3 INDIVIDUAL DIFFERENCES IN SECOND LANGUAGE LEARNING

Before you read this chapter, reflect on your own experience as a language learner. Then interview several friends, colleagues, or family members about their experiences learning a second or foreign language. If there is a language they speak with a high level of proficiency, ask about the environment in which the language was heard and used, the kind of instruction (if any) they received, how long they used the language, and the age at which they began learning. Ask about the kinds of relationships they had with speakers of the language and whether they felt a part of a community in which it is spoken. Ask whether there is a language they failed to learn, even though they had some exposure to, or instruction in, that language. Keep notes about your own experiences and those of the people you interview and refer to them as you read this chapter about individual differences in second language learning.

As we saw in Chapter 1, children are almost always successful in acquiring the language or languages that are spoken (or signed) to them in early childhood, provided that they have adequate opportunities to use the language over a period of several years. This contrasts with our experience of second language learners, whose success varies greatly.

Many of us believe that individual differences that are inherent in the learner can predict success or failure in language learning. Such beliefs may be based on our own experience or that of people we have known. For example, many teachers are convinced that extroverted learners who interact without inhibition in the second language and seek opportunities to practise language skills will be the most successful learners. In addition to an outgoing personality, other characteristics often believed to predict success in language learning are intelligence, aptitude, motivation, and the age at which learning begins.

In this chapter, we will see whether these intuitions are supported by research findings. To what extent can we predict differences in the success of second language acquisition if we have information about learners' personalities, their general and specific intellectual abilities, their motivation, or their age?

Who is a 'good language learner'?

We know that some people learn languages more quickly than others. Even in first language acquisition, the rate of development varies widely. Some children can string together five-, six-, and seven-word sentences at an age when other children are just beginning to label items in their immediate environment. Nevertheless, children eventually master their first language.

It has been observed countless times that, in the same foreign language class, some students progress rapidly while others struggle along making very slow progress. Even in what seem to be ideal conditions, some learners seem to make little progress in learning. Researchers—for example, Neil Naiman and his colleagues (1995)—have tried to identify the personal characteristics that make one learner more successful than another.

Table 3.1 shows a list of some of the characteristics that have been thought to contribute to successful language learning. In your experience—as a second language learner or teacher—which characteristics seem to you most likely to be associated with success in second language acquisition in the classroom? Which ones do you think are less important?

The characteristics listed in Table 3.1 can be classified into several categories: motivation, intellectual abilities, personality, and learning preferences. However, many of the characteristics cannot be assigned exclusively to one category. For example, 'is willing to make mistakes' can be considered a personality characteristic. It might also be seen as an aspect of motivation if the learner is willing to make mistakes in order to get a message across.

Research on learner characteristics

Perhaps the best way to begin our discussion is to describe how research on the influence of individual differences on second language learning is usually done. When researchers are interested in finding out whether a VARIABLE such as motivation affects second language learning, they usually select a group of learners and give them a questionnaire to measure the type and degree of their motivation. Then some kind of test is used to assess their second language proficiency. The test and the questionnaire are both scored, and the researcher uses a statistical procedure called a CORRELATION. The correlation shows how likely it is that learners with high scores on the motivation questionnaire will also have high scores on the language test. If the two variables (motivation and language proficiency) are found to be positively correlated, the researcher will try to discover just what the relationship between them is.

Rate each of the following characteristics on a scale of 1–5. Use 1 to indicate a characteristic that you think is 'very important' and 5 to indicate a characteristic that you consider 'not at all important' in predicting success in second language learning.

A good language learner:

a	is a willing and accurate guesser	1	2	3	4	5
b	tries to get a message across even if specific language knowledge is lacking	1	2	3	4	5
c	is willing to make mistakes	1	2	3	4	5
d	constantly looks for patterns in the language	1	2	3	4	5
e	practises as often as possible	1	2	3	4	5
f	analyses his or her own speech and the speech of others	1	2	3	4	5
g	attends to whether his or her performance meets the standards he or she has learned	1	2	3	4	5
h	enjoys grammar exercises	1	2	3	4	5
i	begins learning in childhood	1	2	3	4	5
j	has an above-average IQ	1	2	3	4	5
k	has good academic skills	1	2	3	4	5
l	has a good self-image and lots of confidence	1	2	3	4	5

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Table 3.1 Characteristics of the 'good language learner'

Although the correlation procedure seems straightforward, it requires careful interpretation. One problem is that, unlike variables such as height or age, it is not possible to directly observe and measure variables such as motivation, extroversion, or even intelligence. These are just labels for an entire range of behaviours and characteristics. Furthermore, characteristics such as these are not independent of each other, and researchers have sometimes used the same label to describe different sets of behavioural traits. For example, in motivation questionnaires, learners may be asked how often they have opportunities to use their second language with native speakers. The assumption behind the question is that those who report that they frequently have such opportunities are highly motivated to learn. This seems reasonable, but it is not so simple. If a learner responds that he or she frequently interacts with speakers of the second language, it may not be because he or she is more motivated to learn. Rather, it might be that this

individual lives where there are more opportunities for language practice in informal contexts than those who report a low frequency of interaction. Because it is usually impossible to separate these two variables (i.e. willingness to interact and opportunities to interact), we cannot conclude whether it is motivation or opportunity that is most closely associated with success.

