

Univerzita Karlova v Praze

Filozofická fakulta

Ústav anglického jazyka a didaktiky

Doktorský program: Filologie

Obor: Didaktika konkrétního jazyka (anglický jazyk)

Teze k dizertační práci

**Autonomní učení anglickému jazyku v kontextu
české střední odborné školy**

**Learner Autonomy in English Classes at a Czech
Secondary Technical School**

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2016

Abstract

This dissertation explores the efficacy of the *learner autonomy* (LA) principles implemented in secondary technical school EFL classes through *project-based units* incorporated into the conventional four-year language curriculum (2011-2015). This integrated approach remains uncommon in a Czech secondary technical school, even though it suggests a teaching model that enhances ELA and increases communicative competence and motivation among learners. A mixed-method design based on longitudinal four-cycle *action research* and *quasi-experiment* approaches was selected (1) to examine the changes in *self-regulation* and *academic achievement* development over time; (2) to investigate the efficacy of autonomous projects systematically applied within the assigned *treatment group* (TG), and (3) to compare the results of the *treatment* and *control* groups as to their *self-regulation* and *academic achievement* development. For the quantitative strand, a structured Self-Regulation Questionnaire (SRQ-A) and a series of academic tests were administered which were consequently analysed through null hypothesis statistical testing (NHST). The instruments employed within the *quasi-experiment* were focused on the following two major questions: (1) whether there was correlation between *self-regulation* and *academic achievement* scores; (2) whether there was statistically significant change in learners' *self-regulation* and motivation development and academic results within the TG and CG as well as between them. With regard to the qualitative strand, participant observations obtained from the teacher's diary, student reflections, artefacts and final student questionnaire were collected and analysed during the longitudinal four-cycle *action research*. Inductive thematic analysis with eliciting common patterns and emergent themes from the participants' and my own reflections was employed. The overall findings of the investigation revealed that positive correlation between self-regulation and academic scores was identified only within intrinsic SR, which indicates crucial importance of its development in EFL classes. The results of inferential statistics revealed significant increase of *intrinsic motivation* within the TG and significant decrease of this variable within the CG. With regard to the academic tests, both groups improved their scores. Nevertheless, the graduation examination results showed that there was a statistically significant difference in the oral part in favour of the TG. Thus, *learner autonomy* principles implemented via projects proved to be effective especially in terms of communicative competence development, autonomous self-regulation and intrinsic motivation development.

Key words: learner autonomy; self-regulation types (external, introjected, identified, intrinsic); metacognition and metacognitive strategies; project-based units; action research; learner-centred approach; language awareness; learner empowerment; knowledge construction; facilitator; self-efficacy; intrinsic motivation.

Abstrakt

Tato disertační práce zkoumá účinnost principů autonomního učení (LA) realizovaného v kontextu střední odborné školy prostřednictvím projektových hodin, začleněných do běžných osnov čtyřletého jazykového studijního EFL programu (2011 - 2015). Tento integrovaný přístup není dosud na českých středních odborných školách běžný, ačkoliv nabízí vyučovací model, který zvyšuje ELA (English Learning Acquisition) a zlepšuje u studentů *komunikační kompetence* i *motivaci*. Smíšená metoda, založená na dlouhodobém akčním výzkumu, obsahujícím čtyři cykly a na longitudinálním *kvaziexperimentu* byla vybrána, (1) aby prozkoumala změny autoregulace a vývoj studijních výsledků v průběhu času; (2), aby prověřila účinnost autonomních projektů systematicky uplatňovaných v rámci přiřazené experimentální skupiny (TG) a (3) porovnála výsledky experimentální a kontrolní skupiny (CG) s ohledem na jejich autoregulaci a vývoj studijních výsledků. Pro kvantitativní výzkumnou metodu byly využity strukturovaný *autoregulační dotazník* (SRQ-A) a řada testů ověřujících znalosti studentů, které byly následně analyzovány pomocí statistického testování nulových hypotéz (NHST). Nástroje využívané v rámci kvaziexperimentu měly pomoci najít odpověď na dvě následující hlavní otázky: (1) zda existuje korelace mezi autoregulací a studijními výsledky; (2) zda došlo ke statisticky významné změně v autoregulaci studujících a rozvoji motivace a studijních výsledků v rámci TG a CG, jakož i mezi nimi. V rámci kvalitativní výzkumné metody byla využita nashromážděná pozorování účastníků, zachycená v deníku učitele, a práce studentů i jejich vlastní reflexe. Vše bylo analyzováno v průběhu longitudinálního čtyřletého akčního výzkumu. Induktivní tematická analýza zahrnovala témata, která vyplynula z jejich odezev, i témata, která se vynořila v průběhu výzkumu na základě reflexí studentů i mě jako učitele.

