

WORKING PAPERS IN

Early Childhood Development

49

*Fostering language acquisition
in daycare settings*

What does the research tell us?

By Simone Beller



Cover: Based on the Reggio Emilia pedagogy, Stichting Pedagogiekontwikkeling 0-7 stimulates young children's development in a learning community in which parents, children and teachers actively participate. Here two young children are enjoying themselves reading and playing 'house' in a tent. Photo: Angela Barrau-Ernst

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June 2008

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Executive summary

The ways in which children learn a language – be it their mother tongue or their second language – can have a strong influence on their success in school. Researchers in linguistics and early child development have tried to determine the factors that can help and hinder language acquisition in young children, with some conflicting results.

In this article, the author reviews the research and existing theories on language development, focusing on how pre-schoolers' social environment affects their ability to learn languages and their subsequent reading and writing skills. Because children from immigrant families and those with a low socio-economic status often have difficulty with language acquisition, this review looks in particular at language development initiatives for disadvantaged groups in daycare settings.

Beginning with an overview of theories on language development, the author examines the sometimes-conflicting hypotheses that attempt to explain how children acquire their first language and how some become bilingual.

Next, the role of the social environment is reviewed, beginning with the importance of verbal input for first language development, then looking at the complex phenomenon of second language acquisition.

The author provides an overview of research on bilingualism and its various forms, focussing on children who learn a second language after they are already established in their mother tongue, as opposed to the less common cases of children who acquire two languages from birth.

Looking in particular at research on migrant children, the paper explores the course and duration of second language acquisition, as well as the common linguistic behaviours that may arise. Conditions that influence children's adoption of a second language and culture are then examined, as well as similarities and differences between first and second language acquisition.

Factors that influence the development of a second language such as age, motivation, interaction, educational style, socio-economic status, and experiences in daycare are discussed, and the impact of early language development on school success is examined.

Finally, the author reviews several programmes aimed at fostering language development and literacy in infancy and early childhood in the United Kingdom, the United States, and Germany, and concludes with a discussion of the implications of the research, providing several recommendations for practice.



Chapter 1: Theoretical approaches to language development

Linguists often give two theoretically opposed explanations for the acquisition of both the first and the second language: the behaviourist (or empirical) theories, which are based on Skinner's theoretical ideas (Skinner 1957), and the nativist theories, which are founded on the work of Chomsky (Chomsky 1957, 1965, 1968, 1975). In the last few decades, however, these two contrary positions have been brought increasingly in line with each other.

Recently developed interactionist explanatory approaches take into account both a biological basis as the precondition for language acquisition and other factors such as social environment, socialisation and the general learning mechanisms and capacities of the child. I begin by outlining the theories on first language acquisition (L1 acquisition), then those on second language acquisition (L2 acquisition) in subsequent chapters.

1.1. First language acquisition

Linguistic approaches to L1 acquisition include the two conflicting behaviourist and nativist positions, as well as the positions deriving from developmental psychology that have contributed to a convergence of the first two concepts.

In the tradition of classical behaviourism based on Watson (1924), Skinner (1957) formulated his theory of language acquisition, in which

reinforcement plays the central role as a learning principle. A child who produces sounds adapts those sounds to the environment as a consequence of selective reinforcement by his or her social surroundings. Mowrer (1960) distinguishes between primary and secondary reinforcement: whereas primary reinforcement occurs through hearing sounds in pleasant situations and does not assume any kind of reward, secondary reinforcement is based on the child's desire to imitate, which is driven by the satisfaction gained from the act of repetition. According to Oskaar (1987), critics of behaviourist theories of language acquisition point out among other things that learning occurs without positive reinforcement, that speaking is not always controlled by a stimulus and that the concept of reinforcement cannot explain the speed of language acquisition and the stability of acquired meaning.

Whereas behaviourist explanatory approaches have tended to lose significance in recent years, nativist approaches can still be found in contemporary discussions on L1 acquisition. Nativist theories based on Chomsky's hypotheses (1965, 1968, 1975) assume that the child is equipped with an inborn linguistic knowledge and has an innate understanding of grammar at his or her disposal. In contrast to behaviourist theories, this approach does not regard language acquisition as being stimulus-controlled or external to the child.

It is, rather, internally guided; although language input activates the inborn mechanism of language acquisition, it has no effect on the way in which acquisition occurs. Underlying the development of nativist theory is the assumption that the language to which the child is exposed provides an inadequate and insufficient stimulus for learning and cannot adequately explain the speed and uniformity of the acquisition process. Empirical studies show, however, that the quality and quantity of language input does indeed have an impact on language acquisition (see chapter 2.1).

Developmental psychology approaches tend instead to consider general learning mechanisms as key to language acquisition. Two variants, the cognitivist and the social interactive theories, have determined the research to date (Grimm and Weinert 2002; Klann-Delius 1999). According to Grimm and Weinert (2002) various theories of language acquisition agree that language is specifically human and has a biological basis, that language acquisition is not possible without a language environment and that the inner preconditions contributed by the child and the environmental factors must “work together in the interest of a successful fit” (Grimm and Weinert 2002: p. 537; my translation). Interactionist explanatory models combine the contributions of various research directions and emphasise in particular the significance of the exchange between the child and the social environment in

the process of language acquisition, which they regard as being fundamentally bi-directional. The process is also linked with competence in other developmental areas. “Language development is a process that begins in early infancy, and depends crucially on skills from a variety of domains including perception, cognition, motor development, and socialisation. The interactionist view includes not only the emergence of single words and their meanings, but includes also the more strictly linguistic areas of phonology and grammar.” (Bates and MacWhinney 1987: p. 150).

According to interactionist theory, language acquisition occurs in the context of social interaction, is embedded in the process of socialisation and refers not only to socio-communicative but also to formal linguistic aspects of language.

1.2. Second language acquisition

In the sphere of L2 acquisition, diverse theories and hypotheses have been developed since the 1940s that attempt to explain the acquisition process. Following are a selection of hypotheses referring mostly to successive¹ L2 acquisition.

The behaviouristically oriented ‘contrastive hypothesis’ (Fries 1945; Lado 1957) assumes that existing structures created in the learning of a first language are employed in L2 acquisition.

¹ *Successive second language acquisition occurs when learning of the second language begins after acquisition of the first language has already started. It can be distinguished from bilingual language acquisition, which involves the parallel acquisition of two languages from birth.*

It is taken that similar structures in both languages facilitate acquisition in the second language because they can be transferred, whereas the presence of different structures gives rise to more difficulties in the acquisition of the second language.