Perhaps the most serious error in interpreting correlations is the conclusion that one of the variables causes the other. The fact that two things tend to occur together or increase and decrease in a similar pattern does not necessarily mean that one caused the other. While it may be that one variable influences the other, it may also be that both are influenced by something else entirely. Research on motivation is perhaps the best context in which to illustrate this. Learners who are successful may indeed be highly motivated. But can we conclude that they became successful because of their motivation? It is also plausible that early success heightened their motivation, or that both success and motivation are due to their special aptitude for language learning or the favourable context in which they are learning.

Another difficulty in assessing the relationship between individual learner characteristics and second language learning is how language proficiency is defined and measured. In the second language learning literature, some studies report that learners with a higher IQ (intelligence quotient) are more successful language learners than those with a lower IQ, while other studies report no such correlation. One explanation for these conflicting findings is that the language proficiency tests used in different studies do not measure the same kind of knowledge. That is, IQ may be less closely correlated to measures of conversational fluency than to tests that measure metalinguistic knowledge.

Research on individual differences must also take into account the social and educational settings in which learners find themselves. Bonny Norton and Kelleen Toohey (2001) argue that, even when individuals possess some of the characteristics that have been associated with the 'good language learner', their language acquisition may not be successful if they are not able to gain access to social relationships in situations where they are perceived as valued partners in communication. Members of some immigrant and minority groups are too often marginalized by social and educational practices that limit their opportunities to engage in communication with peers, colleagues, and even teachers. In these social conditions, individuals who approach a new language with the cognitive and motivational characteristics typical of the 'good language learner' may not achieve the proficiency that these characteristics would predict.

Understanding the relationship between individual differences, social situations, and success in second language learning is a great challenge. Nevertheless, research in this area is of great importance to both researchers

and educators. Researchers seek to know how different cognitive and personality variables are related and how they interact with learners' experiences so that they can gain a better understanding of human learning. Educators hope to find ways of helping learners with different characteristics achieve success in second language learning. The larger community is also concerned because of the enormous impact second language learning has in shaping opportunities for education, employment, mobility, and other societal benefits.

Intelligence

The term 'intelligence' has traditionally been used to refer to performance on certain kinds of tests. These tests are often associated with success in school, and a link between intelligence and second language learning has sometimes been reported. Over the years, some research has shown that IQ scores were a good means of predicting success in second language learning. However, as suggested above, IQ tests may be more strongly related to metalinguistic knowledge than to communicative ability. For example, in a study with students in French IMMERSION PROGRAMMES in Canada, Fred Genesee (1976) found that, while intelligence was related to the development of French second language reading, grammar, and vocabulary, it was unrelated to oral production skills. This suggests that the kind of ability measured by traditional IQ tests may be a strong predictor when it comes to learning that involves language analysis and rule learning. This kind of 'intelligence' may play a less important role in classrooms where the instruction focuses more on communication and interaction. Indeed, many students whose general academic performance is weak experience considerable success in second language learning if they are given the right opportunities.

In recent years, many educators have been influenced by Howard Gardner's (1993) proposal that individuals have 'multiple intelligences' and that traditional IQ tests have assessed only a limited range of abilities. Among the 'multiple intelligences' Gardner includes abilities in the areas of music, interpersonal relations, and athletics, as well as the verbal intelligence that is most often associated with success in school.

Aptitude

Specific abilities thought to predict success in language learning have been studied under the title of language learning 'aptitude'. One of the pioneers in this area, John Carroll (1991), has characterized aptitude in terms of the ability to learn quickly. Thus, we may hypothesize that a learner with high aptitude may learn with greater ease and speed but that other learners may also be successful if they persevere.

Over several decades, the most widely used aptitude tests have been the Modern Language Aptitude Test (MLAT) and the Pimsleur Language Aptitude Battery (PLAB) (Pimsleur 1966). Recently, Paul Meara (2005) and his colleagues have developed tests that are taken on a computer. All the tests are based on the view that aptitude has several components. All measure the ability to (1) identify and memorize new sounds, (2) understand the function of particular words in sentences, (3) figure out grammatical rules from language samples, and (4) remember new words. While early research revealed a substantial relationship between performance on the MLAT or PLAB and performance in foreign language learning, these studies were conducted at a time when second language teaching was based on grammar translation or audiolingual methods (see Chapter 6). With the adoption of a more communicative approach to teaching, many teachers and researchers came to believe that the abilities targeted by these tests were irrelevant to the process of language acquisition. However, others suggest that some of the abilities measured by aptitude tests are predictive of success even in settings where the emphasis is on communicative interaction. For example, Leila Ranta (2002) found that children who were good at analysing language (one component of aptitude that is targeted by aptitude tests) were the most successful learners in an English second language program in which activities almost never involved direct attention to grammar. Nick Ellis (2001) and others have hypothesized that WORKING MEMORY may be the most important variable in predicting success for learners in many language learning situations. Peter Skehan (1989) argues that successful language learners may not be strong in all of the components of aptitude. For example, some individuals may have strong memories but only average abilities in language analysis. Learners' strengths and weaknesses in these different components may account for their ability to succeed in different types of instructional programs.