Celkové výsledky kvantitativního šetření ukázaly, že pozitivní korelace mezi autoregulací a studijními výsledky byla identifikována pouze v rámci vnitřní autoregulace (2014), což ukazuje zásadní důležitost jejího rozvoje v hodinách anglického jazyka. Výsledky inferenční statistiky odhalily u TG statisticky významný nárůst vnitřní motivace, zatímco u CG k žádné významné změně této proměnné nedošlo. Pokud jde o vstupní a didaktické testy, došlo ke zlepšení u obou skupin. Maturitní výsledky nicméně ukázaly, že existuje statisticky významný rozdíl ve prospěch TG v ústní části. V rámci kvalitativní metody se během akčního výzkumu objevila následující objevující se témata: (1) nárůst autonomie studentů, (2) uvědomování si pokroků dosažených v jazyce a komunikační kompetenci, (3) zvýšené sebedůvěry a (4) nárůst vnitřní motivace. Principy autonomního učení realizované prostřednictvím projektů se ukázaly být účinné zvláště v oblasti rozvoje komunikačních kompetencí, autonomní autoregulace a vývoje vnitřní motivace.

Klíčová slova: autonomní učení; autonomie žáka; typy autoregulace; metakognice; metakognitivní strategie; projektové hodiny; akční výzkum; princip výuky; jazykové povědomí; komunikační kompetence; rozvoj znalostí; facilitátor; sebedůvěra; vnitřní motivace.

1 Introduction

This dissertation responds to recent calls for innovation as well as to incentives from the ELT/TEFL/TESOL field towards developing innovative and efficient tools in foreign language acquisition (FLA). Bourgeoning intercultural contacts, globalisation processes and IT communication through new media have all increased demands for foreign language competence, and particularly for English as a *lingua franca*. Naturally, issues of quality of teaching, learner-centeredness, *learner autonomy* and *communicative competences* have come to the fore. Scholars and practitioners have thus become more involved in innovations of ELT; be it didactics, methodology or teaching methods aimed at developing learners' cultural awareness, their autonomy and critical thinking.

In the Czech Republic, the majority of secondary-school leavers come from technical schools and are considered to be the most problematic sector of Czech education and the least researched area. The leavers face the challenges of finding jobs and being flexible in learning new things. Therefore autonomous skills development is especially important.

2 The research aims and scope

The objective of the dissertation is to explore the efficacy of *learner autonomy* principles implemented through *project-based units* incorporated into regular English classes of a secondary technical school from several perspectives:

- (1) Developmental change in the participant *self-regulation* and *autonomy* within the *treatment group*;
- (2) Comparison of this change with *self-regulation* development of the control group;
- (3) Comparison of academic results of the observed groups (time and participant triangulation).

There was also a focus on the development of *communicative competence* and integrated language skills, where improvement is particularly desirable. Another goal was to bring some benefit to participants in the research project. For example, some tools and data collection processes (e.g. academic tests and learner diaries) were 'translated' into classroom activities, giving them an inclusive rather than intrusive character. My research hypothesis suggested that *learner autonomy* principles such as learner empowerment, learner choice and decision making, the use of reflective and strategic techniques in English classes might help students to

(1) improve their language integrated skills and (2) construct their knowledge through autonomous learning. *Learner autonomy* principles implemented in *the project-based units* could lead to autonomous *self-regulation* and *intrinsic motivation* development in EFL students, and consequently to *academic success*.

The theoretical-empirical research presented in the dissertation represents a four-year longitudinal mixed-method study conducted in a Prague secondary technical school between 2010 and 2015.

3 Theoretical background

The theoretical part of the dissertation contains two chapters and draws on the essential European documents related to the EFL and ELT fields (European Commission, 2003, Morrow, 2004, CEFR and ELP, 2001, Assembly, 2000; Council of Europe, 2001; Hunter & Alderson, 2009; *Recommendation of the European Parliament and the Council of 18 December 2006 on key competencies for lifelong learning*, 2006)¹ as well as the Czech educational documents and field literature (*National plan of foreign language education*, 2006; *Action Plan*, 2003; the Framework Educational Programmes (FEPs) or *Rámcový Vzdělávací Program (RVP)*; White Paper on Education and Training: Teaching and Learning, 1995; Balada et al., 2007; Matějů et al., 2009; Skalková, 2007; Walterová & Greger, 2006). The second chapter of the dissertation especially deals with the contextual factors and changes suggested in the above-mentioned literature at both international and national levels.