According to the contrastive hypothesis, mistakes and difficulties that arise in L2 acquisition can be explained and in part predicted by the differences between the first and the second language. However, it has not yet been proven empirically that children learn second languages that are similar to their first language more easily than non-similar languages (see Klein 1992). The assumptions of the contrastive hypothesis nevertheless remain interesting as a linguistic method for the analysis of mistakes in L2 acquisition (Oskaar 2003; Wode 1992).

The nativist-oriented ‘identity hypothesis’ proposed by Corder (1967) and examined by Dulay and Burt (1974) distinguishes itself from the contrastive hypothesis in that it assumes that L1 and L2 processes are isomorphic, i.e. that the same sequence occurs in the acquisition of the second language as in L1 acquisition. It postulates that there is no relationship between the first and the second languages; grammar acquisition in the second language is independent of that in L1 acquisition. Transfers and interferences, as posited in the contrastive hypothesis, do not occur. Instead, existing universal cognitive mechanisms are responsible for the processing of each language independently. It should

be noted that the research of Dulay and Burt, which seems to confirm the identity hypothesis, has been criticised on account of methodical weaknesses and the validity of their findings accordingly questioned (see Oskaar 2003).

The ‘interlanguage hypothesis’ sees the language of the learner of a second language as an independent and variable system, which contains elements of the first and second languages as well as its own distinctive ones. This is called ‘interlanguage’ (Selinker 1969, 1972). Consequently, mistakes can be both independent of the first language and can also deviate from normal L1 acquisition. However, structural similarities between the two languages and the resultant transfers and interferences can nonetheless play their part.

The interlanguage hypothesis combines assumptions of the contrastive and identity hypotheses and includes both neuro-psychological and socio-psychological aspects, while emphasising the independence of the interlanguage of the second-language (L2) learner from both his or her first and target languages. Communicative strategies such as the avoidance of topics, changes in meaning, code-switching, borrowing, gestures, facial expression and also discourse-related strategies of the L2 learner are regarded as useful forms of communicative behaviour. The interlanguage hypothesis also takes into account factors external to language such as the motivational, social and emotional aspects of L2 acquisition. For example, standstills in second language

acquisition are traced back to unfavourable input conditions, limited acculturation needs, the experience of insufficient acceptance by the dominant culture, inadequate learning opportunities and/or a general incapacity of the learner to use the information provided by the available input.

Based on research in children who have grown up bilingually, De Houwer (1994) puts forth the theory that the two languages develop separately. The ‘separate development hypothesis’ assumes that, after a mixing of the languages in the first two years of life, the two languages develop independently of one another as separate systems.² De Houwer assumes that the separate development of the two languages is supported by the environment, specifically when there is a clear separation of the languages (for example, the people in the learner’s environment each consistently use only one language, even if they are bilingual). Others (see Jampert 2002) do not regard this as absolutely necessary. They assume that the separation of languages does not occur on the basis of input but of language features. In his study of Turkish migrant children in Germany, Jeuk (2003) discovered factors that also support the separate development hypothesis in the case of successive L2 acquisition.

Social-interactionist theory focuses on the bidirectional nature of verbal interactions in second language learning. Interactionists believe that

L2 learners are able to absorb the grammar of a second language incidentally and implicitly even while focusing on meaning and communication in personal interactions. Language learning is seen as the result of the interaction of the learner’s mental ability and the verbal environment. Long (1990) stresses three aspects of verbal interactions in a communicative setting: input, production and feedback. A communicative setting where verbal input is available and verbal production (output) is fostered, including negotiations of meanings and feedback about verbal outcome, provides an optimal basis for language learning. In this interactive process, the L2 learners are able to use the feedback and the language outcome of the native speaker to monitor their output relative to the native speaker’s output.

The following two hypotheses deal less with the question of the processes occurring in L2 acquisition and consequently do not attempt to explain the course of learning. Instead they are concerned with the preconditions for the successful acquisition of a second language according to the level of competence achieved in the first language.

The ‘threshold level hypothesis’ proposed by Skutnabb-Tangas and Toukoma (1976) on the basis of a study of 7–10-year-old Finnish migrant children in Sweden states that, under certain conditions, bilingualism can have a negative effect on school success and that positive results can only be achieved when the children are

² *The hypothesis states that both languages pursue separate developmental lines. However, this does not mean that the two languages are processed in different language centres of the brain. Brain research has shown that second language acquisition in adults differs from that in children in that the child processes the two languages in the same part of the brain, whereas adults do not.*

sufficiently competent in their first language. In their cross-sectional study, Skutnabb-Kangas and Toukoma found that Finnish migrant children who had arrived in Sweden before starting school showed weaker school performance and spoke Swedish less well than Finnish children who had migrated to Sweden after the start of school. They concluded that the children who had entered Sweden before the first year of school were insufficiently competent in their first language, Finnish (which was not further fostered in Sweden), and for this reason reached an inadequate level of competence in Swedish. On the other hand, children who arrived in Sweden after the beginning of school were highly competent in their first language and could build on it as they learned their second language. The two authors developed a bilingual model whose lowest level, semilingualism, was characterised by low competence in both the first and second languages. Only when a threshold has been crossed and competence in the first language has reached the level of a native speaker can negative consequences for intellectual development and the acquisition of a second language be excluded. And only after crossing a second threshold, after which a child achieves a level of ‘additive bilingualism’ – characterised by high competence in both languages – can bilingualism have a positive effect on intellectual development. According to Skutnabb-Kangas and Toukoma, therefore, if the first language is insufficiently developed, the foundation for the second language is lacking and will then be built on inadequate structures.

Cummins (1984) takes up the findings of Skutnabb-Kangas and Toukoma and supports

his hypothesis with evidence gained from comparisons of submersion and immersion programmes carried out in Canadian schools. This is the basis for the development of his ‘interdependence hypothesis’. He assumes that the second language is developed on the basis of an intact first language, that children who do not have an intact first language when they begin to learn the second language will have difficulties in acquiring the second language and that competence in the second language is dependent upon the level of development of the first language. Findings that revealed that the communicative competence of many migrant children had no positive effect on language performance at school or on IQ led him to assume the existence of two dimensions of language mastery. By basic interpersonal communicative skills he meant the basic skills of oral communication, which are strongly context-bound and are used and acquired in everyday situations. Cognitive academic language proficiency (CALP) is achieved when language is decontextualised and can be used in written form, thus permitting its application as a cognitive tool (Cummins, 1984: p. 196). If competence in the first language has reached the CALP level when learning begins with the second language, this competence can be transferred to the second language and the child can participate successfully in lessons held in the second language. But if the CALP level in the first language has not been reached when a child starts school, this not only has a negative effect on school performance: according to Cummins, the limited language competence also influences the possibility of fostering the second language.