In a Canadian language programme for adult learners of French, Marjorie Wesche (1981) studied the progress of students who were placed in instructional programmes that were either compatible or incompatible with their aptitude profile and information about their learning experiences. In the compatible groupings, students who were high on analytic ability, but average on memory, were assigned to teaching that focused on grammatical structures, and learners with good memory but average analytic skills were placed in a class where the teaching was organized around the functional use of the second language in specific situations. In the incompatible groupings, students were placed in classes that did not correspond to their aptitude profiles. Wesche reported a high level of student and teacher satisfaction when students were matched with compatible teaching environments. In addition, some evidence indicated that matched students were able to attain significantly higher levels of achievement than those who were mismatched.

While few schools could offer such choices to their students, teachers may be able to ensure that their teaching activities are sufficiently varied to accommodate learners with different aptitude profiles.

Learning styles

The term 'learning style' has been used to describe an individual's natural, habitual, and preferred way of absorbing, processing, and retaining new information and skills (Reid 1995). We have all heard people say that they cannot learn something until they have seen it. Such learners would fall into the group called 'visual' learners. Other people, who may be called 'aural' learners, seem to learn best 'by ear'. For others, referred to as 'kinaesthetic' learners, physical action such as miming or role-play seems to help the learning process. These are referred to as perceptually-based learning styles. Considerable research has also focused on distinctions between different cognitive learning styles. Individuals have been described as FIELD INDE-PENDENT or FIELD DEPENDENT, according to whether they tend to separate details from the general background or tend to see things more holistically. For a number of years, it was widely reported that there was a strong relationship between field independence and success in second language learning. However, a review of the research leads Zoltán Dörnyei and Peter Skehan (2003) to conclude that more research will be needed to identify the nature of the relationship.

There are many questions about how learning styles interact with success in language learning. For one thing, it is difficult to determine whether they reflect immutable differences or whether they develop (and thus can be changed) through experience. There is a need for considerably more research. Nevertheless, when learners express a preference for seeing something written or spending more time in a language laboratory, we should not assume that their ways of working are wrong, even if they seem to be in conflict with the pedagogical approach we have adopted. Instead, we should encourage learners to use all means available to them. At a minimum, research on learning styles should make us sceptical of claims that a single teaching method or textbook will suit the needs of all learners.

Before we leave the topic of language learning aptitude and learning styles, it is perhaps appropriate to look at two extremes of the aptitude continuum. Some people, whose academic performance is usually very good, find themselves terribly frustrated in their attempts to learn a foreign language. Lenore Ganschow and Richard Sparks (2001) and their colleagues have studied many cases of young adults who find foreign language learning exceedingly difficult. They identified several ways in which these students differ from successful learners. Most perform poorly on at least some of the measures that make up aptitude tests. Some have problems with certain

kinds of verbal skills, even in their own language. What is perhaps most important about this research is that, with great effort and instructional support, some of these students are able to succeed in spite of their difficulties. The challenge is to find instructional approaches that meet the needs of learners with a variety of aptitude and learning style profiles.

At the other end of the aptitude continuum we find individuals whose achievements seem to defy every prediction about what is possible in second language learning. Lorraine Obler (1989) reported on the case of one American man who seemed able to acquire oral fluency in a new language in 'a matter of weeks'. Neil Smith and Ianthi-Maria Tsimpli (1995) have followed a *polyglot savant* who learned many languages with apparent ease. This achievement was particularly astonishing in light of the fact that his overall cognitive functioning and social skills were quite limited. Such exceptional learners suggest that an aptitude for language learning is at least partly independent of cognitive, social, and personality characteristics that are often associated with successful learning.

Personality

A number of personality characteristics have been proposed as likely to affect second language learning, but it has not been easy to demonstrate their effects in empirical studies. As with other research investigating the effects of individual characteristics on second language learning, different studies measuring a similar personality trait produce different results. For example, it is often argued that an extroverted person is well suited to language learning. However, research does not always support this conclusion. Although some studies have found that success in language learning is correlated with learners' scores on questionnaires measuring characteristics associated with extroversion such as assertiveness and adventurousness, others have found

that many successful language learners do not get high scores on measures of extroversion. Lily Wong-Fillmore (1979) found that, in certain learning situations, the quiet observant learner may have greater success.

Another aspect of personality that has been studied is inhibition. It has been suggested that inhibition discourages risk-taking, which is necessary for progress in language learning. This is often considered to be a particular problem for adolescents, who are more self-conscious than younger learners. In a series of studies, Alexander Guiora and his colleagues (1972) found support for the claim that inhibition is a negative force, at least for second language pronunciation performance. One study involved an analysis of the effects of small doses of alcohol, known for its ability to reduce inhibition, on pronunciation. Study participants who drank small amounts of alcohol did better on pronunciation tests than those who did not drink any. While results such as these are interesting, they may have more to do with performance than with learning. We may also note, in passing, that when larger doses of alcohol were administered, pronunciation rapidly deteriorated!

Learner anxiety—feelings of worry, nervousness, and stress that many students experience when learning a second language—has been extensively investigated. For a long time, researchers thought of anxiety as a permanent feature of a learner's personality. In fact, the majority of language anxiety scales, like the Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz, and Cope 1986) measure anxiety in this way. So, for example, students are assumed to be 'anxious' if they 'strongly agree' with statements such as 'I become anxious when I have to speak in the second language classroom'. However, such questionnaire responses do not take account of the possibility that anxiety can be temporary and context-specific. More recent research investigating learner anxiety in second language classrooms acknowledges that anxiety is more likely to be dynamic and dependent on particular situations and circumstances. This permits distinctions to be made between for example, a student who feels anxious when giving an oral presentation in front of the whole class but not when interacting with peers in group-work. Whatever the context, anxiety can play an important role in second language learning if it interferes with the learning process. Peter MacIntyre (1995) argues that 'because anxious students are focused on both the task at hand and their reactions to it ... [they] will not learn as quickly as relaxed students' (p. 96).

