Chapter 15

Curriculum Reform Due to Project–Based Learning Methodology Implementation in Teaching an ESP Course to Russian University Natural Science Students

Boris A. Zhigalev
Nizhny Novgorod State Linguistics University, Russia

Olga A. Obdalova
National Research Tomsk State University, Russia

Ludmila Y. Minakova
National Research Tomsk State University, Russia

ABSTRACT

This chapter investigates the didactic potential of a project-based learning (PjBL) methodology as a means of modernizing curriculum and improving an ESP course at the university level. The chapter outlines in detail the main elements of the negotiated teaching framework and discusses why such a methodology is appropriate for teaching communicative competence and developing learners’ performance in English in a professional context. It also presents practical devices for the implementation of the designed conceptual framework. The first part of the chapter focuses on outlining methodological aspects of the undertaken case study. The second part concentrates on the quantitative and qualitative assessment of the results of the PjBL framework intervention. Within this context, a discussion about the influence of the PjBL course implementation on 48 students is provided. The authors also specify some factors contributing to the effectiveness of the development of learners’ target skills attributed to the introduction of the featured model for the ESP project-based course.

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INTRODUCTION

The need and demand for effectively instructing and training users of English as a lingua franca across all professional areas and international speech communities have never been higher than today (Bezukladnikov, Zhigalev, & Vikulina, 2014). Since English language education for adults is primarily implemented at the university level, studies have mostly focused on this specific learning environment and on the relationship between the nature of learning and the efficacy of utilized approaches and methods of teaching.

New approaches to language teaching, or rather their fusion (Bezukladnikov, Shamov, & Novoselov, 2013; Minakova, 2014, 2016; Obdalova, 2014, 2016; Soboleva & Obdalova, 2014), “Seek to capture the rich view of language and language learning” (Richards, 2006, p. 24), in addition to exploiting academic settings to engage the learners in “learning by doing” and “cooperative investigation”. A shift is being made towards focusing greater attention on the learning process itself, the closer integration of the learners and the language, and on linguistic competence and professional expertise (Minakova & Gural, 2015; Simpson & Obdalova, 2014; Soboleva & Obdalova, 2015). To improve teaching under new societal conditions, teaching modes should allow students to be fully involved in the process of learning and to use English in situations that are close to “real” professional communication. For this study, we examine the effectiveness of the so called Project-Based Learning method (PjBL) used to develop learners’ performance in English as a Foreign Language (EFL) in a professional context.

While, particularly in recent years, there have been a number of international studies affirming the positive impact of PjBL within the realm of science education both at university and school levels (e.g. Bilgin, Karakuyu, & Ay, 2015; Boudersa & Hamada, 2015; Cziprok & Popescu, 2015; Galvan & Coronado, 2014), there is still a remarkable preponderance of PjBL being applied within professional-oriented disciplines such as economics, law, and medicine (Donnelly & Fitzmaurice, 2005; Perrenet, Bouhuijs, & Smits, 2000).

As the project-based method has been a defined component of current university reform models in Russia directed at the development of practical skills and knowledge acquisition, we are going to take a closer look at the features that facilitate its use at the university level, and will also discuss the results of a study conducted at Tomsk State University, Russia, featuring non-linguistics students majoring in biology. Our study aims at defining PjBL as a means of enhancing traditional communicative language teaching curriculum by bringing together multiple objectives of teaching a foreign language to non-linguistics majors with a focus on their personal and professional development. Accordingly, our main interest in this study is to analyze the ways PjBL can stimulate the conditions under which university students demonstrate effective performance both in language learning and their professional fields. As such, we have formulated the following research questions:

1. What features of PjBL are the most effective with respect to integrating a cognitive approach into traditional communicative instruction?
2. How, and to what extent, can PjBL change students’ content knowledge in biology?
3. How, and to what extent, can PjBL enhance the capacity of biology majors in performing communicative tasks in English more successfully?
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