The Role of Individual Differences in the Development of Listening Comprehension in the Early Stages of Language Learning

Éva Bacsa and Csaba Csíkos

Abstract This chapter discusses the results of a longitudinal project examining the development of listening comprehension and the role of individual differences in this process in an early language learning context. We aimed at exploring how language learning aptitude, motivation, attitudes, the use of listening strategies, beliefs about language learning and listening anxiety as decisive variables of individual differences (Dörnyei, AILA Rev 19:42–68, 2006; Lang Learn 59(1):230–248, 2009; Mihaljević Djigunović, Role of affective factors in the development of productive skills. In: Nikolov M, Horváth J (eds) UPRT 2006: empirical studies in English applied linguistics. Lingua Franca Csoport, Pécs, pp 9–23, 2006; Individual differences in early language programmes. In: Nikolov M (ed) The age factor and early language learning. Mouton de Gruyter, Berlin, pp 198–223, 2009) relate to each other and to the learners' performances on listening measures. The main objective of the present study is to explore and identify the internal structure, roles and relationships of individual variables in the development of early language learners' listening comprehension based on a multi-factor dynamic model of language learning (Gardner & MacIntyre, Lang Teach 26:1–11, 1993) and its reinterpretation (Dörnyei, The relationship between language aptitude and language learning motivation: Individual differences from a dynamic systems perspective. In: Macaro E (ed) Continuum companion to second language acquisition. Continuum, London, pp 247–267, 2010).

A total of 150 fifth and sixth graders (11–12-year-olds; 79 boys and 71 girls) of ten school classes in Hungary participated in the research. The findings are in line with the predictions of the theoretical framework: the variables of individual differences are themselves multifactor constructs, the components are in constant

Note: The applied instruments are available at: http://www.doktori.hu/index.php?menuid=193&vid=13859

For more information, please contact the first author: evabacsa2010@gmail.com.

É. Bacsa (✉)
Kiss Bálint Reformed School, Szentes, Hungary
e-mail: evabacsa2010@gmail.com

C. Csíkos
Department of Educational Assessment and Planning, University of Szeged, Szeged, Hungary
e-mail: csikoscs@edpsy.u-szeged.hu

M. Nikolov (ed.), *Assessing Young Learners of English: Global and Local Perspectives*, Educational Linguistics 25, DOI 10.1007/978-3-319-22422-0_11

interaction with each other and with their environment, thus, changing and creating a complex developmental pattern.

The results of the two phase assessment project clearly indicate that language aptitude defined as one of the main cognitive factors and parents' education are strong predictors of listening performance. The affective factors (e.g., listening anxiety) also contribute to the performance on the listening tests, but their rates change over time and they are sensitive to the context of language learning. Beliefs and emotions are interrelated and they also play a decisive role in the development of listening skills in the early years of language learning. Consequently, what the learners think or believe about language learning and how they feel about it influence the learners' achievement in listening comprehension. In our model, these beliefs are rooted in the students' social background (parents' education) and language aptitude, and this relationship is exactly in contrast with the direction displayed in Gardner and MacIntyre's (Lang Teach 26:1–11, 1993) model.

Keywords EFL • Early language learning • Listening comprehension • Individual differences

1 Introduction

In recent decades, the study of affective factors in second language learning has gained significant ground in addition to the research of cognitive variables, which, according to researchers of the field, could considerably contribute to the understanding and interpretation of individual differences (Dörnyei, 2006, 2009; Gardner, 1985; Gardner & MacIntyre, 1992, 1993; Mihaljević Djigunović, 2006, 2009) The underlying question of the research has been: what might be the main cause of significant variance in the achievement of students from similar backgrounds in similar circumstances. Hence, individual differences became the focus of study in the field originally covering two subfields, language aptitude (e.g., Hasselgren, 2000; Kiss & Nikolov, 2005; Ottó, 2003; Sáfár & Kormos, 2008; Skehan, 1998) and motivation for language learning (e.g., Dörnyei, 1998, 2001; Gardner, 1985; Heitzmann, 2009; Martin, 2009; Nikolov, 2003a). Later on, research on learning styles (Dörnyei & Skehan, 2003) and language learning strategies (e.g., Cohen, 1998; Griffiths, 2003; Mónus, 2004; Nikolov, 2003b; O'Malley & Chamot, 1990; Oxford, 1990; Wenden & Rubin, 1987) also received more attention. Yet, the question remained, what could account for the individual differences where no significant variance is perceived in internal and external circumstances. One possible explanation might be self-perception that fostered the investigation of variables such as attitude to language learning, anxiety, interest and beliefs (e.g., Bacsa, 2012; Brózik-Piniel, 2009; Csíkos & Bacsa, 2011; Csizér, Dörnyei, & Németh, 2004; Dörnyei & Csizér, 2002; Hardy, 2004; Matsuda & Gobel, 2004; Spinath & Spinath, 2005; Tóth, 2008, 2009; Yim, 2014).

It is widely accepted that foreign language proficiency does not solely result from language teaching, but it is the outcome of several factors related to student

achievement. Moreover, the majority of these factors are not static but change dynamically over time. It is also clear that these factors are not independent from one another but they affect learning outcome in interaction with each other (Dörnyei, 2006, 2009, 2010; Gardner & MacIntyre, 1993; Nikolov & Mihaljević Djigunović, 2006, 2011). Research on individual differences in language learning used to study the relationships between single variables and learning outcomes in general. However, recent studies have had a much narrower scope, targeting one skill area. Hence, the subfields of research on motivation, anxiety and learning strategies in reading, writing, listening and speaking skills have been developed (e.g., Goh, 2008; Kormos, 2012; Woodrow, 2006).

In our research we focus on listening comprehension in the early stages of English as a foreign language (EFL) learning. The review of the relevant literature suggests that listening comprehension is a cornerstone of early language learning, since it is based on the processes of first language acquisition, relying primarily on memory, where language input is provided largely through listening (MacWhinney, 2005; Skehan, 1998). The development of listening comprehension is vital to achieving verbal expression and well developed communicative competence, since high level speech production presupposes highly developed listening comprehension (Dunkel, 1986; Mordaunt & Olson, 2010). In addition, rapidly spreading digital technology redefines language teaching by providing auspicious possibilities in listening to authentic language sources. However, research in the context of the present study found that listening comprehension was one of the most neglected areas of language teaching even though primary school language teaching ought to focus on listening and speaking skills (Bors, Lugossy, & Nikolov, 2001).

The present research is novel in the field of early language learning in that it is the first survey that investigates the development of listening comprehension skills in interaction with the multicomponent construct of individual variables, and applies diagnostic measures of the development of listening comprehension in school context for testing *for* learning purposes in addition to testing *of* learning (Alderson, 2005; McKay, 2006; Sternberg & Grigorenko, 2002).

First, we provide a theoretical background to the survey; then, we describe the methods and the procedure of the research that is followed by the discussion of findings and their theoretical and pedagogical implications.

2 Literature Review

2.1 Early Foreign Language Learning and Teaching

Early Language Learning and Young Language Learners appear more and more frequently in the literature of foreign language learning and instruction. Amongst other aspects, research is targeting the specifics of childhood foreign language learning, the optimal time of start and the effective methods of teaching. Having reviewed the relevant literature of the recent years, Nikolov and Mihaljević

Djigunović (2006, 2011) emphasize the importance of further research in the field due to the increased interest in early language learning in Hungary and across the globe. This interest is based on the widespread assumption held not only by researchers that starting language learning early is directly related to its success: "the younger the better". However, several empirical studies support "the claim that younger learners are more efficient and successful in all respect and at all stages of SLA is hard to sustain in its simple form" (Nikolov, 2000, p. 41; see details in Halle, Hair, Wandner, McNamara, & Chien, 2012; Larson-Hall, 2008; Mihaljević Djigunović, 2010; Moon & Nikolov, 2000; Nikolov, 2009; Nikolov & Curtain, 2000; Nikolov & Mihaljević Djigunović, 2006, 2011).

Researchers agree that young learners' development significantly differs from that of older children and adults. Krashen (1985) distinguishes language acquisition and language learning. He claims that foreign language acquisition is mainly instinctive, resembling the acquisition of the mother tongue, whereas language learning is a conscious process typical after puberty.

Several models have been constructed to describe language proficiency (e.g., Bachman & Palmer, 1996; Canale & Swain, 1980; CEFR, 2001). In Hungary, the 2003 revision of the Hungarian *National Core Curriculum* (2003) was the first to define the concept of usable language knowledge besides describing the objective of language teaching:

> The objective of foreign language learning is to establish communicative linguistic competence. The concept of communicative linguistic competence is identical with usable language knowledge. It means the ability to use adequate language in various communicative situations. Its assessment and evaluation is possible in the four basis language skills (listening comprehension, speaking skills, reading comprehension and writing skills). (p. 38)

Nikolov (2011) outlined the theoretical framework of the assessment and development of English language proficiency for early language learners in grades 1–6, for children between the ages of 6 and 12. She highlighted that the assessment of English language proficiency has to account for language knowledge as a comprehensive and complex construct corresponding to the level of the learners' knowledge and their age specifics (also see Nikolov, 2016 in this book).