Of course, it has also been argued that not all anxiety is bad and that a certain amount of tension can have a positive effect and even facilitate learning. Experiencing anxiety before a test or an oral presentation can provide the right combination of motivation and focus to succeed on it. Because anxiety is often considered to be a negative term, some researchers have chosen to use other terms they consider to be more neutral. In an ethnographic study of

young adults learning French in an intensive summer programme, Guy Spielmann and Mary Radnofsky (2001) use the term 'tension'. They found that tension, as experienced by the learners in their study, was perceived as both beneficial and detrimental and that it was also related to the learners' social interactions inside and outside the classroom.

A learner's 'willingness to communicate' has also been related to anxiety. We have all experienced occasions when we have gone to great lengths to avoid communicating in a second/foreign language. This often has to do with the number of people present, the topic of conversation, and the formality of the circumstances. A colleague in Canada, who works in the area of second language learning and speaks several languages, recently confessed that he avoided the corner store in his neighbourhood because the proprietor always spoke French to him. He recognized the proprietor's efforts to help him improve his skills in this new language, and was grateful for it, but, as he told us with embarrassment, it was just easier to go to the store where he could use English. According to some researchers, learners who willingly communicate in a wide range of conversational interactions are able to do so because 'their prior language learning has led to development of self-confidence, which is based on a lack of anxiety combined with a sufficient level of communicative competence, arising from a series of reasonably pleasant [second language] experiences' (MacIntyre, Clément, Dörnyei, and Noels 1998: 548).

Several other personality characteristics such as self-esteem, empathy, dominance, talkativeness, and responsiveness have also been studied. However, in general, the available research does not show a single clearly-defined relationship between personality traits and second language acquisition. And, as indicated earlier, the major difficulty in investigating personality characteristics is that of identification and measurement. Another explanation that has been offered for the mixed findings of personality studies is that personality variables may be a major factor only in the acquisition of conversational skills, not in the acquisition of literacy or academic skills. The confused picture of the research on personality factors may be due in part to the fact that comparisons are made between studies that measure communicative ability and studies that measure grammatical accuracy or metalinguistic knowledge. Personality variables seem to be consistently related to the former, but not to the latter. Finally, most of the research on personality variables has been carried out within a QUANTITATIVE research paradigm, that is, an approach that relies heavily on measuring learners' scores on personality questionnaires and relating these to language test performance. Some researchers have argued that a more QUALITATIVE approach to understanding and investigating personality variables is needed to adequately capture their depth and complexity, especially as they emerge and evolve over time.

Despite the contradictory results and the problems involved in carrying out research in the area of personality characteristics, many researchers believe that personality will be shown to have an important influence on success in language learning. This relationship is an intricate one, however, in that it is probably not personality alone, but the way in which it combines with other factors, that contributes to second language learning.

Motivation and attitudes

Robert Gardner and his colleagues have carried out a program of research on the relationship between a learner's attitudes toward the second or foreign language and its community, and success in second language learning (Masgoret and Gardner 2003). As suggested above, it is difficult to know whether positive attitudes produce successful learning or successful learning engenders positive attitudes, or whether both are affected by other factors. Although the research cannot prove that positive attitudes and motivation cause success in learning, there is ample evidence that positive motivation is associated with a willingness to keep learning.

Motivation in second language learning is a complex phenomenon. It has been defined in terms of two factors: on the one hand, learners' communicative needs, and, on the other, their attitudes towards the second language community. If learners need to speak the second language in a wide range of social situations or to fulfil professional ambitions, they will perceive the communicative value of the second language and will therefore be motivated to acquire proficiency in it. Likewise, if learners have favourable attitudes towards the speakers of the language, they will desire more contact with them. Robert Gardner and Wallace Lambert (1972)

coined the terms INSTRUMENTAL MOTIVATION (language learning for more immediate or practical goals) and INTEGRATIVE MOTIVATION (language learning for personal growth and cultural enrichment). Research has shown that these types of motivation are related to success in second language learning, but the distinction is not always as clear as it was in the research context in which the contrast was first described. In some learning environments, it is difficult to distinguish between these two types of orientation to the target language and its community. Furthermore, early research on motivation tended to conceptualize it as a stable characteristic of the learner. More recent work emphasizes the dynamic nature of motivation and tries to account for the changes that take place over time.

Zoltán Dörnyei (2001a) developed a process-oriented model of motivation that consists of three phases. The first phase, 'choice motivation' refers to getting started and to setting goals, the second phase, 'executive motivation', is about carrying out the necessary tasks to maintain motivation, and the third phase, 'motivation retrospection', refers to students' appraisal of and reaction to their performance. An example of how one might cycle through these phases would be: a secondary school learner in Poland is excited about an upcoming trip to Spain and decides to take a Spanish course (choice motivation). After a few months of grammar lessons he becomes frustrated with the course, stops going to classes (executive motivation) and finally decides to drop the course. A week later a friend tells him about a great Spanish conversation course she is taking, and his 'choice motivation' is activated again. He decides to register in the conversation course and in just a few weeks he develops some basic Spanish conversational skills and a feeling of accomplishment. His satisfaction level is so positive (motivation retrospection) that he decides to enrol in a more advanced Spanish course when he returns from his trip to Spain.

