skill”. As a result, the student enriched his communication: “I had some improvements for my communication skills”.

Structuring content analysis (Mayring, 2004, 269) of the data revealed that the external factors and, particularly, factors forming communication positively influenced the educational process within the English as a Foreign Language course in police education.

Conclusions

The results of the present research reveal that the external factors and, particularly, factors forming communication influence the educational process within the English as a Foreign Language course in police education.

Moreover, factors forming communication positively influence the integration of peer-learning into the cycle of the educational process if the educational process follows a certain sequence:

- from teaching in Phase 1
- through peer-learning in Phase 2
- to learning in Phase 3.

Further research on factors that influence the educational process in higher education should be proposed to search for relevant methods for evaluation of factors that influence the educational process. Empirical studies on factors that affect the educational process in higher education in other tertiary institutions and a comparative research of different countries are recommended as well.

ACKNOWLEDGMENT

The work has been supported by the European Community Mobility Programme Erasmus Mundus Action 2, Stand 1 – TRIPLE I, Round 2011A, Nr. 204398-2011-1-FI-ERA MUNDUS-EMA1.

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Loogma, K. Educational change and social innovation: The


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