For this reason he recommends beginning with general instruction in the mother tongue. Numerous studies seem to confirm this hypothesis, but meta-analyses carried out in recent years have criticised methodical weakness in many studies and have concluded that the positive effect on the second language and on school performance of promoting the first language has not yet been proven (see Söhn 2005a).

A further important theory in this context is the ‘time-on-task hypothesis’ that is based on the learning psychology model of Carroll (1963) and is strongly advocated in Germany, for example by Hopf (2005). Carroll examined several variables that seemed suited to predict the learning success of a pupil, a central factor being the actively used learning time in relation to a pupil’s abilities (necessary learning time). The time-on-task hypothesis assumes that success in the second language is positively related to the amount of contact with the second language. According to Hopf, the learning time available to a student is limited and the offer of additional lessons in the first language reduces the learning time in the second. Consequently, it must have a negative effect on the acquisition of the second language. However, meta-analyses could not confirm this hypothesis. Söhn (2005a) comes to the conclusion that encouragement of the first language does not have a negative effect on the acquisition of the second.

In summary it can be said that there are numerous hypotheses on the development of a second

language, whereby linguists tend to deal primarily with the course and the processes of acquisition. Among the linguistic hypotheses, we find both nativist and behaviourist approaches: the contrastive hypothesis combines both nativist and behaviourist assumptions, while the interactionist theory assumes that a second language is learned best in communicative settings. L2 acquisition is a result of the learner’s mental abilities and verbal environment, which enables the L2 learner to acquire communicative and linguistic aspects of the target language. Several studies found that a highly interactive teaching style is positively related to the development of the target language (see chapter 2.2) but, according to Ellis (1994), it is still unclear whether forced output can account for the acquisition of new linguistic features. Developmental psychological hypotheses concentrate less on the processes that occur in the acquisition of a second language and more on the relationship between the competences attained in L1 acquisition and the achieved or achievable competence in the acquisition of the second language.

None of the hypotheses have been conclusively proven empirically to date. It should also be noted that very few studies have studied language acquisition in pre-school-aged children, and those that do refer mostly to children who have grown up bilingually and not to children who have experienced successive L2 acquisition.³ As well, it is important to note that these studies were based for the most part on very small samples.

³ The studies of Jeuk (2003) and Beller et al. (2006) are an exception.

Chapter 2: Language development and the role of social environment

2.1. Input and language development

In the last few decades, research has demonstrated that the quantity and quality of the language input addressed to a child has an influence on the acquisition of language as a system. Although the input does not influence the acquisitional sequence of grammatical constructs, it is nonetheless assumed that when a child does not have a ‘critical amount’ of input, initially he or she can acquire at most only part of the relevant language structures or will experience a delay in acquiring them. It is unclear how much input constitutes a critical amount, although it is related to the relative transparency or opacity of the construct to be learned. If opaque structures are to be learned, they must be presented more frequently than transparent structures (Mueller Gathercole and Hoff 2007).

Tomasello (2000) assumes that ‘overgeneralisations’ occur less often with frequently heard forms than with those that are seldom heard. The language structures to be learned must then be available to the child as input and he or she must have sufficient exposure to these structures in order to learn them correctly, whereby the amount of experience is dependent upon the

degree of transparency of the structure. Studies in bilingual children who were exposed to one language more than another have shown that the children acquired certain structures earlier in the more frequently used language⁴ (Mueller Gathercole and Hoff 2007). The quantity of the language input therefore has a small effect on the stage at which grammatical structures are acquired. Several studies in domestic and non-domestic settings found a positive relationship between the quantity of the language input by parents and educators and the grammatical development of the children (Bradley and Caldwell 1976; Clarke-Stewart 1973; McCartney 1984; and NICHD 2000). Barnes et al. (1983) found that the quantity of the language used to address the child had positive effects on grammar and semantics. Huttenlocher et al. (2002) showed that children whose educators used complex sentences more frequently were more advanced in the use of complex sentences than children whose educators spoke in simpler sentences. According to Naigles and Hoff-Ginsberg (1998), the richly varied use of verbs in different grammatical structures is a predictor for syntactic flexibility in children’s use of verbs. Huttenlocher et al. (1991) demonstrated that the quantity of language input has a very high

⁴ Gathercole (2002a, b) compared English-Spanish bilinguals with German and Spanish children who grew up monolingually in cases where the bilinguals were more frequently exposed to one language than the other. They examined the number of structures learned and found that the bilinguals acquired the structure earlier in the language to which they were more exposed, but later than the monolingual children, overall.

predictive force for the child's acquisition of vocabulary. According to their findings, the frequency and duration of input are in fact the strongest predictors for the development of a lexicon. Their results are confirmed by Hart and Risley (1995), whose study showed that the amount of verbal interaction between parents and children is the strongest influence on the language development of the child. In this sample, a greater number of parental statements was associated with a greater variety of words and sentences in their child(ren). Thus there was a correlation between the amount of variety in the parents' language – measured by the number of nouns and adjectives used and the length of their phrases and sentences – and the progress of their children in the language.

According to Ritterfeld (2000), optimal language input in the context of children's language acquisition fulfils three essential tasks. First, it guarantees that children's attention is directed towards the language of their environment. Second, it provides the data that children need to develop their knowledge of the language. And, third, it motivates children to communicate verbally themselves. Interactive behaviour in adults, such as corrective feedback, reformulations and 'expansions' of the child's statements, foster language by making optimal use of the child's attention and providing information relevant to language development (Bohannon and Stanowicz 1988; Farrar 1990, 1992; Szagun 1996). The frequency of the mother's contingent responses, in which a part of what a child has said is repeated, correlates positively with a faster process of syntactical development and

a larger vocabulary (Snow et al. 1987). Moerk (1991) points out that maternal modelling of children's statements, such as expansions and corrective feedback, impacts positively on the acquisition of grammar. Although expansions have been shown to foster language acquisition in a natural setting, Cazden (1965) and Nelson (1973) could reproduce at best only a short-term effect of expansion in the experimental setting. According to Cazden (1965) some forms of interaction have beneficial effects on language development only in the non-experimental milieu.

According to Nelson (1996), the acquisition of lexicon takes place in the context of easily understandable event routines. A typical kind of interaction between adults and children occurs when adults name objects from the immediate environment for their children. Hampson and Nelson (1993) were able to show that the frequency of object naming by adults is related to an early start to language production in children.