In a book devoted to helping second language teachers generate and maintain learners' motivation, Dörnyei (2001b) proposes and describes concrete and innovative methods and techniques that can help teachers motivate learners throughout these three phases.

Motivation in the classroom

In a teacher's mind, motivated students are usually those who participate actively in class, express interest in the subject matter, and study a great deal. Teachers also have more influence on these behaviours and the motivation they represent than on students' reasons for studying the second language or their attitudes toward the language and its speakers. Teachers can make a positive contribution to students' motivation to learn if classrooms are places that students enjoy coming to because the content is interesting and relevant to their age and level of ability, the learning goals are challenging yet manageable and clear, and the atmosphere is supportive.

Although little research has directly investigated how pedagogy interacts with motivation in second language classrooms, considerable work has been done within the field of educational psychology. In a review of some of this work, Graham Crookes and Richard Schmidt (1991) point to several areas where educational research has reported increased levels of motivation for students in relation to pedagogical practices. Included among these are:

Motivating students into the lesson At the opening stages of lessons (and within transitions), it has been observed that remarks teachers make about forthcoming activities can lead to higher levels of interest on the part of the students.

Varying the activities, tasks, and materials Students are reassured by the existence of classroom routines they can depend on. However, lessons that always consist of the same routines, patterns, and formats have been shown to lead to a decrease in attention and an increase in boredom. Varying the activities, tasks, and materials can help to avoid this and increase students' interest levels.

Using co-operative rather than competitive goals Co-operative learning activities are those in which students must work together in order to complete a task or solve a problem. These techniques have been found to increase the self-confidence of students, including weaker ones, because every participant in a co-operative task has an important role to play. Knowing that their team-mates are counting on them can increase students' motivation.

Cultural and age differences will determine the most appropriate way for teachers to motivate students. In some classrooms, students may thrive on competitive interaction, while in others, co-operative activities will be more successful.

Identity and ethnic group affiliation

Social factors at a more general level can affect motivation, attitudes, and language learning success. One such factor is the social dynamic or power relationship between the languages. For example, members of a minority group learning the language of a majority group may have different attitudes and motivation from those of majority group members learning a minority language. Even though it is impossible to predict the exact effect of such societal factors on second language learning, the fact that languages exist in social contexts cannot be overlooked when we seek to understand the variables that affect success in learning. Children as well as adults are sensitive to social dynamics and power relationships.

A good example of how relations of power in the social world affect interaction between second language learners and target language speakers

comes from the work of Bonny Norton. Drawing from data collected in a longitudinal case study of the language learning experiences of immigrant women in Canada, she argues that concepts such as instrumental and integrative motivation do not adequately capture the complex relations of power, identity and language learning. Instead, she uses the term 'investment' to 'capture the relationship of the language learner [and his/her identity] to the changing social world.' (Norton Peirce 1995: 10). All the participants in her study were highly motivated to learn English. However, there were social situations in which they were reluctant to speak and these were typically ones in which there was a power imbalance. Their experiences in those situations limited the opportunities they had to practise and to continue to develop the second language outside the classroom.

Kelleen Toohey (2000) observed that immigrant children in English-medium kindergarten classes were quickly assigned identities such as successful/unsuccessful, big/small, talkative/quiet, etc., in their first year of school. Of course, they also had the identity of 'being ESL'. Because learners' identities impact on what they can do and how they can participate in classrooms, this naturally affects how much they can learn. For example, one of the learners was consistently excluded from imaginative interactive activities with her peers; another learner was perceived as someone who never listened or did the 'right thing'. Toohey argues that these identities could eventually lead to their isolation and to restricted or less powerful participation in their classroom community. While Toohey is careful to point out that identities are not static and can change over time, it is equally important to keep in mind that 'classrooms are organized to provide occasions upon which some children look more and some less able, and judgements are made which become social facts about individual children' (p. 77).

Elizabeth Gatbonton Pavel Trofimovich, and Michael Magid (2005) found a complex relationship between feelings of ethnic affiliation and second language learners' mastery of pronunciation. Among other things, they found that learners who had achieved a high degree of accuracy in pronouncing the second language were sometimes perceived as being less loyal to their ethnic group than those whose second language speech retained a strong 'foreign accent'. Such perceptions can affect learners' desire to master the second language, especially in contexts where there are conflicts between groups or where power relationships imply a threat to one group's identity.

Learner beliefs

Second language learners are not always aware of their individual cognitive or perceptual learning styles, but virtually all learners, particularly older learners, have strong beliefs and opinions about how their instruction should

be delivered. These beliefs are usually based on previous learning experiences and the assumption (right or wrong) that a particular type of instruction is the best way for them to learn. This is another area where little work has been done. However, the available research indicates that learner beliefs can be strong mediating factors in their experience in the classroom. For example, in a survey of adult international students in a communicative ESL program, Carlos Yorio (1986) found high levels of dissatisfaction among the students. The type of communicative instruction they received focused exclusively on meaning and spontaneous communication in group-work interaction. In their responses to a questionnaire, the majority of students expressed concerns about several aspects of their instruction, most notably, the absence of attention to language form, corrective feedback, or teacher-centred instruction. Although this study did not directly examine learners' progress in relation to their opinions about the instruction they received, several of them were convinced that their progress was negatively affected by an instructional approach that was not consistent with their beliefs about the best ways for them to learn.