Several studies point out that traditional summative, exam like performance measurements are not appropriate for this age group (Inbar-Lourie & Shohamy, 2009; McKay, 2006). Such tasks are needed that could provide feedback to the teachers and learners about the level of their language development, their strengths and weaknesses, thus outlining the path for successful future development. In other words, assessment *for* learning, conducted by the teachers in the classroom embedded into their daily work of development, is gaining ground in addition to the practice of external evaluation that are mainly targeting accountability, i.e. assessment *of* learning (Lantolf & Poehner, 2011; Nikolov & Szabó, 2011a).

The most important objective of assessment for learning is to positively influence the learning process by scaffolding young learners' language development in the process of using measurement and feedback. However, assessment must not be restricted to tasks measuring language knowledge, but it has to provide feedback on other domains, like language learning strategies and motivation as they dynamically

influence the process of early language learning (Nikolov & Szabó, 2011a). Assessment can effectively support development only if assessment and development are in a dynamic relationship; these two have to work together a single process for future development (Sternberg & Grigorenko, 2002).

2.2 Listening Comprehension

Understanding speech in one's mother tongue seems simple and effortless; however, in a foreign language it involves difficulties, sometimes causing frustration and it is a source of significant stress for many learners (Chang & Read, 2007). Foreign language listening comprehension is an invisible mental process, which is difficult to describe precisely. The learner has to distinguish the sounds, understand vocabulary and grammatical structures, interpret the stress and tone of speech, keep in mind what has been said and interpret what has been heard the socio-cultural context (Vandergrift, 2012). Listening comprehension is rather poorly represented in research on foreign language learning, despite being a crucial skill: it is first acquired in the mother tongue as well as in early language learning.

Research in cognitive psychology revealed that listening comprehension is more than a mere extraction of meaning from the incoming verbal text. It was found to be the process in which the speech is getting linked to the lexical knowledge one already acquired (Vandergrift, 2006, 2012). Hence it is obvious that listening comprehension goes beyond the perception and processing of acoustic signals. This skill has been described in various ways in recent models. The currently most widely accepted cognitive psychological approach perceives it to be a hierarchically structured interactive process. The interactive model of Marslen-Wilson and Tyler (1980) is based on the assumption that the recognition of words involves simultaneously bottom-up processes, where information derives from the uttered word itself and top-down processes, where the information is deducted from the contextual triggers (Eysenck & Kean, 2005). Hence, speech recognition can be described as a two directional process; on the one hand, bottom-up, when learners activate their linguistic knowledge (sounds, grammatical rules etc.) to understand the message, on the other hand, top-down, when learners activate their contextual prior knowledge (topic, direct context, text type, cultural information etc.) to understand the message. At the same time, listening comprehension does not only work top-down or bottom-up, but is composed of the interaction of the two processes, since the listener uses both prior contextual and linguistic knowledge to comprehend the message. The rate of activation between these two processes depends on the linguistic knowledge, familiarity with the topic and the objective of the listening task (Vandergrift, 2012). According to Field (2004), the two processes could not be considered alternative to each other, since their relationship is a much more complex interdependency.

In recent decades, communicative and competence-based language teaching has emphasized listening comprehension and its implications for teaching methodology. All methods prioritize listening comprehension, since it is much more fre-

quently used than the other skills. Learners need to spend a significant amount of time listening to speech in the target language and they need to comprehend what they listen to (Mordaunt & Olson, 2010).

Dunkel (1986, p. 100) points out that we need to "put the horse (listening comprehension) before the cart (speech production)" in order to achieve a high level of communicative competence. In other words, high level of speech production presupposes a high level of listening comprehension. Hence, the task of language teachers is to present their learners with a wide variety of listening comprehension tasks (also see Wilden & Porsch, 2016 in this volume).

Foreign language listening comprehension is heavily influenced by the level of listening comprehension in the mother tongue. Simon's (2001) findings revealed a close relationship between achievements of listening comprehension in L1 and in a foreign language. The development of listening comprehension is not self-serving, since well-developed listening comprehension significantly enhances the development of other skills (Richards, 2005; Rost, 2002).

2.3 Individual Differences

The field of psychology has focused on two contradictory objectives: to understand the general principles of human behaviour and intellect and to reveal "uniqueness of the individual mind" (Dörnyei, 2006, p. 42). This latter approach has created an independent subsystem, which came to be known as individual differences (IDs) covering all research targeting these aspects. IDs are "dimensions of enduring personal characteristics that are assumed to apply to everybody and on which people differ by degree" (Dörnyei, 2005, p. 4). According to another description, "they concern stable and systematic deviations from a normative blueprint" (Dörnyei, 2006, p. 42). Hence, the objective is to reveal and identify those specific learner characteristics that are relevant in foreign language acquisition and are present to different degrees among learners (Dörnyei, 2006; Mihaljević Djigunović, 2009).

The literature on foreign language acquisition traditionally separates IDs into *cognitive* and *affective* factors (Gardner, 1985; Gardner & MacIntyre, 1992, 1993). According to Gardner and MacIntyre (1992, p. 211), cognitive factors "involve different aspects of cognition". Johnson (2001, p. 117) defined them as "the mental makeup of a person" that include age, aptitude, intelligence, SES, learning strategies and learning or cognitive style, whereas affective factors include "those attributes that involve individuals' reactions to any situation" (Gardner & MacIntyre, 1992, p. 211). In other words, they represent "the emotional side of human behavior" (Brown, 1994, p. 135) and include personality factors such as anxiety, extroversion/introversion, inhibition, risk-taking, empathy, self-perception, attitude and motivation (Mattheoudakis & Alexiou, 2009).

Researchers assembled detailed lists of factors of individual differences (e.g., Gardner, 1985; Gardner & MacIntyre, 1993; Larsen-Freeman & Long, 1991; Skehan, 1998). According to Mihaljević Djigunović (2009, p. 198) "the term individual

differences, although widely used, still represents a rather loose concept and different authors list different learner characteristics as individual differences." She collected the most frequently listed variables in recent publications: (1) intelligence, (2) aptitude, (3) age, (4) gender, (5) attitude and motivation, (6) language anxiety, (7) learning style, (8) learning strategies and (9) willingness to communicate.

Others highlight some significant domains instead of giving extensive lists of individual differences. Dörnyei (2009) mentions four important variables: (1) Motivation refers to the direction and extension of student behaviour, including the choice of the learner, intensity of learning and endurance. (2) Ability of language acquisition refers to the capacity and quality of learning. (3) Learning style includes the way of learning. (4) Learning strategies are located halfway between learning style and motivation, indicating the proactivity of the learner in selecting the learning path. "Thus the composite of these variables has seen to answer why, how long, how hard, how well, how proactively, and in what way the learner engages in the learning process" (p. 232).

Prior research predominantly investigated the learner's characteristics in the context of individual differences and they were generally included in research as background variables that modify, personalize the picture of the language acquisition process (Dörnyei, 2009). Today several researchers perceive foreign language learning as the result of interaction between learner characteristics and the learning context, assuming a complex relationship between these two factors. In addition, increased efforts are put into a deeper understanding of connections between the learners and the context of learning (Mihaljević Djigunović, 2009). Some IDs are more stable and less sensitive to the changes of circumstances (e.g., intelligence, aptitude), while others (e.g., motivation, strategies, anxiety) respond quickly to changed context (e.g., in training program). The question can be raised whether an optimal combination of individual variables could be identified that would particularly enhance the effectiveness of language learning. According to Ackerman (2003), individual characteristics can strongly influence learning success separately as well, however, any combination of these characteristics would definitely have a larger impact.

Research on IDs further highlights the fact that different variables influence success and student achievement to different degrees. Hence, the traditional approach identifies primary and secondary variables (Gardner & MacIntyre, 1992, 1993). According to this classification, aptitude and motivation can be considered as primary variables in foreign language research, since these variables have the strongest demonstrable impact on student achievement: aptitude is the primary cognitive factor and motivation is the primary affective factor. Others extended this class of primary variables to include aptitude, attitude and motivation, social background, status of the target language and the quality of language teaching (Csapó, 2001; Ellis, 1994; Józsa & Nikolov, 2003, 2005; Nikolov, 2007). According to Dörnyei (2010), the perceived effect of these variables also depends on the method applied to measure these constructs.

Furthermore, some recent investigations question the modular approach to individual variables. Dörnyei (2009, 2010) approaches the role of individual differences,

especially the two primary variables (aptitude and motivation), from the perspective of a "dynamic system". He claims that "identifying 'pure' individual difference factors has only limited value [..]; instead, a potentially more fruitful approach is to focus on certain higher-order combinations of different attributes that act as integrated wholes" (Dörnyei, 2010, p. 267; Dörnyei, MacIntyre, & Henry, 2015).

It has been revealed that young learners do not resemble each other in every aspects of their learning either, hence it is possible as well as desirable to study their IDs (Mihaljević Djigunović, 2009; Nikolov, 2009). However, adequate methods and instruments for assessment are scarce, since the majority of available measures were developed for older age groups. According to Mihaljević Djigunović (2009), the main line of future research should focus on exploring the relationships between IDs among early language learners, which ultimately presupposes the development of relevant measures and methods.