3.1 The key concepts of the investigation

The key concepts of the investigation (learner autonomy, project-based learning, metacognition and integrated skills approach) are discussed in Chapter 3 from three perspectives: (1) pedagogy; (2) psychology, and (3) linguistics. For example, psychological background of the dissertation is derived from developmental psychology (Čáp & Mareš, 2007; Vágnerová, 2005, 2007), motivational theories (Dörnyei, 2001, 2009; Ushioda, 2006), positive psychology (Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001), Self-Determination Theory (Deci & Ryan, 2002) and metacognition (Anderson, 2002; Goh, 1997; Flavell, 1976, 1979; Oxford, 2013).

¹ 'Promoting Language Learning and Linguistic Diversity: an Action Plan 2004 – 2006' (European Commission, 2003).

With respect to linguistics, this dissertation draws on Halliday's functional theory of language influenced by the principles of the Prague School of Linguistics and follows his ideas that language is mastered through experience and in relation to social structures (Halliday, 1993). Halliday highlights such significant areas of applied linguistics as the relationship between linguistics, language teaching and language learning suggesting a threefold perspective of *learning language*, *learning through language* and *learning about language*. This perspective is definitely aligned with linguistic aspects of the *learner autonomy* concept and was adopted as fundamental for my research. It is also aligned with communicative language teaching (CLT) (Widdowson, 1978; Savignon, 1983, 1990) and the construct of communicative competence (Hymes, 1967, 1972). My dissertation also addresses Halliday's conception of functional language use and Bachman's model of functional knowledge (1990) as well as Bachman & Palmer's *metacognitive strategies* (1996). With respect to the purpose of the presented in this dissertation investigation, the model elaborated by Celce-Murcia, Dörnyei and Thurrell (1995) was selected as a main theory to draw upon. Regarding applied linguistics, this dissertation draws on an integrated skills approach. According to Hinkel (2006), integrated and contextualized teaching of multiple language skills is the most promising and beneficial approach of ELT in the immediate future.

3.1.1 Learner autonomy conceptualizations

The first part of the literature review (Chapter 3) is devoted to the *learner autonomy* (LA) concept as an EFL teaching approach and discusses important LA-related issues (Benson, 1997, 2000, 2002; Benson & Voller, 2014; Dam, , 2005; Little, 1990, 2000, 2007, 2009; Jimenez Raya, Lamb, & Vieira, 2007; Flavia Vieira, 2002; Sinclair, McGrath, & Lamb, 2000; Holec, 1988; Littlewood, 1996, 1999; Smith, 2008; Smith & Erdoğan, 2008). Along with international sources, the Czech authors who promote learner-centeredness in education in general and specifically in foreign language classrooms are also addressed in this chapter (Dvořák, 2009; Janíková, 2011; Mareš, 2010; Mareš, Man, & Prokešová, 1996; Průcha 1997, 2002; Mareš, 2010; Mareš et al., 1996; Vlčková, 2007).

3.1.2 Project-based language learning and its conceptualizations

The second section of Chapter 3 deals with the concept of *project-based language learning* (PBLL) and its relation to the *learner autonomy* concept. The discussed literature includes both national and international authors (Blumenfeld, Krajcik, Marx, & Soloway, 1994; Keys

& Bryan, 2001; Moursund, 2003; Ribé & Vidal, 1993; Beckett, 1999; Hedge, 1993; Boud, Cohen, & Sampson, 2014; Boud & Feletti, 1998; Boud, Keogh, & Walker, 2013; Alan and Stoller 2005; Stoller, 2006; Dooly and Mastas, 2011). The Czech literature on *project-based learning* covers mostly its theoretical background, even though some empirical results have been also reported (Kratochvílová, 2003, 2009; Maňák & Švec, 2003). While Kratochvílová describes general pedagogical aspects of PBL, another Czech scholar, Janíková (2006, 2007), addresses PBL with respect to FLA (specifically German language acquisition). There is, however, lack of research specifically aimed at examining PBL principles in the EFL and ELT context.