More recent research on learner beliefs about the role of grammar and corrective feedback in second language learning confirms that there is often a mismatch between students' and teachers' views. In two large-scale studies Renate Schulz (2001) found that virtually all students expressed a desire to have their errors corrected while very few teachers felt this was desirable. In addition, while most students believed that 'formal study of the language is essential to the eventual mastery of the language', just over half of the teachers shared this view. In our own research on learner beliefs and preferences for learning, we are exploring not *whether* grammatical instruction should be provided but *how* learners prefer grammar to be taught. We are particularly interested in exploring whether learners prefer to be taught about language forms in separate lessons or in lessons where form-focused and meaning-focused instruction are integrated.

Learners' instructional preferences, whether due to inherent differences in their approach to learning or to their beliefs about how languages are learned, will influence the kinds of strategies they use in trying to learn new material. Teachers can use this information to help learners expand their repertoire of learning strategies and thus develop greater flexibility in their ways of approaching language learning.

Age of acquisition and the Critical Period Hypothesis

We now turn to a learner characteristic of a different type: the age at which learning begins. This characteristic is easier to define and measure than personality, aptitude, or motivation, but the relationship between age and success in second language acquisition is hardly less complex or controversial.

It is frequently observed that most children from immigrant families eventually speak the language of their new community with NATIVE-LIKE fluency, while their parents often fall short of such high levels of mastery of the spoken language. To be sure, there are cases where adult second language learners have distinguished themselves by their excellent language skills. One often sees reference to Joseph Conrad, a native speaker of Polish who became a major writer in the English language. Many adult second language learners communicate very successfully in the language even though subtle differences of accent, word choice, or grammatical features distinguish them from monolingual native speakers and from second language speakers who began learning the language while they were very young.

It has been hypothesized that there is a critical period for second language acquisition just as there is for first language acquisition. As we saw in Chapter 1, the Critical Period Hypothesis is that there is a time in human development when the brain is predisposed for success in language learning. Developmental changes in the brain, it is argued, affect the nature of language acquisition, and language learning that occurs after the end of the critical period may not be based on the innate biological structures believed to contribute to first language acquisition or second language acquisition in early childhood. Rather, older learners may depend on more general learning abilities—the same ones they might use to learn other kinds of skills or information. It is argued that these general learning abilities are not as effective for language learning as the more specific, innate capacities that are available to the young child. It is most often claimed that the critical period ends somewhere around puberty, but some researchers suggest it could be even earlier.

Of course, as we saw in Chapter 2, it is difficult to compare children and adults as second language learners. In addition to possible biological differences suggested by the Critical Period Hypothesis, the conditions for language learning are often very different. Younger learners in informal language learning environments usually have more time to devote to learning language. They often have more opportunities to hear and use the language in environments where they do not experience strong pressure to speak fluently and accurately from the very beginning. Furthermore, their early imperfect efforts are often praised or, at least, accepted. Older learners are more likely to find themselves in situations that demand more complex language and the expression of more complicated ideas. Adults are often embarrassed by their lack of mastery of the language and they may develop a sense of inadequacy after experiences of frustration in trying to say exactly what they mean. Such negative feelings may affect their motivation and willingness to place themselves in situations where they will need to use the new language.

On the other hand, some studies of the second language development of older and younger learners, learning in similar circumstances, have shown that, at least in the early stages of second language development, older learners are more efficient than younger learners. By using their meta-linguistic knowledge, memory strategies, and problem-solving skills, they make the most of second or foreign language instruction. In educational settings, learners who begin learning a second language at primary school level do not always achieve greater proficiency in the long run than those who begin in adolescence. Furthermore, there are countless anecdotes about older learners (adolescents and adults) who achieve excellence in the second language. Does this mean that there is no critical period for second language acquisition?

The critical period: More than just accent?

Most studies of the relationship between age of acquisition and second language development have focused on learners' pronunciation. In general, these studies have concluded that older learners almost inevitably have a noticeable 'foreign accent'. But what about other linguistic features? Is syntax (word order, overall sentence structure) as dependent on age of acquisition as phonological development? What about morphology (grammatical morphemes that mark verb tense or the number and gender of nouns)?

Mark Patkowski (1980) studied the relationship between age and the acquisition of features of a second language other than accent. He hypothesized that, even if accent were ignored, only those who had begun learning their second language before the age of fifteen could ever achieve full, native-like mastery of that language. Patkowski recorded the spoken English of sixty-seven highly educated immigrants to the United States. They had started to learn English at various ages, but all had lived in the United States for more than five years. He also recorded the spoken English of fifteen native-born Americans from a similarly high level of education. Their variety of English could be considered the second language speakers' target language.

The main question in Patkowski's research was: 'Will there be a difference between learners who began to learn English before puberty and those who began learning English later?' However, in the light of some of the issues discussed above, he also compared learners on the basis of other characteristics and experiences that some people have suggested might be as good as age in predicting or explaining a person's success in mastering a second language. For example, he looked at the total amount of time a speaker had been in the United States as well as the amount of formal ESL instruction each speaker had had.