Findings of prior research draw a varied picture about the relationship between IDs and student achievement (also see Mihaljević Djigunović, 2016 in this volume). There has been a consensus that cognitive, affective and additional background factors all impact the success of language learning, however, the significance attributed to individual factors varies across the studies (Csapó & Nikolov, 2009). Consequently, the study of student achievements should out cover a wide range of interactions between individual variables (Nikolov & Mihaljević Djigunović, 2011).

3 The Study

3.1 A Model of Individual Differences in Listening Comprehension

When defining the theoretical framework of our research a language learning model had to be found that would meet the requirements of complexity, interactivity and dynamism (flexibility, versatility) in terms of the context and components of language learning. The Socio-educational model of second language acquisition proposed by Gardner and MacIntyre (1993) is one of the most often cited models. It perceives the learning process embedded in a comprehensive socio-cultural context, and highlights four different aspects, related to each other: (1) antecedent factors: e.g., age, gender, prior learning experience and beliefs; (2) ID variables: e.g., intelligence, language aptitude, strategies, attitudes, motivation, anxiety; (3) language learning contexts: formal and informal learning contexts; and (4) outcomes: linguistic and non-linguistic achievements. The model describes the factors influencing language learning as interrelated, exerting direct and indirect impact on the process of language acquisition which effects achievement. The authors note that the model is extendable, since several additional cognitive and affective factors might be present in language learning influencing learning outcome. This model was the first to place emphasis on the interaction of variables, perceiving language learning as a

dynamic process influenced by several interrelated factors. At the same time it is passive (Kim, 2001), since it defines the amount and direction of interactions excluding the possibility of integrating further interactions of variables into the model.

In his review of individual differences Dörnyei (2010) challenges the dichotomy of cognitive and affective factors, stating that the two domains overlap. He interprets IDs as a multifactor "umbrella term", including several underlying factors. Instead of investigating the interaction and effect of isolated areas, Dörnyei suggests the identification of existing (viable) constellations in which "the cognitive and motivation (and also emotional) subsystems of human mind cooperate in a constructive manner" (Dörnyei, p. 267).

Therefore, our investigation is based on Gardner and MacIntyre's (1993) sociocultural framework and its set of variables with the addition of Dörnyei's (2010) points. Hence variables of IDs were perceived as multi-factor constructs where "the constituent components continuously interact with each other and the environment, thereby changing and causing change, and subsequently displaying highly complex developmental pattern" (Dörnyei, p. 267).

Based on the above and relying on findings of prior research among early stage language learners, we conducted our research in a classroom context. *Age, gender* and *parents' education* were included in the study from a group of antecedent (background) variables (Csapó, 2001; Csapó & Nikolov, 2009; Józsa & Nikolov, 2005; Mattheoudakis & Alexiou, 2009; Nikolov & Curtain, 2000). Additional IDs were represented by variables of *language aptitude, strategies of listening comprehension, beliefs* related to language learning, *attitude* towards and *motivation* for language learning and *anxiety to listening comprehension* (Bacsa, 2012; Csizér & Dörnyei, 2002; Dörnyei, 2006, 2009; Kiss, 2009; Kiss & Nikolov, 2005; Mihaljević Djigunović, 2009; Nikolov, 2003a, 2003b, 2007, 2009; Nikolov & Mihaljević Djigunović, 2006, 2011; Yim, 2014). The context of language learning (formal vs. informal) appears in the analysis as a background variable. Aspect of achievement was restricted to the results of listening comprehension tests (Nikolov, 2011; Nikolov & Szabó, 2011a, 2011b; Szabó & Nikolov, 2013) and school marks in English. Following Dörnyei (2010), the research interprets the variables involved in the research as multifactor constructs rather than independent modules and attempts to draw conclusions on changes in student achievement factors affecting the development of listening comprehension by exploring the relationships and constellations of these factors.

3.2 Aim of the Study

We aimed to explore and identify the internal structure, roles and relationships of individual variables in the development of early language learners' listening comprehension based on a multi-factor dynamic model of language learning (Gardner & MacIntyre, 1993) and its reinterpretation (Dörnyei, 2010). A further objective was

to understand the development of young language learners' listening comprehension and the influencing factors of its individual differences along with exploring how these factors affect each other creating a unique pattern in the early language learning context and contributing to listening comprehension achievements. We expected that the research findings would help us understand the development of listening comprehension and IDs as well as explain young learners' achievements and foster the facilitation of developing listening comprehension effectively.

The study addressed the following research questions:

1. What tendencies could be seen in the development of students' listening comprehension over a semester?
2. How do separate components of individual differences change over the assessment period?
3. What relationship (pattern) can be detected between the components of individual differences and how are they related to the students' results in listening comprehension assessments?
4. To what extent do pretest results of individual differences predict posttest achievements?
5. What causal relationship could be found between components of individual differences and student achievements?
6. What relationship (pattern) can be detected between the components of individual differences and how are they related to students' school marks in ESL?
7. To what extent do pretest results of individual differences predict English marks?
8. What causal relationship could be found between components of individual differences and English marks?

4 Method

4.1 Participants

Participants were elementary school students in grade 5 and grade 6. A total of 150 students of EFL were involved in ten school classes of a mid-sized town in Hungary. In order to get results that can be generalized, the sample was representative with regards to gender, ability levels of the student groups and socio-economic status.

4.2 Measures and Procedure

The research design applied the methodologies and measures used in the field and the characteristics of the sample with a preference of mixed methods (Moschener, Anschuetz, Wernke, & Wagener, 2008; Nikolov, 2009; Nunan & Bailey, 2009). (1) *Diagnostic listening comprehension tasks* (Nikolov & Szabó, 2011a, 2011b) were provided for teachers to measure and monitor their students' development of

listening comprehension during the assessment period. (2) *Pretests and posttests* (Nikolov & Józsa, 2006) were applied to measure listening comprehension achievements. Relevant adapted and newly developed questionnaires were used to capture IDs in the following areas: (3) *language aptitude* (Kiss & Nikolov, 2005), (4) *strategies of listening comprehension* (Vandergrift, 2005, 2006), (5) *beliefs about language learning* (Bacsa, 2012), (6) *attitude and motivation related to language learning* (Nikolov, 2003a, 2003b) and (7) *listening anxiety* (Kim, 2005). All the questionnaires applied a 5 point Likert-scale to assess statements. We used (8) *interviews* and (9) *think-aloud protocols* to gain in-depth insight into the functioning of listening comprehension.

The features of the questionnaires and the tests are presented in Tables 1 and 2. A longitudinal design was used covering the period of a semester, involving two measurement sessions (except for language aptitude which was measured once between the two assessment periods). All students were given a booklet including diagnostic tasks of listening comprehension and questionnaires of individual differences. The instruments were administered with the help of classroom teachers, whereas the aptitude and the placement tests were completed under the supervision of the first author. The collected data was analyzed with the help of SPSS 22 and AMOS 20 software.

The development of listening comprehension over the period of 6 months was analyzed in previous papers (Bacsa, 2014; Bacsa & Csíkos, 2013). The specifics of individual differences were identified by detailed investigations of the individual variables, which provided a picture of how these variables influenced student achievement and how they changed between the two testing sessions.

The present study provides a synthesis of the main findings of the longitudinal research on the role of IDs in the development of young language learners' listening

Table 1 Features of the questionnaires applied in the research

Measures of individual differences	Number of items	Number of factors loaded	Cronbach-α pretest	Cronbach-α posttest
MALQ (Vandergrift, 2005)	18	4	0.83	0.84
Attitude and motivation to language learning (Nikolov, 2003a, 2003b)	20	3	0.71	0.83
FLLAS (Kim, 2005)	33	5	0.88	0.92
Beliefs about language learning (Bacsa, 2012)	40	8	0.87	0.91

Table 2 Features of the tests applied in the research

Tests	Number of items	Cronbach-α	Mean (%)	Std. deviation
Language aptitude test (Kiss & Nikolov, 2005)	45	0.81	60.0	15.3
Pretest	16	0.51	56.8	15.6
Posttest (part 1)	16	0.64	62.3	17.6
Posttest (total)	30	0.79	63.8	14.8

comprehension skills. Six variables of individual differences (*aptitude*, *beliefs* about language learning, *strategies* of listening comprehension, *attitude and motivation* toward language learning, *anxiety* about listening comprehension, *parents' education*) and three variables of student achievement (*pretest*, *posttest*, *school marks* in English) were used and their interactions were analyzed, in line with the theoretical framework (Dörnyei, 2010; Gardner & MacIntyre, 1993).

5 Results

5.1 Development in Listening Comprehension

The diagnostic tasks used in this research for the first time were welcomed by most teachers and students and they also received positive reviews as measurement instrument. The results of the series of assessments monitoring the development of listening comprehension show that the majority of the sample continuously developed throughout the assessment period.

As far as the reliability of the measures is concerned, the results show that the pretest reliability figures (Cronbach-$\alpha = 0.51$) were lower than expected and lower than what was found in prior research (Cronbach-$\alpha = 0.72$ in Nikolov & Józsa, 2006), which might partially be explained by the lower item and sample size (Dörnyei, 2007), as well as the lower number of distractors. Therefore, we decided to add validated tests and the modified tests provided sufficient differentiation in the posttest (Cronbach-$\alpha = 0.79$).