A language style that stimulates conversation has a positive effect on the language development of the child (Hoff-Ginsberg 1986). Hoff-Ginsberg (1987) found that children produced more language statements when the mother took up the topic introduced by the child. But if the mother continued with a topic of her own or introduced a new topic, the child produced fewer language statements. Hoff-Ginsberg also observed that toward the end of the third year of life, children took up more frequently those statements of their mothers that contributed to the topic of the ongoing discourse. Children with advanced language skills participated actively in

the discourse and thus also evoked a language style that had a positive effect on acquisition.

According to Nelson (1996), it is above all the acquisition of abstract concepts and the formation of a lexical system that are fostered in a dialogic exchange with adults. Children whose mothers not only named new objects but also established links with their child's previous knowledge and experience demonstrated better retention than children who were offered only names. A further factor that has a positive effect on the retention performance of children is their own language activity in relation to an object (Nelson 1989). A vertical dialogue structure in which the participants delve into a topic more profoundly together also favours the production of more complex and more varied statements (Ritterfeld 2000).

The frequent use of open questions in language input has a positive influence, especially on grammatical development (Hoff-Ginsberg 1998; Shatz and Hoff-Ginsberg 1982;). Grimm (1995) differentiates five different question forms, the answers to which demand different levels of linguistic complexity from the child, thus possibly explaining the positive effect on the development of grammar.

The use of imperatives has a significant negative correlation with the production of 'inflections'

and auxiliary verbs in the language of younger children (Newport et al. 1977). In the case of older children, the use of imperatives by adults has a negative effect on the children's willingness to express themselves and on their readiness to ask questions (Hoff-Ginsberg 2000). The frequency of imperatives in language use is related to educational styles. Children in groups in which the educators exercise control, often using briefly formulated instructions, experience delays in language development, as has been shown in a longitudinal study by Beller et al. (1996). Guidance that permits autonomy, however, is linked with linguistically more complex statements and, in contrast to controlling guidance, promotes more complex language and thought structures.

In contradiction to the often-quoted assumption that linguistic fine-tuning and the use of simple, short sentences fosters language development in children, Bornstein et al. (1998) found that a higher mean length of utterance (MLU)⁵ and a more complex vocabulary in the language statements of the mother are related to a more extensive vocabulary in two-year-old children⁶. On this point, Hoff-Ginsberg (2000) advocates the interesting hypothesis that children filter linguistically complex input and can decide not to process information that is too complex without negative consequences for language development, as long as they have

⁵ Mean Length of Utterance is a measurement that comprises not only the number of words but also the grammatical complexity.

⁶ After reviewing a number of studies advocating the thesis that fine-tuning (i.e. adapting to the child's level of language production) fosters language development, Szagun (1996) could not find any confirmation for this thesis.

sufficient input. However, there is no possibility of compensating for insufficient input.

Studies that compared the interaction styles of mothers with children who suffer from delayed language acquisition to those of mothers of children whose language development is normal for their age showed that the mothers of linguistically delayed children communicate significantly less with their children, provide less environmental diversity, comment on their children's actions less often, seldom make references to the content of their children's statements and use significantly fewer expansions (Grimm and Kaltenbacher 1982). There is no evidence that the input is causal, i.e. that it brings about the delay in language development. It is also conceivable that the less stimulating input is a reaction to the delayed language development and can be interpreted as an adaptation to the deficient competence of the child.⁷ But it remains a fact "that the child whose language acquisition is in any case delayed" is also offered "a less rich language environment" (Szagun 1996: p. 284; my translation). Grimm shows that the mothers of 'dysphasic'⁸ children also make too few cognitive demands on their children on account of their delayed language development, despite knowing that their children are of average intelligence (Grimm

1994). Research on language acquisition to date has dealt with the question of whether the adaptation of the mother's language input has a beneficial effect on the language development of the child, but not with the question whether the level of the child's language development influences the quality of the language input, even though interactionist theories take a bidirectional relationship as their starting point. The studies quoted above suggest that a reciprocal relationship exists between children's language development and the quality of the language input.

In summary, a high level of quality and quantity in the language input has a positive influence on language development in terms of children's grammatical, semantic and lexical competence and accelerates the process of language acquisition; however, it does not have any effect on the sequencing of the acquisition of language structures.

These findings refute nativist theories on language acquisition, which assume that the input only stimulates the process of language acquisition, but that the acquisition itself proceeds independently of the input. Rather, the above findings demonstrate the significance of input in language acquisition.

⁷ According to Szagun (1996) maternal fine-tuning has not been proven beneficial for language acquisition, as has often been assumed.

⁸ Dysphasia describes a specific impairment in language development in cases involving normal non-verbal intelligence. The children studied in interaction with their mothers were 4½-years-old on average, whereas their language production was at the level of approximately 2½-year-old children.

2.2. Second language acquisition in migrant children

Before launching into the issues surrounding acquisition of a second language in migrant children, I would like to give a brief survey of research on bilingualism and examine its various forms.

As a rule, those persons who acquire two languages in early childhood are characterised as bilingual. Unfortunately, English language terminology does not always distinguish between children who learn the languages from their parents in parallel to one another from birth and those who acquire the second language later, for example on entering kindergarten, which is described in German as ‘successive language acquisition’. In English, if a distinction is made these children are characterised as ‘L2 learners’.

The phenomenon of bilingualism is complex and heterogeneous, not only with regard to the point in time when acquisition of the second language begins but also with regard to whether the language to be learned is a minority or majority language and whether L2 acquisition is initiated by choice (by parents) or out of necessity. Children who learn a majority language as their first language and learn a second language in early childhood are characterised as ‘L1 majority L2 learners’. Usually these children learn a socially recognised second language in immersion programmes, for example children in Germany who attend (German-) English language kindergarten.

In this case, we speak of elitist or elective bilingualism. However, migrant children usually learn a minority language – one that has low social recognition – at home and the country’s (majority) language as a second language in school. This form of bilingualism is defined as ‘circumstantial bilingualism’ and the persons concerned as ‘L1 minority L2 learners’ (see Limbird 2006; Paradis 2007). Whereas elitist bilinguals frequently acquire academic and literacy competence in both languages, this is often not the rule among migrant children (Hakuta 2000). The differences brought to light by research in the academic achievement of bilingual children depend less on the individual child’s cognitive and personal abilities than on his or her social environment. Research findings on bilingualism cannot, therefore, be extrapolated from one group of bilinguals to another (Limbird 2006).

Generally speaking, there have been no negative consequences of bilingualism discovered in bilingualism research, but rather slightly positive effects with regard to intelligence and metalinguistic skills. Multilingualism does not require particular aptitudes or above average intelligence (see Langenmayr 1997). Nevertheless, differing results have been found in the sphere of academic achievement in the second language, although, according to Bialystok et al. (2003), positive effects predominate. The differences in the research findings can perhaps be explained by the heterogeneity and complexity of the phenomenon of bilingualism.