A lengthy interview with each person was tape-recorded. Because Patkowski wanted to remove the possibility that the results would be affected by accent,

he did not ask the raters to judge the tape-recorded interviews themselves. Instead, he transcribed five-minute samples from the interviews and removed from them any identifying or revealing comments about immigration history or language background. These transcribed samples were rated by trained native-speaker judges. They were asked to place each speaker on a scale from 0, representing no knowledge of the language, to 5, representing a level of English expected from an educated native speaker.

The findings were quite dramatic. All native speakers and thirty-two out of thirty-three second language speakers who had begun learning English before the age of fifteen were rated 4+ or 5. The homogeneity of the pre-puberty learners seemed to suggest that, for this group, success in learning a second language was almost inevitable (see Figure 3.1). In contrast, the majority of the post-puberty group were rated around the 3+ level, but there was a great deal of variation. The performance of this group looked more like the sort of range one would expect if one were measuring success in learning almost any kind of skill or knowledge: some people did extremely well; some did poorly; most were in the middle.

When Patkowski examined the other factors that might be thought to affect success in second language acquisition, the picture was much less clear. There was, naturally, some relationship between those factors and learning success. However, it often turned out that age was so closely related to the other factors that it was not really possible to separate them completely. For example, length of residence in the United States sometimes seemed to be a fairly good predictor. However, while it was true that a person who had lived in the country for fifteen years might speak better than one who had been there for only ten years, it was often the case that the one with longer residence had also arrived at an earlier age. Similarly, amount of instruction, when separated from age, did not predict success to the extent that age of immigration did. Thus, Patkowski found that age of acquisition is a very important factor in setting limits on the development of native-like mastery of a second language and that this limitation does not apply only to accent. These results gave added support to the Critical Period Hypothesis for second language acquisition.

Intuitions of grammaticality

Jacqueline Johnson and Elissa Newport (1989) conducted a study of forty-six Chinese and Korean speakers who had begun to learn English at different ages. All were students or faculty members at an American university and all had been in the United States for at least three years. The study also included a comparison group of twenty-three native speakers of English. The participants were asked to judge the grammaticality of a large number of sentences that tested twelve rules of English morphology and syntax. They
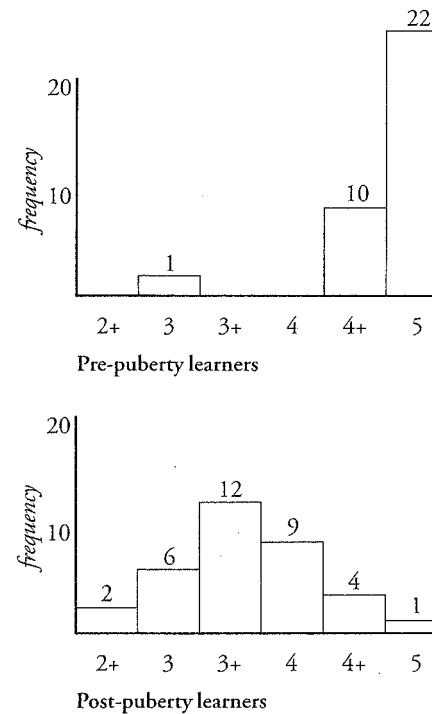

Pre-puberty learners

Post-puberty learners

Figure 3.1 Number of speakers at each proficiency rating (Patkowski 1980)

heard sentences on a tape and had to indicate whether each sentence was correct. Half of the sentences were grammatical, half were not.

Johnson and Newport found that age of arrival in the United States was a significant predictor of success on the test. They grouped the participants in the same way as Patkowski, comparing those who began their intensive exposure to English between the ages of three and fifteen with those who arrived in the United States between the ages of seventeen and thirty-nine. Johnson and Newport found that learners who began earliest achieved the highest scores on the judgement task. Those who began later did not have native-like language abilities and their performance on the test varied more widely.

Robert DeKeyser (2000) carried out a replication of the Johnson and Newport study, working with Hungarian immigrants to the United States. He also found a strong relationship between age of immigration and second language proficiency. An aspect of his study that makes it particularly

valuable is that, in addition to examining their judgements of grammaticality, he asked participants to take language aptitude tests. He found that, for participants who began learning English as adults, aptitude scores were correlated with success. However, there was no such correlation for those who learned English in childhood. These findings appear to confirm the hypothesis that adult learners may learn language in a way that is different from the way children learn.

Rate of learning

Some research suggests that older learners may have one important advantage: they appear to learn faster in the early stages of second language learning. In 1978, Catherine Snow and Marian Hoefnagel-Höhle published an article based on a research project they carried out in Holland. They studied the progress of a group of English speakers who were learning Dutch as a second language. The learners they were following included children as young as three years old as well as older children, adolescents, and adults. Furthermore, they used a large number of tasks to measure different types of language use and language knowledge. They assessed pronunciation, AUDITORY DISCRIMINATION, grammatical morphemes, grammatical complexity, sentence translation, grammaticality judgement, vocabulary, story comprehension and storytelling.