The ensuing meta-analysis of recent studies reflects the growing interest of experts in the linkage between *learner autonomy, project-based learning and metacognition* (Oxford, 2003, 2013; Wenden, 1991, 1999; Ushioda & Course, 2012). Interestingly, the linkage between *metacognition* and *learner autonomy* has also been presented in Czech field literature, for example in Mareš (2010) and especially in Krykorková (2010; Krykorková & Chvál, 2003). Along with interrelation of the key concepts, particular attention is paid to *metacognitive strategies* which played essential role in the Framework suggested for the current investigation as a tool to implement *learner autonomy* and *project-based learning* in English classes. Several typologies of learning strategies are discussed in the chapter (Anderson, 2002; Cotterall, 1995; Flavell, 1979; Chamot, 2005; Oxford, 2013; Victori & Lockhart, 1995; Wenden, 1991, 1999). Among the most frequently mentioned strategies are planning, monitoring and evaluating. In addressing these metacognitive areas, my dissertation draws on strategies specifically recommended in the field of applied linguistics and ELT by Oxford (2003, 2013; 1989) and Chamot & O'Malley (2004, 2005).

3.1.3 Conceptualizations of an integrated skills approach

The final section of the chapter introduces an integrated skills approach and my own model of it. Although an integrated approach has been frequently mentioned in the literature discussed above, it has not been acknowledged as an official one yet. Nevertheless, according to a number of experts, for example, Hinkel (2006), Oxford (2001), Little (1995, 2000), this approach presents a new dynamic in TESOL and needs to be explored from both theoretical and empirical perspectives. There is no one rigid model or definition of an integrated approach. Nevertheless, several areas of integration have been identified in the literature:

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- (1) Integration of language skills and subskills (Hinkel, 2006; Oxford, 2001)
 - (2) L2 learning motivation and metacognition relationship (Ushioda, 2014)
 - (3) Integration of language and 21st century skills (Dooly & Masats, 2011; Little, 2000)
 - (4) Language skills and metacognitive skills integration (Hinkel, 2006)
 - (5) Metacognition and learner autonomy (Krykorková, 2010; Ushioda, 2014).

These areas are discussed in the dissertation in detail.

4 Empirical part of the dissertation

4.1 Methodology

The methodology of my investigation is concerned with the matters of the mixed-method research design based on a longitudinal four-cycle *action research* and a longitudinal *quasi-experiment*. With regard to the quasi-experiment, the non-equivalent control group design with the pre- and post-treatment measurements is applied. Both qualitative and quantitative strands draw on national and international methodology recommended in literature (Boyatzis, 1998; Burns, 2005, 2010a; Carr & Kemmis, 1986; Campbell & Stanley, 2012; Corbin & Strauss, 2008; Creswell, 2002; Guba & Lincoln, 1994; Lincoln & Guba, 1985; 1998; Hendl, 2005, 2006; Huberman & Miles, 2002; Chraska, 2007; Marshall & Rossman, 2010; Sheskin, 2003; Wallace, 1998). The methodology-related chapter also introduces the participants, describes ethical issues and provides the rationale for the quantitative and qualitative strands of the research.

4.1.1 Research plan

The overall research plan included two phases: the pilot and the main studies. The aim of the pilot study was: (1) to validate my *project-based framework* and to test its feasibility; (2) to explore the efficacy of the *learner autonomy* concept and *project-based units*, and (3) to collect preliminary data for the *action research* (Baker & Risley, 1994).

The plan of the main study comprised both quantitative and qualitative strands. Table 1 below presents the summary of my *quasi-experiment* and *action research* as follows:

Quasi-experiment	Action Research				Quasi-experiment
	2011	2012	2013	2014	
2011	2011	2012	2013	2014	2014/2015
Pre-treatment stage (2 groups)	TREATMENT STAGE (1 group)				Post-treatment stage (2 groups)
1) Treatment group (TG) 2) Control group (CG)	Treatment group (TG) (Data: Participants' reflections and Teacher's diary)				1) Treatment group (TG) 2) Control group (CG)
Self-Regulation Questionnaire (SRQ-A, 2011)	PROJECT BASED UNITS (2011 – 2014): <ul style="list-style-type: none"> • PBU1: Creating English Digital Toolbox • PBU2: Learning by teaching • PBU3: Learning by doing research • PBU4: Getting ready for 'Maturita' (graduation examination) 				Self-Regulation Questionnaire (SRQ-A, 2014)
Academic Entry Test (AET, 2011)					Mock Didactic Tests (2014, 2015) and GDT, 2015
Correlation between SRQ-A & AET					Correlation between SRQ-A & MDT, 2014
	Triangulation (QL)				Triangulation (QN)

Table 1: Summary of the research plan. Main study (2011-2015)

A three-stage research plan presented in Table 1 includes only rough information on the instruments employed in the investigation. Nevertheless, it provides the most essential research phases and combines the quantitative strand (see left- and right-handed columns of the table) and the qualitative strand in the middle.