A further distinction between groups of bilinguals is their categorisation as either ‘balanced’ or ‘dominant’. Persons with a high degree of linguistic and academic competence in both languages or with the competence appropriate to their age are considered to be ‘balanced bilinguals’ (Diaz and Klinger 1991). There is little documentation on balanced bilingualism and it tends to be rare, particularly in the pre-school period and in the early years at school (see Hamers and Blanc 1989). We speak of ‘dominant bilingualism’ when a person has greater competence in one of the two languages. Often the language to which someone is most frequently exposed becomes the dominant language. Cummins (1979) speaks of semi-bilingualism when a certain threshold of competence is not crossed in the two languages. The characterisation of this threshold and the definition of adequate competence, however, remain unclear. The measurement of the competence of children who grow up using more than one language is difficult and remains a much-discussed topic. It is not to be expected that children who learn the majority language as their second language will achieve an age-appropriate competence that is comparable to that of children raised with a majority first language, as the former usually begin to acquire the majority language later than the latter. Competence in the first language, when it is learned at home as a minority language, cannot be compared with that of children who learn the same language as a majority language (see BMBF 2005).

The following discussion looks at L2 acquisition mainly in children with a migration background, who learn a minority language at

home and begin to learn the majority language when they enter pre-school or kindergarten. It should be noted that these children are usually ‘circumstantial bilinguals’. In their case, the first language enjoys little social recognition and they must acquire the second language in order to participate in the educational system. Balanced bilingualism is rather unusual among migrant children, even among those who grow up with a parent from the majority language. The first (minority) language is mainly dominant at first, but with increasing contact the language of the environment and the school system then becomes dominant.

Children with a migration background usually acquire their second language successively, i.e. the learning does not occur from birth in parallel to the acquisition of the first language, but starts later, usually when the child enters pre-school or kindergarten.

The course of second language acquisition

Tabors (1997) ascertained four stages of L2 acquisition on the basis of observations of the language behaviour of migrant children in American nursery schools. In a brief first stage, the children try to use their mother tongue. As they quickly find out that they are not understood, they often stop talking or speak very little. This second stage, in which younger children seem to persist longer than older children, lasts from several weeks to several months. Often the children revert to non-verbal communication such as gestures. First utterances in the second language were more frequently observed in one-on-one interactions than in groups. In the third stage, the children

often use single words in telegram style and formulaic expressions. In the fourth stage, they increasingly use new content combinations and grammatical 'morphemes'. According to Paradis (2007) the fourth stage is equivalent to what Selinker et al. (1975) described as 'interlanguage' (see chapter 2.2).

Many migrant children achieve a good level of communicative competence in their second language in everyday situations during pre-school or school years. In many cases, it is comparable with the competence of children learning this language as a first language. But Knapp, for example, has ascertained the existence of concealed language difficulties, which only become evident when the written language is used (Knapp 1998)⁹.

The duration of second language acquisition

On the basis of numerous studies of migrant children in English language schools in the USA, Collier (1995) comes to the conclusion that the acquisition of the second language is a laborious process. On average, L2 learners only reach a level comparable to that of L1 users of

the same age after 7 to 10 years. She states that the duration is independent of socio-economic status (SES), the language spoken at home and the country of origin of the learner.

The phenomena of second language acquisition

A frequently observed phenomenon in L2 acquisition that is much discussed in theory and practice is language mixing or 'code-switching'. This is the insertion of single words from one language in utterances in the other language (lexical mixing)¹⁰. Morphosyntactic mixing, the borrowing of grammatical rules from one language for use in the other, also occurs.¹¹ In pedagogical practice this phenomenon is unfortunately often regarded as negative and as an indication that the child cannot distinguish the two languages from one another or has only reached the level of semi-lingualism. The concept was coined in the context of the interdependence and the threshold hypotheses. In both hypotheses it is assumed that the first and second languages build upon one another.

⁹ Difficulties arise above all in the conceptual sphere, in the lack of textual complexity, in unbalanced sequences of events and in the use of reference.

¹⁰ In this case a distinction is made in the literature between code-switching and code-mixing. Code-switching is the conscious and purposeful insertion of words from one language in another in specific situations with particular interaction partners. This assumes pragmatic competence on the part of the speaker. Jeuk (2003) interprets the code-switching into German of children whose first language is Turkish as a productive strategy that only seems to be used when the child knows that its partner in the conversation understands and accepts the switch. We speak of code-mixing when the child unconsciously borrows words from one language for use in the other. This is most frequently observed among children who are simultaneous bilinguals. Tracy sees code-mixing as a productive strategy in which children introduce single words from another language into the language structure of an utterance, or structural bootstrapping (Tracy 1996: p. 87) and thus apply their acquired language competence in problem-solving.

¹¹ This is also termed fusion or transfer.

Language mixing would not therefore be so unusual, but neither Skutnabb-Kangas nor Cummins go into the phenomenon in any detail. It is, however, referred to in the context of semi-lingualism and is often negatively interpreted (Ünsal and Wendtlandt 1991). Essentially, all the hypotheses presented in this paper with the exception of the contrastive hypothesis consider language mixing “as a necessary concomitant” (Jeuk 2003: p. 41; my translation) of L2 acquisition. Jeuk (2003) sums up by pointing out that language mixing can be a sign of productive communicative strategies, learning strategies and developmental phenomena in the acquisition of a second language, but also of language impairment. For this reason he suggests that a distinction should be made “at the descriptive level between forms of fusion of grammatical, phonological and lexical features on the one hand and code-mixing or code-switching on the other” (Jeuk 2003: p. 37).

But in no event should the forms of language mixing be generally condemned as negative or pathological types of language behaviour and repressed. The interpretation of the language mixing occurring in the utterances of individual learners is, however, extremely difficult. According to Jeuk (2003), it must take into account both environmental factors¹² and the language structures of the first and second languages of the child.

Conditions for the acquisition of a second language.