A significant increase was found in overall listening comprehension over the semester long assessment period ($t = -4.268$; $p < 0.001$). Subsamples divided by age and gender did not show significant variance; although, boys achieved somewhat lower scores than girls, as did the grade 5 subsample compared to grade 6, where insignificant difference reoccurred on the post-test as well. Significant inter-group variance was found on the pretest [$F(9.127) = 4.90$); $p < 0.001$] and the posttest [$F(9.128) = 13.20$); $p < 0.001$] along with a considerable within-group variance.

5.2 Components of Individual Differences

IDs were assessed by applying quantitative and qualitative research methods. The questionnaires (Attitude and motivation, Beliefs about language learning) were either originally constructed for the age of the sample or adapted (MALQ and FLLS) to their age specifics, by reproducing the original factor structure to measure the construct reliably. This statement is supported by several findings of the qualitative investigations. The reliability indices of subscales deriving from the internal factor structures of the questionnaires were found to be lower in some cases than expected in social scientific research, hence, only those factors were included in the components of

individual differences (final analysis) which reliably measured the construct (Cronbach-α >0.70). This condition was fulfilled by the scales shown in Table 3.

The first component (Cronbach-α = 0.70) is comprised of the strategies used by listeners when concentrating to the task at hand and focusing on understanding English speech. The second component is the factor of foreign language learning motivation and attitude towards school learning and classroom conditions (Cronbach-α = 0.70). The third factor (Cronbach-α = 0.79) includes statements on the learners' self-concept. The fourth component (Cronbach-α = 0.82) refers to feelings, anxiety about focusing attention and following the text, the fifth (Cronbach-α = 0.72) to anxiety about the difficulty of comprehension, the sixth (Cronbach-α = 0.72) to anxiety about unknown words that hinder comprehension. Finally, the seventh factor (Cronbach-α = 0.78) covers beliefs on the difficulty of language learning.

In the first section of the results, descriptive statistical data of the selected components and results of the two assessments are presented (Table 4).

Table 3 Components included in the research synthesis (Cronbach α > 0.70)

Individual differences	Example
Strategy: *directed attention*	"While listening to the text I pay attention to the key words."
Attitude and motivation: *classroom level*	"English classes are extremely boring."
Attitude and motivation: *learner level (self-concept)*	"No matter how I study, I cannot achieve better in English."
Anxiety about listening comprehension: *following the text*	"When a person speaks English very fast, I worry that I might not understand all of it."
Anxiety about listening comprehension: *difficulty of comprehension*	"When someone pronounces words differently from the way I pronounce them, I find it difficult to understand."
Anxiety about listening comprehension: *unknown words*	"I get annoyed when I come across words that I do not understand while listening to English."
Beliefs: *difficulty of language learning*	"I learn English quite easily."

Table 4 Components of individual differences in the two assessments

Components of individual differences	First assessment	Second assessment	t	p
Strategy: *directed attention*	3.68	3.66	0.268	n.s.
Attitude and motivation: *classroom level*	3.79	3.58	2.602	0.010
Attitude and motivation: *learner level (self-concept)*	3.47	3.33	1.973	n.s.
Anxiety about listening comprehension: *following the text*	2.82	2.91	−1.059	n.s.
Anxiety about listening comprehension: *difficulty of comprehension*	2.27	2.66	−4.904	0.000
Anxiety about listening comprehension: *unknown words*	2.68	2.87	−2.049	0.042
Beliefs: *difficulty of language learning*	3.38	3.45	−1.191	n.s.

The data presented in Table 4 show that the revealed (obtained from MALQ) strategy use (metacognitive awareness) of focusing on keywords and understanding scored high in both assessments without a significant difference. Observed strategy use (think-aloud protocol) confirmed the primary usage of focusing on keywords in the listening process. It can also be seen that, based on the average scores, students do not think that they would have difficulties in learning EFL, since they scored high in both assessments on the related belief scales without significant differences. The students' motivational self-concept (learner level) did not reflect a significant change by the end of the school year. However, attitude and motivation in classroom learning decreased significantly by the second assessment, which might be explained by end-of-year exhaustion or incidental negative experiences. The three components of anxiety about listening comprehension scored below 3.00 on average in both assessments, which indicate that the participants' anxiety levels are rather low. In addition, the interviews revealed that their anxiety relates mostly to the test situation and pressure for achievement rather than to the listening comprehension activity itself. The second assessment showed a significant increase in anxiety in case of two variables; however, the increased level does still not reach "general" anxiety level.

In addition to the seven components of individual differences this study includes the results of the *language aptitude test* and *parents' education* which proved to be the main predictors of foreign language achievements of young learners (Csapó & Nikolov, 2009; Kiss & Nikolov, 2005). We wanted to find out to what degree the nine ID variables explain the variance found in the two assessments. Previous research suggested that aptitude would prove to be the best predictor of foreign language learning achievements (Ellis, 1994; Kiss & Nikolov, 2005; Robinson, 2001; Skehan, 1991; Sparks, Patton, & Ganschow, 2011) and that cognitive variables would explain more of the variance in case of younger learners than in older age groups (Csapó & Nikolov, 2009). The results presented in Table 5 support all these prior research findings in both assessments.

Table 5 shows that the components included in the analysis explain 30 % of the variance in the listening comprehension scores in the initial and 46 % in the second

Table 5 Variables of individual differences explaining listening test performances

Individual differences	Pretest	Posttest
Parents' education	1.4	4.6*
Language aptitude	24.4**	29.6**
Strategy: *directed attention*	–0.5	3.2
Attitude and motivation: *classroom level*	1.8	–0.1
Attitude and motivation: *learner level (self-concept)*	–2.1	–1.4
Anxiety about listening comprehension: *following the text*	0.4	–1.2
Anxiety about listening comprehension: *difficulty of comprehension*	1.8	3.3
Anxiety about listening comprehension: *unknown words*	0.0	5.1
Beliefs: *difficulty of language learning*	3.3	2.4
Total variance explained (R^2)	**30 %**	**46 %**

**p < .01; *p < .05

assessment. It can be seen that aptitude accounts for a significant degree of variance in both cases: in the first assessment it gave 80 % of the total explained variance as the only significant factor, whereas in the second assessment it covered 65 % of the total variance explained. In both assessments cognitive factors in the traditional sense (Gardner & MacIntyre, 1992, 1993) explained a higher percentage of variance than affective factors. In the first assessment aptitude was found to be the only significant predictor of listening comprehension results, whereas in the second assessment parents' education also proved to be a significant indicator of student achievement. These findings support the findings of previous research that suggested the primary status of cognitive factors in predicting student achievement in younger age groups (Csapó & Nikolov, 2009; Kiss & Nikolov, 2005). They further indicate that variables of individual differences (e.g., attitude, motivation, strategies, beliefs) cannot be viewed as stable constructs, but they change with time reacting to changes in context (Mihaljević Djigunović, 2009; Robinson, 2001).

5.3 Relationships Between Variables of First Assessment and Listening Comprehension Achievement

In this section the relationship between the components yielded from the two assessment session are explored by attempting to filter the situational effect of the context, thus allowing us to understand young learners' development in their English listening comprehension skills. In the following analyses we studied how the experiences, opinions and beliefs found in the first assessment predicted the development of listening comprehension with the help of the factors outlined above. First, a *cluster analysis* was conducted to see how the certain variables relate to listening comprehension, i.e. what clusters they form around achievement. The dendrogram of the cluster analysis conducted by the *furthest neighbour* method is presented in Fig. 1.

The dendrogram in Fig. 1 reflects four separate clusters. Variables of aptitude and achievement are grouped in a well separated cluster. The other variables link to this by forming smaller individual clusters. Anxiety variables are grouped together, motivation variables are connected to strategies, linking to the cluster formed by beliefs and parents' education. Following the steps based on the proximity of connections it can be seen that aptitude and parents' education are followed by the anxiety components which in turn are followed by beliefs about language learning. Motivation is the last connection to them, supporting the findings that it is the most weakly interacting component with achievement.

Following the system of relationships between the variables, predicting values of individual differences are considered. *Regression analysis* was conducted to reveal these factors. The question was to what degree the independent variables of individual differences (in the first assessment) included in the analysis predicted listening comprehension achievement as dependent variables in the posttest. Table 6 shows the results of the regression analysis.