4.1.2 Data collection

The data collection gained during the *quasi-experiment* involves (1) the scores on the standardised Self-Regulation Questionnaire by Deci & Ryan (2002) administered at the pre- and post-treatment stages; (2) series of academic tests taken by participants at the pre- and post-treatment stages, and the results of the graduation examination; (3) statistically tested hypotheses based on the above-mentioned instruments. The qualitative data collection obtained during the *action research* includes (1) the students' artefacts and reflections on the treatment, and (2) the teacher's diary entries written on a weekly basis during the treatment stage.

4.1.3 Methods and procedures

With regard to the *quasi-experiment*, the Null Hypothesis Statistical Testing (NHST) was employed, including both descriptive and inferential statistics. The most essential tests are presented in Table 2 below:

2011	<ul style="list-style-type: none"> • The Pearson product-moment correlation coefficient computations, 2011 (between AET & SRQ-A scores , 2011) • Wilcoxon two-sample Test No. 1, 2011 - Treatment Group assignment • Kruskal-Wallis Test No. 1, 2011 - Control Group assignment
2014/2015	<ul style="list-style-type: none"> • The Pearson product-moment correlation coefficient computations, 2014 (between MDT & SRQ-A, 2014) • Wilcoxon two-sample Test No.2, 2014 – TG homogeneity verification • Kruskal-Wallis Test No. 2, 2014 – CG homogeneity verification • Wilcoxon matched-pairs test No. 1, TG – SRQ-A, 2011 vs 2014 (time triangulation) • Wilcoxon matched-pairs test No. 2, CG – SRQ-A, 2011 vs 2014 (time triangulation) • Wilcoxon matched-pairs test No. 3, TG vs CG - SRQ-A, 2014 (participant triangulation) • Wilcoxon matched-pairs test No. 4, TG vs CG - MDT, 2014 (participant triangulation)

Table 2: Selected statistical tests applied during the quasi-experiment

Table 2 indicates four major purposes of applying the measurements of descriptive and inferential statistics:

- (1) to test whether there is correlation between two observed variables: four self-regulation types and academic achievements;
- (2) to test whether the observed EFL classes are homogeneous from the statistical perspective in 2011 and to verify their homogeneity in 2014;
- (3) to assign the *treatment* and *control* groups in 2011 and verify their homogeneity in 2014;

(4) to compare the results of the TG and CG in terms of their self-regulation development and academic growth (time and participant triangulation).

The second strand of my research, the *action research* (AR), was conducted between 2011 and 2015 and described in chapter 7 of my dissertation in detail. Most definitions of *action research* in an educational context (Barlett, 2006; Borg, 2011; Burgess, 2006; Burns, 2010; Mason, 2010; Stenhouse & Rudduck, 1985; Stringer, 2004; Wallace, 1998) tackle the model of AR proposed by Lewin (1946):

- identify a problem;
- suggest a solution;
- bring about a favourable change.

My dissertation draws on suggestions by Burns (2010) who not only calls for a more positive mode of AR but also is focused on methodology appropriate for exploring language learning and teaching practices. She also explains how to achieve high quality validity of the research and avoid judgements based only on assumptions and personal views. According to Burns there might be a direct link between *action research* and *learner autonomy* and ‘teachers can investigate ways to promote *learner autonomy* through undertaking action research’ (2010, p. 62). The qualitative data obtained during the four-year AR were aimed at understanding all the dynamics and in-depth perspectives of implementing *learner autonomy* principles implemented through the projects. The following framework was used for each cycle of the AR:

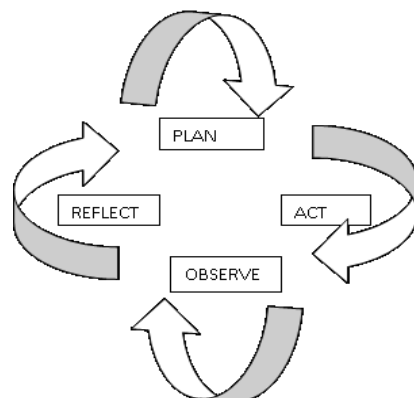


Figure 1: The reflective cycle used in the current AR

Along with planning, action, observations and reflections, more specific procedures were also undertaken: (1) initial steps, ethical issues and introductory discussion; (2) intervention: autonomous project-based units; (3) data collection; (4) inductive data analysis and evaluation of the results, and (5) conclusions and changes towards the next cycle.