As with the acquisition of the first language, second language acquisition occurs in the process of socialisation and against a cultural background that differs to a greater or lesser degree from that of the first language. Language acquisition does not occur in a vacuum but runs parallel to and is intertwined with the acquisition of social and cultural phenomena and forms of behaviour. According to Ooskaar, “the aims of second language acquisition are multilingualism, intercultural communication and multiculturalism” (Ooskaar 2003: p. 36; my translation). As little importance is attributed to this fact in theories and hypotheses on L2 acquisition as well as in pedagogical practice, I would like to examine it here in more detail. ‘Cultureme theory’ makes it clear that information can be mediated not only verbally but also non-verbally. According to Ooskaar, culturemes are “abstract units of social contact which are realised in various communicative acts by behaviouremes, determined, among other things, by specific factors of age, gender, relationship and status” (Ooskaar 2003: p. 39). In Ooskaar’s opinion, culturemes are realised in a social context – i.e. in interaction – and they transmit information that is non-verbal (gestures, facial expressions, posture), verbal (words, sentences) and para-verbal (manner of speaking). In addition, information is transmitted on extra-verbal factors such as time

¹² For example, acquisition conditions such as the age of the child, the acquisition situation, the institutional and social framework and input conditions (Jeuk 2003).

and space and social variables (age, gender, status, role and social relationships). Specifically, this means that not only what is said has significance but also how, when, where and to whom the person speaks. This is also relevant information that is transmitted, interpreted and processed. This information, implicitly included in the act of interaction, also influences language acquisition, which for Oskaar is always also cultural acquisition. It can either facilitate or impede the process of acquisition. Substantial cultural differences and lack of social recognition (as in folk bilingualism, for example) are factors that can render acquisition more difficult.

In summary, it can be said that language learners never acquire just a language. In the process of socialisation, they at the same time learn cultural features, attitudes and forms of behaviour associated with the acquired language. Contemporary research on language acquisition – in particular on L2 acquisition – and pedagogic practice do not take the concept of enculturation sufficiently into account, as they deal almost exclusively with language acquisition alone.

Fostering second language acquisition

There is no agreement in research on the most effective way to promote the acquisition of a second language. In recent years there has been much discussion of whether fostering the first language or formal schooling in the first language promotes or impedes the acquisition of the second language.

Various authors have undertaken meta-analyses designed to answer the question of whether institutional encouragement of the first language improves the acquisition of the second language (Greene 1998; Rossel and Baker 1996; Slavin and Cheung 2005; Söhn 2005a). Söhn (2005a) concludes from the inconsistency of the research findings¹³ that, firstly, the fostering of the first language has no negative effects on L2 acquisition and secondly, no consistent positive effect could be proven.

Interactionist approaches to the acquisition of a second language emphasise the importance of interaction for development and assume that interactive input is stimulating and creates an opportunity to improve comprehension by means of modelling and questioning. Thus, at the same time it improves linguistic production in the target language. The importance of the input lies in the bidirectional communication in the target language. Several studies appear to confirm these assumptions (see Beller et al. 2006; Collier 1995).

2.3. Similarities and differences between first and second language acquisition

One difference between first and second language acquisition is that, by acquiring the second language, learners also get to know another cultural system. They must at least acquaint themselves with, and partly assume,

¹³ There are no studies examining the effects of the first language on the acquisition of the second in the first six years of life.

the behavioural forms, attitudes and norms of this system, if they are to communicate successfully. Successive L2 acquisition differs in some points from L1 acquisition, in that the children already know the basic rules of communication¹⁴ and already have at their disposition the vocabulary and concepts from their first language. They also ‘know’ that the rule system of a language must be acquired. Because of their higher level of development, they are in a position to process larger and more complex units of language as their information processing strategies are better developed than at the time of L1 acquisition (Jeuk 2003; Paradis 2007).

The specific basic grammatical rules of the second language are acquired successively. The acquisition process takes a similar course to that of learners acquiring the same language as their first language (Paradis 2007; Rösch 2003). In her research on migrant children with different first languages and comparable exposure to English as a second language, Paradis (2005) found the same grammatical mistakes as those made by monolingual English learners of the same age who had specific language impairments. In contrast to the acquisition of their first language, however, children learning a second language use simple subject naming and short MLUs more seldomly. This can probably be explained by the fact that they are older at the time of acquisition and are able to process larger information units. Socio-

communicative behavioural forms implicitly learned with the first language and other learned concepts can possibly diverge more or less strongly from the forms prevalent in the second culture and must be learned anew or adapted in L2 acquisition (Oskaar 2003).

The individual differences between children learning a second language are great, even when the time of exposure is comparable and the instructional programmes are similar (Paradis 2005; Wong Fillmore 1983). The differences are probably greater among L2 than among L1 learners, although it must be noted that, hitherto, more research in this field has been done on the second language. In L2 acquisition, many more factors are operative than in the acquisition of the first language (see Collier 1995).

2.4. Factors that influence second language acquisition

The great differences established by second language research with regard to the learning speed and competence level of individuals has led scholars to consider the factors that influence L2 acquisition. Following are some of their results. It must be remarked, however, that most of the studies in this field refer to schoolchildren and adult learners and not to children at pre-school age, and that only a few studies were carried out in natural settings.

¹⁴ According to Oskaar, this foreknowledge can have positive effects on language acquisition when cultural similarities exist, but can give rise to difficulties in the case of substantial cultural differences, which can also influence the forms of communicative behaviour.

Age of acquisition

There has been intense debate on the existence of a biologically determined critical period for the acquisition of a second language (Lenneberg 1967). The view has been advocated that older learners (i.e. after puberty) have more difficulties and fail to reach the same level of competence as younger learners. It is undisputed in the research that older learners of a second language have more difficulties and that many can no longer learn the second language perfectly. But the assumption of biological determinism and of a clear point in time for more successful learning has not been verified (Hakuta et al. 2003). A study by Snow and Hoefnagel-Höhle (1978) showed that older¹⁵ English-speaking children learn Dutch more quickly than 3–5-year-olds. Studies with a retrospective design found gradual effects of the starting age on second language learning, with children who began at an earlier age having higher attainment levels (Paradis 2007). The results of such retrospective studies must be interpreted with caution, however, as an early start in the second language is linked with longer learning time.

Language aptitude

In recent years, a number of studies initiated by the work of Carroll (1963) have been carried out on the role of language aptitude in second language learning. Aptitude is operationalised

by means of various analytical capacities and working memory, which are considered necessary for the acquisition of the implicit structures and words of a language (see Carroll 1963; Dörnyei and Shekan 2003). The findings of aptitude research on L2 acquisition are not consistent. DeKeyser (2000), for example, found no positive relationship between language aptitude and language performance in subjects under 17 years old, only in those above this age. For adult learners, language aptitude together with motivation has proven to be the strongest predictor for successful acquisition (Dörnyei and Shekan 2003). In other research – predominantly on children in school immersion programmes – positive effects of language aptitude have been found (Genesee and Haymann 1980; Harley and Hart 1997).