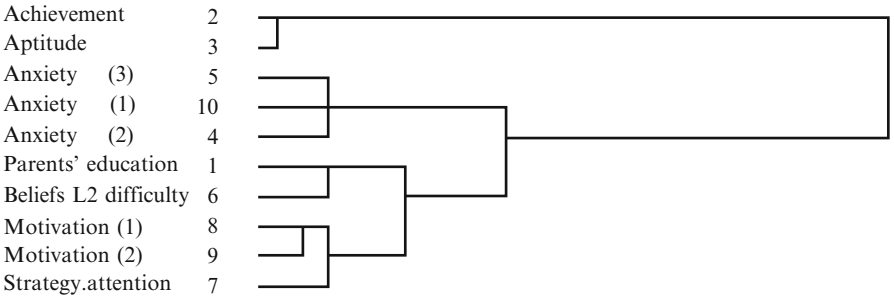

Fig. 1 Dendrogram of variable clusters around listening comprehension achievement. Explanation: *Anxiety (1):* following the test; *Anxiety (2*): difficulty of understanding; *Anxiety (3):* unknown words; *Motivation (1*): classroom level; *Motivation (2*): student level (self-concept)

Table 6 Variables of first assessment predicting listening comprehension achievement

Individual differences	β	r*β (%)
Parents' education	0.185**	4.4**
Language aptitude	0.552**	28.3**
Strategy: *directed attention*	0.041	1.0
Attitude and motivation: *classroom level*	0.051	0.5
Attitude and motivation: *learner level (self-concept)*	–0.144	–1.2
Anxiety about listening comprehension: *following the text*	0.087	0.4
Anxiety about listening comprehension: *difficulty of comprehension*	–0.264**	5.7**
Anxiety about listening comprehension: *unknown words*	0.200*	3.2*
Beliefs: *difficulty of language learning*	0.162*	6.8**
Total variance explained (R^2)		**49 %**

**p<.01; *p<.05

Table 6 shows the β values of the regression analysis and the explained variance of variables (R^2). Five out of the nine variables included in the analysis had significant β values. The nine variables in total explained nearly 50 % of the variance found in the posttest. Half of this is explained by aptitude alone. Parents' education representing the learners' socio-economic status was also found to have significant variance, in line with the majority of other studies conducted in this age group in Hungary (e.g., Bukta & Nikolov, 2002; Csapó & Nikolov, 2009; Józsa & Nikolov, 2005). The three additional variables that represent significant explanatory power relate to the thinking and feeling of the students about the difficulties of language learning and listening comprehension.

Finally the paths supposedly leading to listening comprehension achievement were drawn with the help of *path analysis* (Fig. 2). The objective of the path analysis is to reveal the degree and strength of suggested causal relationships (Münnich & Hidegkuti, 2012). The literature (Everitt & Dunn, 1991) suggests drawing the hypothesized path (just-identified/saturated model) prior to conducting the analysis so that the outcome of the analysis may confirm our assumptions. The present anal-

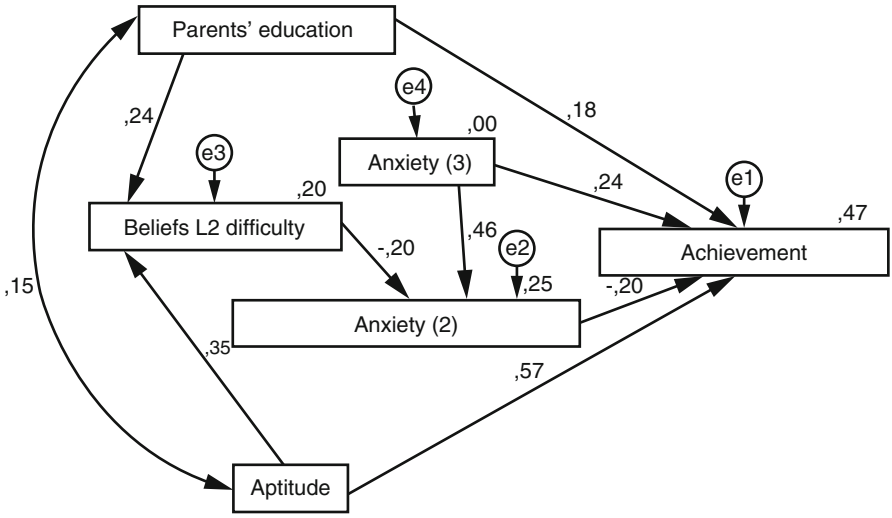

Fig. 2 Variables of individual differences and causal relationships of listening comprehension achievement. *Explanation: Anxiety (2*): difficulty of understanding; *Anxiety (3):* unknown words

ysis was based on Gardner and MacIntyre's (1993) model modified by Dörnyei (2010), where individual variables have both direct and indirect effect on test achievement, and as Dörnyei (2010, p. 267) suggests "the cognitive and motivation (and also emotional) subsystems of human mind cooperate in a constructive manner". Those components of individual variables were included in the path-analysis that resulted in significant β values in the regression analysis. Hence, the final model comprised five variables (exogenous variables) representing the IDs (*aptitude, parents' education, anxiety about the difficulty of understanding and unknown words* and *beliefs on the difficulty of language learning*). The interactions and causal relationships of these exogenous variables could explain the development of student achievement (endogenous variable). The path diagram is shown in Fig. 2 below.

The χ^2*-test* confirmed our null hypothesis, i.e. the saturated and default models were found to be identical. The parameters were evaluated with the method of *maximum likelihood*, which attempts to maximize the value of the likelihood of the criterion variables.

In this section we describe the indexes of model fit. The saturated model had 27 parameters, the tested model had 21, degrees of freedom (df) was 6 (NPAR). Values of $\chi^2 = 7.95$, $p = 0.242$ indicate that the model fit between the saturated model and the data was not (significantly) worse than between the data and the default model. It can be seen that path coefficients (β values) that are found next to the arrows in the diagram (Fig. 2) are significant in each case. NFI = 0.949 and CFI = 0.986 values reflect optimal fit, since both indicators exceed the 0.9 (good fit) level. Finally, RMSEA = 0.034 value also suggests good model fit: lower than 0.05.

The five variables in the model account for 47 % of the total variance of achievement. The multivariate analysis of individual differences and test achievements

revealed that components of individual variables exert both direct and indirect effect on student achievement. The biggest direct effect on achievement (β = 0.57) was found in case of *language aptitude*, which also directly effected the students' *beliefs on language learning* (β = 0.35). Beliefs, on the other hand, indirectly influence achievement through *feelings related to the difficulty of listening comprehension* (anxiety or the lack of it). *Parents' education* has both a direct (β = 0.18) and an indirect effect on achievement through the related beliefs and feelings. *Anxiety concerning unknown words* was also found to exert a significant impact on achievement directly (β = 0.24) and indirectly through *anxiety about comprehension* (β = 0.46).

It can be stated that students' beliefs act as a mediator of the effects of their aptitude and their parents' education, making their way to achievement through emotional states. In other words, student beliefs, what they think about language learning, and their emotions, how they feel in the learning process, interact in determining children's development. The effect of beliefs on anxiety about listening comprehension (β = −0.20) and the effect of anxiety about listening comprehension on achievement (β = −0.20) are both negative, as expected based on the correlations. Those who are less anxious expect English to be easier and have a more positive self-concept as language learners. Consequently, those who are more positively inclined toward language learning achieve better, which is certainly also true the other way around.

School marks were used as additional measures of student achievement that evaluate their work throughout the school year. In the next section we discuss the relationships between IDs and the students' English marks in order to compare the overlaps of the two achievement variable with the variables of individual differences.

5.4 Relationships Between Variables of the First Assessment and English Marks

In Hungarian educational practice, the most significant indicators of school achievement are school marks, due to the lack of standardized methods and instruments of assessment that are the foundation of consistent evaluation of achievement in school subjects in other countries. School marks are traditionally used as indicators of student achievement, although research on school marks (Csapó, 2002a, 2002b) highlighted several controversial phenomena: school marks weakly correlate with the actual knowledge measured by knowledge tests based on the school curriculum and text books (Csapó, 2002b). In this respect, English as a school subject is in a better position compared to other subject, since the highest correlation was found between test results and school marks (r = 0.52 in grades seven and eight). This finding was explained by traditions in standardized testing in English language assessment in contrast with other school subjects, since language proficiency exams have clearly defined criteria and hence measuring language skills must have improved practice (Csapó).

The discussion of student achievement is complemented by a detailed description of the relationships between English marks and ID variables and we attempt to clarify causal relationships by including this achievement indicator in the path analysis. First, a *cluster analysis* was conducted to explore the system of relationship between the ID variables and to highlight how these variables are grouped in connecting to school achievement. *Furthest neighbour* method was used in the cluster analysis. The dendrogram of the results is shown in Fig. 3.

The variables shown in Fig. 3 are grouped in two larger clusters containing three smaller clusters. Aptitude formed a separate cluster. By reviewing the steps of cluster formation it can be seen how the individual variables relate to one another. English mark is grouped in one cluster with the components of strategy and motivation, whereas aptitude forms a separate cluster with the components of individual differences.

Next, the predictive effect of individual difference variables on English marks was analyzed. Table 7 shows the β and explained variance values of the nine variables.