Taken together, all research stages and strands are presented in Chapters 5 – 8 of the dissertation, including the one-year *pilot study* (Chapter 5), the four-cycle *action research* (Chapters 7), and the pre-treatment (Chapter 6) and post-treatment (Chapter 8) stages of the *quasi-experiment* in chronological order. The partial time and participant triangulation is also presented in these chapters.

4.2 Results

4.2.1 Results of the quasi-experiment

The most essential results of the investigation are summarised in Chapter 9. Regarding the longitudinal *quasi-experiment*, the findings revealed that the initial scores of the participants both on the Self-Regulation Questionnaire (SRQ-A, 2011) and the Academic Entry Test (AET, 2011) were low. The lowest mean score was within *intrinsic motivation* compared with the results on *external, introjected and identified self-regulation*. The lowest mean of the AET was 48%. As to correlation between four types of *self-regulation* and *academic scores*, the statistically significant negative correlation between these two variables was identified in 2011 (the Pearson product-moment correlation coefficient, 2011). The same test computed at the post-treatment stage in 2014 revealed a **positive correlation between *intrinsic self-regulation* and *academic scores***, which indicated a crucial role of *learner autonomy* and *intrinsic self-regulation* development in English classrooms.

The results of other NHST showed a statistically significant increase in *autonomous self-regulation* and *intrinsic motivation* within the *treatment group*, while the findings within the *control group* revealed either no change in the self-regulation development (2011 vs 2014) or significantly lower results compared with the *treatment group* at a significance level of 5%.

Although the academic achievements in English over four years of study showed improvement in both observed groups, the scores on the oral part of the Graduation Examination revealed that there was a statistically significant difference in *communicative*

competence between the treatment and control groups in favour of the treatment group (see Figure 2):

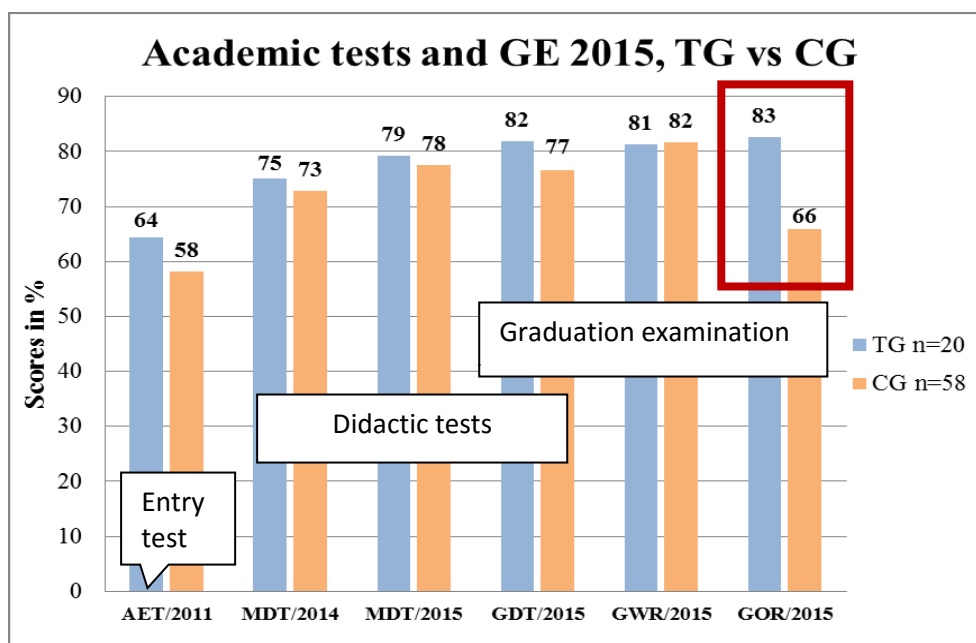


Figure 2: Participants' academic scores (in %) (2011 – 2015)

Note:

AET/2011 Academic Entry test/2011
 MDT/2014 Mock Didactic test/2014
 MDT/2015 Mock Didactic test /2015

 GDT/2015 Graduation Didactic Test/2015
 GWR/2015 Graduation Writing Test/2015
 GOR/2015 Graduation Oral Test

This difference indicates that the assigned autonomous projects enhanced (1) learner autonomy; (2) intrinsic motivation, and (3) communicative competence of the *treatment group*.