As research on the influence of language on schoolchildren has been carried out almost exclusively in the context of school immersion programmes, it is questionable whether there is a similar influence on L2 acquisition in the first six years of life in natural settings.¹⁶ Furthermore, there are no longitudinal studies on language aptitude that could establish whether the ascertained positive effects on children are stable over time. It may well be that children with a higher language aptitude learn more quickly (at the beginning), but this says little about the level of competence ultimately

¹⁵ 8–10- and 12–15-year-olds.

¹⁶ An exception is a study by Reves (1983), who examined Arab schoolchildren who were learning two second languages at once: English at school and Hebrew in a natural setting. The study found positive effects of language aptitude for both second languages.

reached. As language aptitude is also considered to be a variable influencing L1 acquisition, it can be assumed that persons with higher language are more likely to have had a positive experience and reinforcement when learning their first language and that their language competence is more elaborated. This positive experience could possibly influence their self-image, self-efficacy and the motivation to learn a second language.

Motivation

In research on seventh-grade children enrolled in an immersion programme, Tucker et al. (1976) found that inner attitudes and motivation were stronger predictors than language aptitude and IQ. Various studies have examined the factor of motivation with regard to L2 acquisition among adults and schoolchildren. There are, however, many different theoretical constructs and operationalisations of the concept of motivation currently in use (see Dörnyei and Shekan 2003). In several studies, positive effects of motivation on the acquisition of a second language in adults and schoolchildren were found (see Dörnyei and Shekan 2003; Paradis 2007).

It is generally assumed for a variety of reasons that motivation is not a variable that strongly influences the acquisition of a second language in pre-school-aged children. Small children are more open to new experiences, generally feel the need to be integrated into children's groups and to learn the language required and are less

conscious of cultural differences. Unlike youths and adults, they need not fear the prospect of losing existing social attachments and identity or of finding new forms of attachment and identity as a result of integration (see Jeuk 2003; Paradis 2007). These are, however, unproven assumptions.¹⁷ In a case study by Fillmore (1976), for example, one in five migrant children was strongly motivated to make contact with English speaking children, which could certainly be understood as motivation for integration, whereas the other children showed less interest. It may well be that the motivation to integrate as revealed in the willingness to make contacts points to a connection with personality variables, such as openness, as well as to social competence.

Personality variables

Extroversion generally has positive effects on the acquisition of a second language. Pritchard (1952, cited in Strong 1983) found that young boys who were assessed as sociable on the basis of observations in a playground showed significantly higher levels of attainment in their second language than boys who were judged to be less sociable. Strong (1983) was able to demonstrate that children who sought more contact with other children in the natural setting of a kindergarten and who were more talkative and responsive also demonstrated better attainment levels in the second language than children who were less open and sociable.

¹⁷ It would be interesting to examine whether the motivation of the parents to learn the majority language and the need to integrate have an effect on L2 acquisition in pre-school-aged children.

Wong-Fillmore (1983), however, identified two contrary personality variables among successful L2 learners. On the one hand, socially open and interested schoolchildren who participated in many interactions in the majority language were successful in the second language. On the other hand, pupils who were reserved and made few social contacts but at the same time had high cognitive skills and followed the lessons attentively were also successful. Various studies with bilingual pupils and students who were in immersion programmes part of the time, found a negative relationship between anxiety and L2 acquisition, including both classroom anxiety and fear of rejection (see Krashen 1981).

The effect of different learning strategies on L2 acquisition has been studied mainly in schoolchildren and has led to varying results (see Dörnyei and Shekan 2003). With regard to children of pre-school age, Jeuk (2003) provides evidence that among 3–4-year-old Turkish children enrolled in German pre-schools, the successful learners made more frequent use of “substitutions, neologisms¹⁸ corrections and metalinguistic aspects of the first language” than less successful learners¹⁹ (Jeuk 2003: p. 270, my translation). The less successful learners had more frequent recourse to non-verbal means of communication.

First language effects

There has been much theoretical discussion of

effect of language typology – of the similarities and differences between the first and the second language – on the speed of acquisition and the achieved level of competence in the second language (see chapter 2.2.). Research on bilingual children has been carried out mainly in the fields of phonological and morphosyntactic competence. In the field of morphosyntactic development in particular, the findings have been contradictory (see Paradis 2007).

The assumption that lack of competence in the first language has a negative effect on the acquisition of the second language can be refuted for pre-school children, according to Jeuk (2003). His and two further studies of Turkish migrant children at pre-school age come to the conclusion that “in the case of Turkish migrant children we are not dealing with double semi-lingualism but with unbalanced bilingualism” (Jeuk 2003: p. 287; my translation; cf. Hepsöyler and Liebe-Harkort 1991; Pfaff 1994).

Input and interaction

Beller et al. (2006) showed in their study that the level of language stimulation by educators – i.e. the quantity and quality of language input – can be raised by systematic intervention.²⁰ They were able to prove that the children in an intervention group showed significantly more development in language and cognition

¹⁸ *New words, or new meanings for established words.*

¹⁹ *Success was measured by the growth of vocabulary, which is also related to semantic and grammatical competence.*

in the same period of time than the children in the control group. The sample included both children who had learned German as their first language and children with a migrant background who had learned German as their second language. There was no significant interaction between the effects of the intervention on the language development of the children and their language of origin. Genesee and Hamayan (1980) found that active participation in lessons and active use of the second language in the classroom and during breaks were the strongest predictors for the L2 acquisition in children participating in a first-year school immersion programme.

These findings are also supported by Collier (1995), who found that a highly interactive teaching style that encourages problem solving and discovery learning in theme-oriented lessons has a positive effect on the development of the second language. The encouragement of interactions in natural settings in the second language provides a highly stimulating input and at the same time promotes language production and active dealings with the environment. These behavioural forms and learning settings are considered fruitful by advocates of the interactionist approach to L2 acquisition and are accordingly encouraged (see Ellis 1985).

The studies quoted above (see chapter 2.1) concerning interactions between adults and children with language impairment suggest that a reciprocal relationship exists between the child's language development and the quality of the language input. In the practical sphere of language assistance programmes, this relationship is not only significant for children with delayed language development but also for children with a migration background, whose competence in their second language is inferior to the competence of children learning it as a first language. A low level of competence in a child's second language may lead educators to adapt their language input by limiting its complexity, thus making insufficient demands on the cognitive capacities of the child.