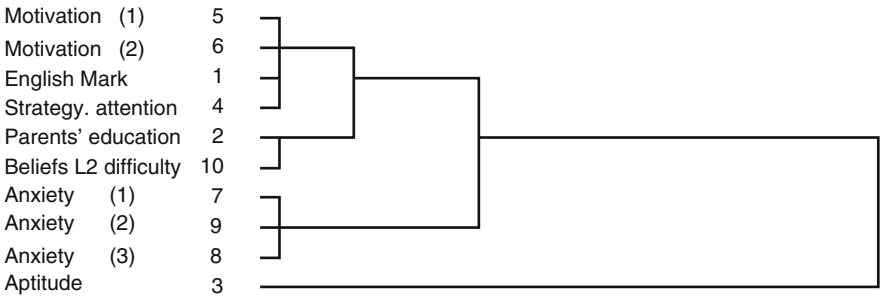

Fig. 3 Dendrogram of clusters around English marks. *Explanation: Motivation (1): classroom level; Motivation (2): student level (self-concept); Anxiety (1): following the text; Anxiety (2): difficulty of understanding; Anxiety (3): unknown words*

Table 7 Variables of first assessment predicting English language marks

Individual differences	β	r*β (%)
Parents' education	0.140	3.9
Language aptitude	0.352**	17.4**
Strategy: *directed attention*	0.195**	6.3**
Attitude and motivation: *classroom level*	–0.010	–0.2
Attitude and motivation: *learner level (self-concept)*	0.260**	11.0**
Anxiety about listening comprehension: *following the text*	0.034	–0.3
Anxiety about listening comprehension: *difficulty of comprehension*	0.016	–0.2
Anxiety about listening comprehension: *unknown words*	–0.084	1.1
Beliefs: *difficulty of language learning*	–0.009	–0.3
Total variance explained (R^2)		**38 %**

**p < .01

According to the data in Table 7, the total variance explained comes close to 40 %. It is apparent that only three variables have significant β values predicting English marks. Aptitude has the highest share in the variance explained, accounting for almost 50 % of the total. The second most significant predictor is the level of student motivation and attitude, i.e. self-concept of the learner, describing how successful or less successful the students perceive themselves. The third significant variable is strategy of directed attention to the keywords; metacognitive awareness about listening comprehension is one of the most important and most frequently applied strategies of listening comprehension, as was confirmed in student interviews. It is also shown that parents' education does not directly predict English marks.

Finally, a *path-analysis* was conducted involving the significant variables resulting from *regression analysis* in order to reveal causal relationships between the variables in relation to the English marks and the paths leading from IDs to student achievement evaluated by school marks. Figure 4 shows the *path-diagram* of assumed causal relationships.

Three of the ID variables had significant β values, meaning that the direct and indirect effects of these three variables explain the variance in English marks. First, the parameters of model fit are reviewed. The saturated model had 14 parameters, the tested model 13, df was 1. Values of $\chi^2 = 0.088$, $p = 0.767$ suggest that the test was not significant, showing that the tested model is a good fit. Path-coefficients (β values) are significant in all relationships. NFI = 0.999 and CFI = 1.000 values also reflect adequate level, exceeding 0.9 (good fit) level. Finally, RMSEA < 0.001 is well below 0.05, indicating good model fit.

There are different paths, however, leading to school marks, the other variable of student achievement. Also, the predictive force of ID variables was considerably lower (35 %) in this case. The most reliable predictor of English language school

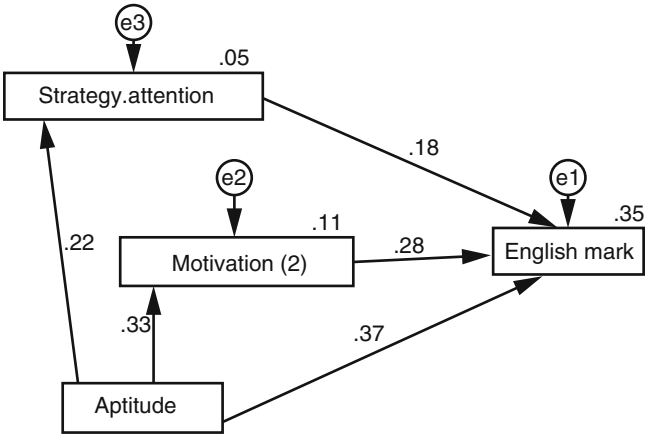

Fig. 4 Variables of IDs and causal relationships of English language marks. *Explanation: Motivation (2)*: student level (self-concept)

marks was *language aptitude* both directly (β =0.37) and indirectly influencing school marks. In this latter case the effect of language aptitude was mediated by the *attention to keywords strategy* (β =0.22) and learners' *self-concept as a motive* (β=0.33). These variables had a significant direct effect on marks. As is shown in Fig. 4, mainly cognitive factors in the traditional sense account for the English marks. From the affective factors, only motivational self-concept impacts the marks.

The resulting paths in both analyses seem to support Dörnyei's assumption (2010): we interpret IDs as dynamic interactions of hierarchically organized components and cognitive and affective factors (within and between themselves) as overlapping rather than dichotomic constructs. It became clear that the two achievement variables, listening comprehension test achievement and English school marks, were explained by different variables of individual differences to a different extent.

6 Conclusion

The findings of the research are in line with the predictions of the theoretical framework (Dörnyei, 2006, 2009, 2010; Gardner & MacIntyre, 1992, 1993): the ID variables are multifactor constructs in themselves, the constituents are in constant interaction with each other and their environment, changing and consequently creating a complex pattern of development. Both the components of individual differences and systemic models of the connections in student achievement support Dörnyei's assumption (2010) that the traditional separation of cognitive and affective variables (Gardner & MacIntyre, 1992, 1993) can be problematic.

The findings confirmed that language aptitude and parents' education are significant predictors of young learners' listening comprehension achievements (Csapó & Nikolov, 2009; Józsa & Nikolov, 2005; Kiss & Nikolov, 2005). The other primary factor in the traditional sense (Gardner & MacIntyre, 1993), the motivational component, was excluded from the predictive model of listening comprehension achievement. This seems to contradict previous findings, however, motivation was found to significantly predict school achievement represented by the English marks in this research, in line with others' findings (Dörnyei, 2009, 2010; Mihaljević Djigunović, 2006, 2009, 2014).

It was also revealed that listening comprehension achievement is predicted by the interaction between IDs and the learning context which is constantly changing throughout the learning process (Dörnyei, 2006, 2009, 2010; Mihaljević Djigunović, 2009).

Additionally, the findings shed light on the fact that learners' beliefs, thoughts and feelings related to the difficulty of language learning and students' aptitude have a significant effect both on one another and on achievement (Aragao, 2011; Bacsa, 2012). This means that what young learners think or believe about language learning and how they feel about their learning experience impact their achievement in listening comprehension. According to our model, these beliefs are rooted in the

young learners' social background (indicated by their parents' education) and language aptitude, and the direction of these relationships is the opposite of that displayed in Gardner and MacIntyre's (1993) model.

6.1 Implications and Direction for Further Research

There is a scarcity on the Hungarian research scene of instruments measuring early language learners' individual differences. This research has taken a step closer to developing the methods needed to explore individual differences and to understand the functioning of the already existing instruments for early language learners. Our findings could assist language teachers in identifying the strengths and weaknesses of their learners and discovering the potential in developing listening comprehension of early language learners. Accurate diagnosis could lead to the facilitation of learners' development and training programs.

This research investigated the development of a single skill from the perspective of the multifactor construct of individual differences. Further research involving larger, potentially representative samples would be needed to test the reliability of the instruments we applied and to gather more data from various perspectives on how they could be improved. More measures developed specifically for young learners would also be needed to explore additional hidden aspects of individual differences. Furthermore, it would be important to examine reading, writing and speaking in similar circumstances by using diagnostic measures in order to better understand their development, and to allow teachers to facilitate their young learners better.

References

Ackerman, P. L. (2003). Aptitude complexes and trait complexes. *Educational Psychologist, 38*, 85–93.

Alderson, J. C. (2005). *Diagnosing foreign language proficiency: The interface between learning and assessment*. London: Continuum.

Aragao, R. (2011). Beliefs and emotions on foreign language learning. *System, 39*(3), 302–313.

Bachman, L. F., & Palmer, A. S. (1996). *Language testing in practice*. Oxford, UK: Oxford University Press.

Bacsa, É. (2012). Az idegennyelv–tanulással kapcsolatos meggyőződések vizsgálata általános és középiskolás tanulók körében [Beliefs about language learning]. *Magyar Pedagógia, 112*(3), 167–193.

Bacsa, É. (2014). *The contribution of individual differences to the development of young learners' listening performances*. Doctoral thesis, University of Szeged, Szeged, Hungary. Retrieved from http://www.doktori.hu/index.php?menuid=193&vid=13859

Bacsa, É., & Csíkos, Cs. (2013). *The contribution of individual differences to the development of young learners' listening performances*. 15th European conference for the research on learning and instruction: "Responsible Teaching and Sustainable Learning". Munich, Germany: TUM.

Bors, L., Lugossy, R., & Nikolov, M. (2001). Az angol nyelv oktatása pécsi általános iskolákban [Teaching English in elementary schools in Pécs]. *Iskolakultúra, 1*(4), 73–88.

Brózik-Piniel, K. (2009). *The development of foreign language classroom anxiety in secondary school*. Doctoral thesis, ELTE, Budapest, Hungary. Retrieved from http://www.doktori.hu/index.php?menuid=193&vid=4014

Brown, H. D. (1994). *Teaching by Principles: An interactive approach to language pedagogy*. New York: Prentice Hall Regents.

Bukta, K., & Nikolov, M. (2002). Nyelvtanítás és hasznos nyelvtudás: az angol mint idegen nyelv [Teaching a language for usable language competence: the case of English as foreign language.] In B. Csapó (Ed.), *Az iskolai műveltség* [School literacy] (pp. 169–192). Budapest, Hungary: Osiris.

Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to language learning and testing. *Applied Linguistics, 1*, 1–47.

Chang, A. C., & Read, J. (2007). Support for foreign language listeners: Its effectiveness and limitations. *RELC Journal, 38*(3), 375–395.