4.2.2 Results of the action research

As far as the *action research* is concerned, the following *learner autonomy* principles were examined during the investigation:

- learner empowerment, decision and choice making;
- strategic thinking development;
- reflective and critical thinking development (reflective writing, self- and peer-assessment);
- guided self-management of learning;

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- negotiation and discussion;
 - metacognitive awareness (planning, monitoring, evaluating);
 - self-assessment.

The findings of the qualitative analysis revealed that all above-mentioned principles were beneficial from both teacher and learner perspectives with only one reservation. Reflective writing as an activity (and also a research instrument) did not seem to be in favour among the participants. Nevertheless, their reflections provided the research with a rich data collection and revealed insightful views and beliefs of the participants.

Specifically, significant enhancement of learner achievements within four emergent themes was revealed: (1) language integrated skills; (2) autonomous learning and project management; (3) self-efficacy, and (4) increased intrinsic motivation. Additionally, a favourable change in student attitudes towards learning English was noted. These findings suggest an advantageous and beneficial role of the *learner autonomy* principles and *project-based units* used as facilitators in autonomous learning. What confirmed these preliminary implications was the fact that most students' and my own observations were corroborated in each cycle.

The results of Cycles 2 - 4 provided sufficient evidence of participant growth in autonomous learning, making use of their empowerment, cooperativeness, metacognitive skills and reflective thinking. The learners also demonstrated growth in their language use and progress awareness. My diary entries provided some new emergent sub-themes. For example, I noted increased academic skills of my students such as note-taking, strategic thinking or time management. According to my diary entries, their communicative capacities (sharing ideas, critical remarks or expressing opinions in the TG also improved). The overall findings were corroborated again. They also enriched the previous emergent themes and brought the new sub-themes. My students and I both noted that the real communication and 'serious learning' took place during the PBUs. We again identified increased self-efficacy, effort, engagement and communicative competence.

The data from the participant and my own reflections were gathered on a weekly basis by eliciting common patterns and emergent themes (also sub-themes) which were encoded in each cycle (Boyatzis, 1998; Creswell & Clark, 2007). More specifically, the emergent themes and sub-themes fell into two large groups: (1) language-related and (2) autonomy-related. The

findings revealed that in the course of the investigation, the participants gradually developed and enhanced the following skills and capacities: (1) *intrinsic motivation*; (2) *learner autonomy*; (4) *communicative competence* and *language awareness*, and (5) *self-efficacy*. The longitudinal findings which addressed the first research question, with its focus on the change and development over time, can be presented as a graph reflecting the dynamic of changes which occurred throughout the cycles (see Figure 3 below):