Participants were first tested within six months of their arrival in Holland and within six weeks of their starting school or work in a Dutch-language environment. They were tested two more times at four- or five-month intervals. The Snow and Hoefnagel-Höhle study found that adolescents were by far the most successful learners. They were ahead of everyone on all but one of the tests (pronunciation) on the first test session. Surprisingly, it was the adults, not the children, whose scores were second best on the other tests at the first test session. In other words, adolescents and adults learned faster than children in the first few months of exposure to Dutch.

By the end of the year, the children were catching up, or had surpassed, the adults on several measures. Nevertheless, it was the adolescents who retained the highest levels of performance overall.

Snow and Hoefnagel-Höhle concluded that their results provide evidence against the critical period for language acquisition. However, other researchers have interpreted the results differently. Some of the poor performance of younger learners could be accounted for by the fact that some of the tasks, (for example, sentence judgement or translation) were too hard for young learners. In fact, young Dutch native speakers with whom the second language learners were compared also had trouble with these tasks. Snow and Hoefnagel-Höhle's study shows that adults and adolescents learned faster in the first year of second language development. This may because they were

learning a language that is very similar to the one they already knew. Even so, the young children were catching up and evidence from other studies suggests that they would probably surpass the older learners if they continued to have adequate opportunity to use the language. The study is particularly valuable in showing, however, that adults and adolescents can make considerable and rapid progress towards mastery of a second language in contexts where they use the language in social, personal, professional, or academic interaction.

At what age should second language instruction begin?

Many people who have never heard of the critical period hypothesis believe that, in school programmes for second or foreign language teaching, 'younger is better'. However, both experience and research show that older learners can attain high levels of proficiency in their second language. Furthermore, it is essential to think carefully about the goals of an instructional programme and the context in which it occurs before we jump to conclusions about the necessity—or even the desirability—of the earliest possible start.

There is strong evidence that there are maturational constraints on language acquisition. It is also the case that reaching high levels of second language proficiency involves aptitude, motivation, and the appropriate social conditions for learning. Some researchers argue that older learners may well speak with an accent because they want to continue being identified with their first language cultural group. We have also seen that adults do not always get the same quantity and quality of language input that children receive in school and play settings. Thus, decisions about the age at which instruction should begin cannot be based solely on evidence for the CPH.

Studies such as those by Patkowski or Newport and Johnson dealt with second language speakers who had spent many years living, working, and going to school in the second language environment. They found that, even after twenty years, only those who had had an early start had a high likelihood of being indistinguishable from people who had been born in that environment. It is important to acknowledge that achieving native-like mastery of the second language is neither a realistic nor necessarily a desired goal for second language learners in many educational contexts. The study by Snow and Hoefnagel-Höhle dealt with the achievement of a variety of second language skills after a few months. They found that it was the older children and adolescents who had made the most progress in that time period. The kinds of skills the older learners were able to acquire in a relatively short period of time will satisfy the needs of learners in many learning contexts where the goal is the ability to use the language for everyday communication rather than native-like mastery.

When the objective of second language learning is native-like mastery of the target language, it may indeed be desirable for the learner to be completely surrounded by the language as early as possible. However, as we saw in Chapter 1, early intensive exposure to the second language may entail the loss or incomplete development of the child's first language.

When the goal is basic communicative ability for all students in an educational system, and when it is assumed that the child's native language will remain the primary language, it may be more efficient to begin second or foreign language teaching later. When learners receive only a few hours of instruction per week, learners who start later (for example, at age ten, eleven, or twelve) often catch up with those who began earlier. Some second or foreign language programmes that begin with very young learners but offer only minimal contact with the language do not lead to much progress. In Clare Burstall's (1975) landmark study, students who had made progress in early-start programmes, sometimes found themselves placed in secondary school classes with students who had had no previous instruction. Teachers tended to teach to a lower common denominator. This situation is not at all uncommon. Thus, after years of classes, learners who have had an early start may feel frustrated by the lack of progress, and their motivation to continue may be diminished. Clearly the age at which instruction begins is not the only variable that determines success in the second language classroom.

Decisions about when to start second language programmes in schools should be based on realistic estimates of how long it takes to learn a second language. One or two hours a week will not produce advanced second language speakers, no matter how young they were when they began. Older learners may be able to make better use of the limited time they have for second language instruction.

Age is one of the characteristics that determine the way in which an individual approaches second language learning. But the opportunities for learning (both inside and outside the classroom), the motivation to learn, and individual differences in aptitude for language learning are also important determining factors that affect both rate of learning and eventual success in learning. It is useful to look back at the graphic representation of Patkowski's research and to remind ourselves that some older learners do achieve the highest level of success.

Summary

Look back at the notes you took about your language learning experience and that of your colleagues and friends. You will probably find some cases that confirm hypotheses about what variables are associated with success—

or the lack of it—in second language learning. You may find others that seem to challenge those hypotheses. In this chapter, we have learned that research on individual differences is complex and that the results of research are not always easy to interpret. This is partly because of the lack of clear definitions and methods for measuring individual characteristics. It is also due to the fact that the characteristics are not independent of one another: learner variables interact in complex ways. The complexity grows when we realize that individual learners will react to different learning conditions in different ways. Researchers are beginning to explore the nature of these complex interactions, but it remains difficult to predict how a particular individual's characteristics will influence his or her success as a language learner. None the less, in a classroom, the goal of the sensitive teacher is to take learners' individual differences into account and to create a learning environment in which more learners can be successful in learning a second language.

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