Cohen, A. D. (1998). *Strategies for learning and using a second language*. New York: Longman.

Council of Europe. (2001). *Common European framework of reference for languages: Learning, teaching, assessment*. Cambridge, UK: Cambridge University Press.

Csapó, B. (2001). A nyelvtanulást és a nyelvtudást befolyásoló tényezők [Factors affecting language competence and language learning]. *Iskolakultúra, 1*(8), 25–35.

Csapó, B. (2002a). Az iskolai tudás felszíni rétegei: Mit tükröznek az osztályzatok? [The superficial stratum of school knowledge: What are school marks for?]. In B. Csapó (Ed.), *Az iskolai tudás* [School knowledge] (pp. 37–63). Budapest, Hungary: Osiris.

Csapó, B. (2002b). Iskolai osztályzatok, attitűdök, műveltség [School marks, attitudes, and literacy]. In B. Csapó (Ed.), *Az iskolai műveltség* [School literacy] (pp. 37–65). Budapest, Hungary: Osiris.

Csapó, B., & Nikolov, M. (2009). The cognitive contribution to the development of proficiency in a foreign language. *Learning and Individual Differences, 19*, 209–218.

Csíkos Cs., & Bacsa, É. (2011). *Measuring beliefs about language learning*. Paper presented at the meeting of the 14th biennial conference for research on learning and instruction: "Education for a Global Networked Society". Exeter, UK: University of Exeter.

Csizér, K., & Dörnyei, Z. (2002). Az általános iskolások idegen nyelv-tanulási attitűdje és motivációja [Language learning attitudes and motivation among primary school children]. *Magyar Pedagógia, 102*(3), 333–353.

Csizér, K., Dörnyei, Z., & Németh, N. (2004). A nyelvi attitűdök és az idegen nyelvi motiváció változásai 1993 és 2004 között Magyarországon [Changes in language attitudes and motivation to learn foreign languages in Hungary, 1993–2004]. *Magyar Pedagógia, 104*(4), 393–408.

Dörnyei, Z. (1998). Motivation in second and foreign language learning. *Language Teaching, 31*, 117–135.

Dörnyei, Z. (2001). New themes and approaches in second language motivation research. *Annual Review of Applied Linguistics, 21*, 43–59.

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Laurence Erlbaum Associates.

Dörnyei, Z. (2006). Individual differences in second language acquisition. *AILA Review, 19*, 42–68.

Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford, NY: Oxford University Press.

Dörnyei, Z. (2009). Individual differences: Interplay of learner characteristics and learning environment. *Language Learning, 59*(1), 230–248.

Dörnyei, Z. (2010). The relationship between language aptitude and language learning motivation: Individual differences from a dynamic systems perspective. In E. Macaro (Ed.), *Continuum companion to second language acquisition* (pp. 247–267). London: Continuum.

Dörnyei, Z., & Csizér, K. (2002). Some dynamics of language attitudes and motivation: Results of a longitudinal nationwide survey. *Applied Linguistics, 23*(4), 421–462.

Dörnyei, Z., MacIntyre, P. D., & Henry, A. (2015). Introduction: Applying complex dynamic systems principles to empirical research on L2 motivation. In Z. Dörnyei, P. D. MacIntyre, & A. Henry (Eds.), *Motivational dynamics in language learning* (pp. 1–7). Bristol, UK: Multilingual Matters.

Dörnyei, Z., & Skehan, P. (2003). Individual differences in second language learning. In C. J. Doughty & M. H. Long (Eds.), *The handbook of second language acquisition* (pp. 589–630). Oxford, NY: Blackwell.

Dunkel, P. (1986). Developing listening fluency in L2: Theoretical principles and pedagogical considerations. *Modern Language Journal, 70*, 99–106.

Ellis, R. (1994). *The study of second language acquisition*. Oxford, NY: Oxford University Press.

Everitt, B. S., & Dunn, G. (1991). *Applied multivariate data analysis*. London: Edward Arnold.

Eysenck, M. W., & Kean, M. T. (2005). *Cognitive psychology: A student's handbook*. Hove, UK: Psychology Press.

Field, J. (2004). An insight into listeners' problems: Too much bottom-up or too much top down? *System, 32*(3), 363–377.

Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London: Edward Arnold.

Gardner, R. C., & MacIntyre, P. D. (1992). A student's contributions to second language learning. Part I: Cognitive variables. *Language Teaching, 25*, 211–220.

Gardner, R. C., & MacIntyre, P. D. (1993). A student's contributions to second language learning. Part II: Affective e variables. *Language Teaching, 26*, 1–11.

Goh, C. C. M. (2008). Metacognitive instruction for second language listening development: Theory, practice and research implications. *RELC Journal, 39*(2), 188–213.

Griffiths, C. (2003). Patterns of language learning strategy use. *System, 31*(3), 367–383.

Halle, T., Hair, E., Wandner, L., McNamara, M., & Chien, N. (2012). Predictors and outcomes of early versus later English language proficiency among language learners. *Early Choldhood Research Quarterly, 27*, 1–20.

Hardy, J. (2004). Általános iskolás tanulók attitűdje és motivációja az angol mint idegen nyelv tanulására [The attitude and motivation of primary school children for learning English as a foreign language]. *Magyar Pedagógia, 104*(2), 225–242.

Hasselgren, A. (2000). The assessment of the English ability of young learners in Norwegian schools: an innovative approach. *Language Testing, 17*(2), 261–277.

Heitzmann, J. (2009). The influence of the classroom climate on students' motivation. In R. Lugossy, J. Horváth, & M. Nikolov (Eds.), *UPRT 2008: Empirical studies in English applied linguistics* (pp. 207–224). Pécs, Hungary: Lingua Franca Csoport.

Moon, J., & Nikolov, M. (2000). *Research into teaching English to young Learners*. Pécs, Hungary: University Press.

Inbar-Lourie, O., & Shohamy, E. (2009). Assessing young language learners: What is the construct? In M. Nikolov (Ed.), *The age factor and early language learning* (pp. 83–96). Berlin, Germany: Mouton de Gruyter.

Johnson, K. (2001). *An introduction to foreign language learning and teaching*. London: Longman.

Józsa, K., & Nikolov, M. (2003). *Az idegen nyelvi készségek fejlettsége angol és német nyelvből a 6. és 10. évfolyamon a 2002/2003-as tanévben* [Levels of performances in English and German in year 6 and 10]. Budapest, Hungary: OKÉV.

Józsa, K., & Nikolov, M. (2005). Az angol és német nyelvi készségek fejlettségét befolyásoló tényezők [Factors influencing achievement in English and German as foreign languages]. *Magyar Pedagógia, 105*(3), 307–337.

Kim, Y. (2001). *Foreign language anxiety as an individual difference variable in performance: An interactionist's perspective* (ERIC Document Reproduction Service No. ED 457 695)

Kim, J. (2005). The reliability and validity of a foreign language listening anxiety scale. *Korean Journal of English Language and Linguistics, 5*(2), 213–235.

Kiss, C. (2009). The role of aptitude in young learner's foreign language learning. In M. Nikolov (Ed.), *The age factor and early language learning* (pp. 253–276). Berlin, Germany: Mouton de Gruyter.

Kiss, C., & Nikolov, M. (2005). Developing, piloting, and validating an instrument to measure young learners' aptitude. *Language Learning, 55*(1), 99–150.
Kormos, J. (2012). The role of individual differences in L2 writing. *Journal of Second Language Writing, 21*, 390–403.
Krashen, S. (1985). *The input hypothesis: Issues and implications*. New York: Longman.
Lantolf, J. P., & Poehner, M. E. (2011). Dynamic assessment in the classroom: Vygotskian praxis for second language development. *Language Teaching Research, 15*(1), 11–33.
Larsen-Freeman, D., & Long, M. H. (1991). *An introduction to second language acquisition research*. London: Longman.
Larson-Hall, J. (2008). Weighing the benefits of studying a foreign language at a younger starting age in a minimal input situation. *Second Language Research, 24*(1), 35–63.
MacWhinney, B. (2005). A unified model of language acquisition. In J. F. Kroll & A. M. B. De Groot (Eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 49–67). Oxford, UK: Oxford University Press.
Marslen-Wilson, W., & Tyler, L. K. (1980). The temporal structure of spoken language understanding. *Cognition, 8*, 1–71.
Martin, A. J. (2009). Motivation and engagement across the academic life span. *Educational and Psychological Measurement, 69*, 794–824.
Matsuda, S., & Gobel, P. (2004). Anxiety and predictors of performance in the foreign language classroom. *System, 32*(1), 21–36.
Mattheoudakis, M., & Alexiou, T. (2009). Early language instruction in Greece: Socioeconomic factors and their effect on young learner's language development. In M. Nikolov (Ed.), *The age factor and early language learning* (pp. 227–252). Berlin, Germany: Mouton de Gruyter.
McKay, P. (2006). *Assessing young learners*. Cambridge: Cambridge University Press.
Mihaljević Djigunović, J. (2006). Role of affective factors in the development of productive skills. In M. Nikolov & J. Horváth (Eds.), *UPRT 2006: Empirical studies in English applied linguistics* (pp. 9–23). Pécs, Hungary: Lingua Franca Csoport.
Mihaljević Djigunović, J. (2009). Individual differences in early language programmes. In M. Nikolov (Ed.), *The age factor and early language learning* (pp. 198–223). Berlin, Germany: Mouton de Gruyter.
Mihaljević Djigunović, J. (2010). Starting age and L1 and L2 interaction. *International Journal of Bilingualism, 14*(3), 303–314.
Mihaljević Djigunović, J. (2014). Developmental and interactional aspects of young EFL learners' self-concept. In J. Horváth & P. Medgyes (Eds.), *Studies in honour of Marianne Nikolov* (pp. 37–50). Pécs, Hungary: Lingua Franca Csoport.
Mihaljević Djigunović, J. (2016). Individual differences and young learners' performance on L2 speaking tests. In M. Nikolov (Ed.), *Assessing young learners of English: Global and local perspectives*. New York: Springer.
Mónus, K. (2004). *Learner strategies of Hungarian secondary grammar school students*. Budapest, Hungary: Akadémiai Kiadó.
Mordaunt, O. G., & Olson, D. W. (2010). Listen, listen, listen and listen: building a comprehension corpus and making it comprehensible. *Educational Studies, 36*(3), 249–258.
Moschener, B., Anschuetz, A., Wernke, S., & Wagener, U. (2008). Measurement of epistemological beliefs and learning strategies of elementary school children. In M. S. Khine (Ed.), *Knowing, knowledge and beliefs* (pp. 113–137). New York: Springer.
Münnich, Á., & Hidegkuti, I. (2012). Strukturális egyenletek modelljei: Oksági viszonyok és complex elméletek vizsgálata pszichológiai kutatásokban [Models of structural equations: The investigation of causal relations and complex tehories in psychological research]. *Alkalmazott Pszichológia, 12*(1), 77–102.
National Core Curriculum (2003). Budapest, Hungary: Oktatási Minisztérium.
Nikolov, M. (2000). Issues in research into early FL programmes. In J. Moon & M. Nikolov (Eds.), *Research into teaching English to young learners* (pp. 21–48). Pécs, Hungary: University Press Pécs.