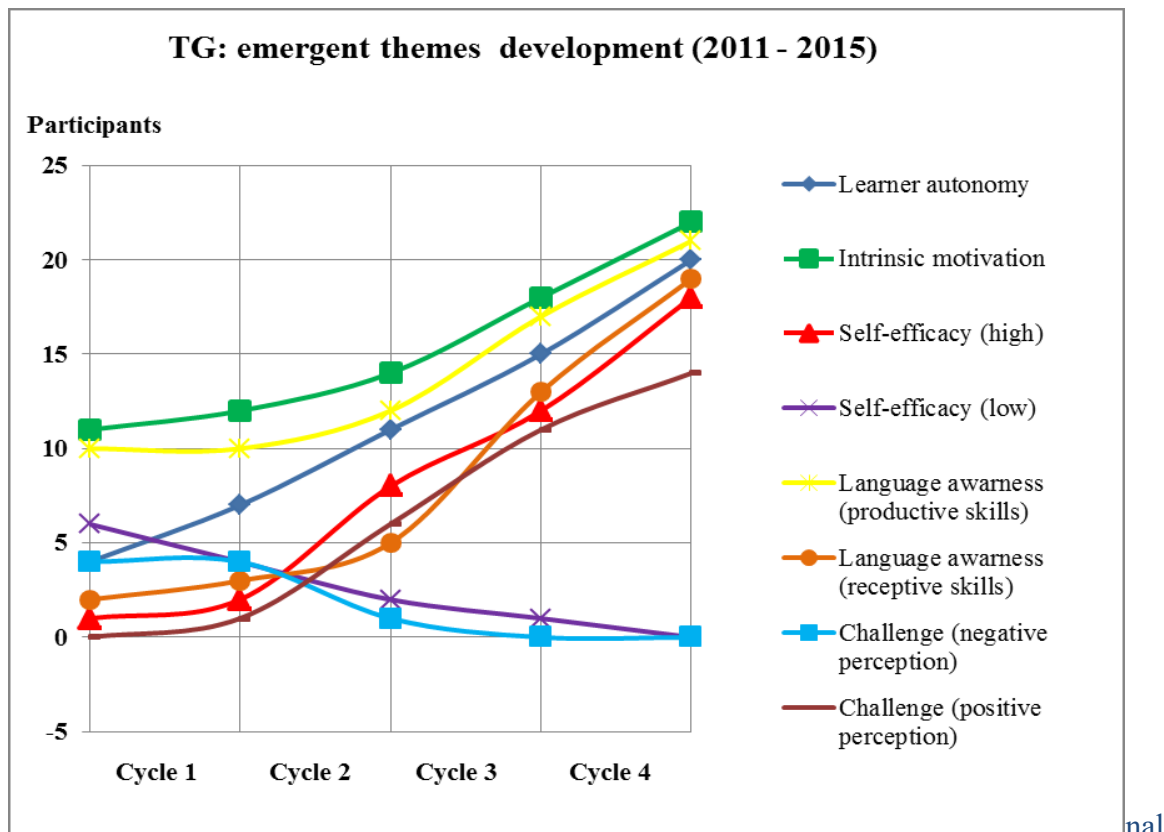


Figure 3: AR, Cycles 1 – 4: emergent themes development

The longitudinal aspect of the *action research* allows us to see the big picture in regards to how every single theme has changed over time. It appears that learner *autonomy* principles implemented through *project-based learning*, and investigated in the four-year *action research*, provided the language learning process with a number of benefits:

- they encouraged interest in learning English among students and increases their intrinsic motivation and creativity;
- they enhanced student interaction, language integrated skills development and communicative competence;

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- they helped students to construct their knowledge of the language through constant use of this language in the classroom and creates the authentic context for the target language use;
 - they increased student self-efficacy as language users;
 - they helped to integrate language skills and 21st century skills development;
 - they developed both learner and personal autonomy.

The overall findings of the present research revealed that both research strands, qualitative and quantitative were corroborated and mutually supported. They imply that project-based units can serve as a practical and effective tool for learner autonomy implementation. Both PBL and LA have a strong potential to develop and foster intrinsic motivation as well as enhance academic achievement.

5 Conclusion

Finally, Chapter 10 draws conclusions and makes suggestions towards the further development of the teacher-researcher dichotomy, integrated-skill approach and efficacy of the learner autonomy principles implemented through project-based language learning. In this chapter, the reader will also find the limitations and advantages of this investigation.

From the research perspective, this dissertation contributes to the sparsely explored area of implementing autonomous learning development within secondary EFL classes in the context of Czech technical schools. The current research mapped the investigated area from both teacher and learner perspectives as well as examined the changes in the observed population views and academic achievements through via statistical measurements. This complex research approach and its findings suggest comprehensive information about the efficacy of implementing *learner autonomy* principles through project-based units and contribute to existing knowledge in applied linguistics. The teaching and learning framework suggested in this dissertation combines several conceptual factors, i.e. English language acquisition, *learner autonomy*, metacognition and project-based language learning and can be used in ELT as an effective learning and teaching tool. It also seems that importance of this investigation is embedded in its longitudinal and multi-perspective character.

The main conclusion emerging from this investigation is that the observed variables are indeed effective and beneficial if applied within the framework based on negotiating of

meanings, functional language, metacognitive strategies and focus on *learner autonomy*. Taken together, the findings of the four-cycle *action research* and the longitudinal quasi-experiment revealed that the findings gained from statistical testing and inductive thematic analysis were corroborated.

A further significant feature of this investigation is its contribution to the theory and practice of educational *action research* which is considered here a multidimensional and developmental paradigm that involves the learners as active participants and helps them benefit from the research actions. It contributed to educational research methodology suggesting an innovative view on *action research* as a genre which can be based on exploring not only problematic areas but also positive stimuli and their development.

I am also aware of the limitations of my investigation. With regard to the quasi-experiment, it was impossible to apply a randomization technique for ethical and practical reasons. Therefore, numerous statistical tests were computed in order to avoid the influence of the extraneous variables. Another limitation of the current research is concerned with the action research is that it does not deal with sporadic negative cases in detail.

Nevertheless, the current findings (both quantitative and qualitative) suggest that the integrated project-based units can serve as an effective tool or ‘facilitator’ to develop and foster *learner autonomy*, and that the project-based framework applied during this investigation seems to be appropriate and effective at a Czech secondary technical school.

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