Nikolov, M. (2003a). Angolul és németül tanuló diákok nyelvtanulási attitűdje és motivációja [Attitudes and motivation of English and German learners]. *Iskolakultúra, 3*(8), 61–73.

Nikolov, M. (2003b). Hatodikosok stratégiahasználata olvasott szöveg értését és íráskészséget mérő feladatokon angol nyelvből [Sixth-graders' test-taking strategies on reading and writing tasks]. *Magyar Pedagógia, 103*(1), 5–34.

Nikolov, M. (2007). Variables influencing Hungarian 6th graders' foreign language learning and development. In A. Sheorey & J. Kiss-Gulyas (Eds.), *Studies in applied and theoretical linguistics* (pp. 1–24). Debrecen, Hungary: Kossuth Egyetemi Kiadó.

Nikolov, M. (Ed.). (2009). *The age factor and early language learning*. Berlin, Germany/New York: Mouton de Gruyter.

Nikolov, M. (2011). Az angol nyelvtudás fejlesztésének és értékelésének keretei az általános iskola első hat évfolyamán [A framework for developing and assessing English language proficiency in the first six grades of primary school]. *Modern Nyelvoktatás, 17*(1), 9–32.

Nikolov, M. (2016). A framework for young EFL learners' diagnostic assessment: Can do statements and task types. In M. Nikolov (Ed.), *Assessing young learners of English: Global and local perspectives*. New York: Springer.

Nikolov, M., & Curtain, H. (Eds.). (2000). *An early start: Young learners and modern languages in Europe and beyond*. Strasbourg, France: Council of Europe.

Nikolov, M., & Józsa, K. (2006). Relationships between language achievements in English and German and classroom-related variables. In M. Nikolov & J. Horváth (Eds.), *UPRT 2006: Empirical studies in English applied linguistics* (pp. 197–224). Pécs, Hungary: Lingua Franca Csoport, PTE.

Nikolov, M., & Mihaljević Djigunović, J. (2006). Recent research on age, second language acquisition, and early foreign language learning. *Annual Review of Applied Linguistics, 26*, 234–260.

Nikolov, M., & Mihaljević Djigunović, J. (2011). All shades of every colour: An overview of early teaching and learning of foreign languages. *Annual Review of Applied Linguistics, 31*, 95–119.

Nikolov, M., & Szabó, G. (2011a). Az angol nyelvtudás diagnosztikus mérésének és fejlesztésének lehetőségei az általános iskola 1–6. évfolyamán [Diagnostic assessment and development of English language knowledge in grades 1 to 6 in the primary school]. In B. Csapó & A. Zsolnai (Eds.), *Akognitív és affektív fejlődés diagnosztikus mérése az iskola kezdő szakaszában* (pp. 13–40). Budapest, Hungary: Nemzeti Tankönyvkiadó.

Nikolov, M., & Szabó, G. (2011b). Establishing difficulty levels of diagnostic listening comprehension tests for young learners of English. *UPRT* 73–82.

Nunan, D., & Bailey, K. M. (2009). *Exploring second language classroom research: A comprehensive guide*. Boston, MA: Heinle, Cengage Learning.

O'Malley, J., & Chamot, U. (1990). *Learning strategies in second language acquisition*. Cambridge, UK: Cambridge University Press.

Ottó, I. (2003). A nyelvérzék és mérése [Foreign language aptitude and its measurement]. *Alkalmazott Pszichológia, 5*(2), 57–64.

Oxford, R. (1990). *Language learning strategies: What every teacher should know*. New York: Newbury House/Harper and Row.

Richards, J. C. (2005). Second thoughts on teaching listening. *RELC Journal, 36*(1), 85–92.

Robinson, P. (2001). Individual differences, cognitive, abilities, aptitude complexes and learning conditions in second language acquisition. *Second Language Research, 17*(4), 368–392.

Rost, M. (2002). *Teaching and researching listening*. London: Longman.

Sáfár, A., & Kormos, J. (2008). Revisiting problems with foreign language aptitude. *International Review of Applied Linguistics in Language Teaching, 46*(2), 113–136.

Simon, O. (2001). A magyar és angol beszédészlelési és beszédmegértési teljesítmény összefüggései 11–12 évesek körében [Connections between speech perception and listening comprehension in Hungarian and English languages]. *Alkalmazott Nyelvtudomány, 1*(2), 45–61.

Skehan, P. (1991). Individual differences in second language learning. *Studies in Second Language Acquisition, 13*, 275–298.

Skehan, P. (1998). *A cognitive approach to language learning*. Oxford, UK: Oxford University Press.

Sparks, R. L., Patton, J., & Ganschow, L. (2011). Subcomponents of second-language aptitude and second-language proficiency. *The Modern Language Journal, 95*, 253–273.

Spinath, B., & Spinath, F. M. (2005). Longitudinal analysis of the link between learning motivation and competence beliefs among elementary school children. *Learning and Instruction, 15*, 87–102.

Sternberg, R. J., & Grigorenko, E. L. (2002). *Dynamic testing: The nature and measurement of learning potential*. Cambridge, UK: Cambridge University Press.

Szabó, G., & Nikolov, M. (2013). An analysis of young learners' feedback on diagnostic listening comprehension tests. In M. J. Djigunovic, & M. Medved Krajnovic (Eds.), *UZRT 2012: Empirical studies in English applied linguistics*. Zagreb, Croatia: FF press. http://books.google.hu/books?id=VnR3DZsHG6UC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

Tóth, Z. (2008). A foreign language anxiety scale for Hungarian learners of English. *WoPaLP, 2*, 55–78.

Tóth, Z. (2009). Foreign language anxiety: For beginners only? In R. Lugossy, J. Horváth, & M. Nikolov (Eds.), *UPRT, 2008. Empirical studies in applied linguistics* (pp. 225–246). Pécs, Hungary: Lingua Franca Csoport.

Vandergrift, L. (2005). Relationship among motivation orientations, metacognitive awareness and proficiency in L2 listening. *Applied Linguistics, 26*(1), 70–89.

Vandergrift, L. (2006). Second language listening: Listening ability or language proficiency? *The Modern Language Journal, 90*, 6–18.

Vandergrift, L. (2012). Listening: Theory and practice in modern foreign language competence. https://www.llas.ac.uk//resources/gpg/67

Wenden, A., & Rubin, J. (1987). *Learner strategies in language learning*. Hemel Hemstead, UK: Prentice Hall.

Wilden, E., & Porsch, R. (2016). Learning EFL from Year 1 or Year 3? A Comparative study on children's EFL listening and reading comprehension at the end of primary education. In M. Nikolov (Ed.), *Assessing young learners of English: Global and local perspectives*. New York: Springer.

Woodrow, L. (2006). Anxiety and speaking English as a second language. *RELC Journal, 37*(3), 308–328.

Yim, S. Y. (2014). An anxiety model for EFL young learners: A path analysis. *System, 42*, 344–354.

Éva Bacsa is deputy headteacher at Kiss Bálint Reformed School in Szentes, Hungary. She holds PhD in educational science. Her research interest includes individual learner differences in early language learning.

Csaba Csíkos is associate professor of education at the University of Szeged, Institute of Education. His research topics include assessing and improving children's higher level thinking skills, and his previous publications focused primarily on mathematical abilities and reading strategies.