Other studies on the quality and quantity of input and its effect on L2 acquisition do not refer to the input available in pre-school and school settings but to the effects of input outside the school. For example, Jia and Aaronson discovered in two separate studies that the exposure Chinese migrants had with English outside the school had a positive effect on the growth of competence in their second language (Jia 2003; Jia and Aaronson 2003). Contact with the second language was measured by questionnaire and surveyed

²⁰ Intervention included reporting upon and systematically integrating proven beneficial behavioural forms into everyday life. These forms include the provision of a high-quality language model (grammatically correct and complex input that is rich in vocabulary, as well as speech accompanied by actions), modelling of children's utterances (corrective feedback, reformulations, expansions and questioning that stimulates specification) and behaviour that stimulates the child to produce utterances (asking open questions, initiating conversations, encouraging the expression of ideas and opinions and promoting interaction between children).

television consumption, reading of books in English, the number of English-speaking friends and the percentage of English spoken in the family home.

Group structure

Grimm (2003) established a negative correlation between the percentage of foreigners in an institution and language development in children of non-German origin in German schools. But these findings could be confirmed only partly by Beller et al. (2006). Grimm found that when the share of foreigners was below 20 percent, children of non-German origin had fewer language problems than foreign children in groups with a higher percentage of foreigners (70 percent). For children of German origin, no correlation of this kind could be found (Grimm 2003). Beller et al. (2006) ascertained that both children of German and non-German origin in groups with more than a 70 percent share of foreigners developed less well than those in groups with fewer foreigners (30 percent) in pre-testing. However, after the implementation of a language project with the same sample (in which the children were divided into control groups and intervention groups), those in groups with a high percentage of non-Germans made significantly more progress than the children in the lower percentage groups, independent of ethnic background.

2.5. Additional factors in language development

Apart from the study of the quantity and quality of language input and the communi-

cative styles of adults, research has also been undertaken on other factors affecting children's language development. Following are several general factors that can be considered independently of their potential specific application to first or second language acquisition.

There are great differences between cultures with regard to the quantity and quality of the language addressed to children. Hoff-Ginsberg (2000) reports on differences in the acquisition of lexicon between Japanese and American children and provides evidence that cultural differences have an effect on the language development of the child. Cultural differences are not only influential with regard to the quantity and quality of the language input but also with regard to parental styles of education. As research has shown, the educational style of the parents has a decisive influence on children's language development.

Educational style

There is agreement in research on the family context and on out-of-home group childcare that the educational style of the mother or the educator has a decisive influence on the child's language development. According to Nelson (1973), mothers who adopt an accepting style in their communication have children who progress faster in language development. This accepting style is based on maternal forms of behaviour in which the mother enables the child to experience the world in a self-determined fashion and accompanies the child unobtrusively when he or she chooses to include her in the process. These mothers

also showed a basic emotional attitude of interest in the activities of their children and were in a position to share their enthusiasm (Nelson 1973). Beller et al. (1996) confirmed these results for groups in daycare settings. They proved that responsive and accepting behaviour and guidance by the educator, which allows for the child's autonomy, has a positive effect on language development. They were also able to demonstrate that the opposite forms of behaviour such as controlling guidance, rejection and laissez-faire attitudes have a negative effect on language development. Cazden (1974) and Snow (1977) emphasise that a genuine communicative interest on the part of the mother is an important factor in fostering the language development of the child, and this approach seems to be more effective than the practice of special learning techniques.

Socio-economic status

In studies examining the relationship between the SES of the family and the language development of the child, differences within a single culture could be found. Various styles of language input (dependent on SES) show that children with a high SES have better-developed language and cognitive skills (see Baumwell et al. 1997; Hoff and Naigles 2002). The clearest differences were found in lexical development; however, in the grammatical and semantic domains, the performance of children with higher SES was also superior to that of children with lower SES. These differences were also revealed, for example, in the language production and understanding of 5–11-year-olds. The ability to describe objects in a differentiated way and to draw the

necessary conclusions from verbal descriptions was significantly less well developed in children with lower SES than in those with higher SES. Although these skills generally increase with age, the differences in performance in relation to SES remain significant (Lloyd et al. 1998).

Schoolchildren with lower SES also had more difficulty in solving textual tasks in mathematics than children with higher SES. There were, however, no differences with regard to purely mathematical calculation (Jordan et al. 1992). Similar relationships were also found in the international comparison made by the Program for International Student Assessment (PISA) study with regard to the reading competence of 15-year-old schoolchildren as well as in the IGLU study (Internationale Grundschul-Lese-Untersuchung = International Study of Reading in Elementary Schools) carried out in fourth-grade students in elementary schools (Baumert et al. 2002; Bos et al. 2004). Pupils of lower SES and those with a migration background revealed poorer reading skills than children of higher SES without a migration background. Families with a migration background are at the same time also frequently represented in the group of families with low SES (Baumert et al. 2002).

In recent years, the emphasis of studies dealing with language and SES has shifted from the ascertainment of group differences (macro-methodological studies) to the identification of effects on language and academic achievement within the group of children with low SES (micro-methodological studies: see Hoff 2006). For example, in a large-scale early childhood

longitudinal study (kindergarten class) of families with low SES, Gershoff et al. (2007) examined, in addition to income, the following variables in relation to early reading skills and mathematical and general knowledge:

- Material hardship (food insecurity, residential instability, inadequacy of medical care and months of financial difficulties)
- Parental stress factors
- Parental investment in the education and upbringing of their children (existence of stimulating materials, out-of-home parent-child activities, provision of extracurricular activities and commitment of the parents in the school)
- Educational style (warmth, cognitive stimulation, physical punishment, rules and routines).

The study found that income and material hardship influenced stress and commitment to education and educational style, which in turn influenced the performance of the children in a unique way. Using the same sample (see Gershoff et al. 2007), Raver et al. (2007) report that differences in the values of the aforementioned influence variables exist for groups of differing ethnic origin. Like Marks and García Coll (2007), they therefore propose that estimates of these effects should be made separately for individual minority groups. The micro-methodological approach provides indications for pedagogical approaches by identifying the variables that give information as to which factors – above and beyond income – have negative or positive effects on the language and academic performance of children in various groups with low SES.

Structural factors in group care and the social relationships of the child

Most of the findings on the effect of language input on the language development of the child are based on data acquired from the mother-child dyad and do not refer to the group care setting. In research on language stimulation in daycare centres, such as the study of McCartney (1984) and the large scale study of the American National Institute for Child and Health Development (NICHD 1997), the frequency of one-on-one interactions between the caregiver and the child was found to be a safe predictor for better language development.

Children in daycare centres who experience conflict in expressing their dependency needs to their caregivers show less linguistic development than children without dependency conflicts. The same is true of children with an uncertain mother-child attachment (Beller 2007). A further important factor with regard to the language development of children in group care is the nature of their peer relationships. Children who have good relationships with other children in the group and who participate spontaneously in group activities are more advanced in their language development (Beller, 2007).

Daycare

Several studies found positive relations between pre-school experience and language development and academic achievement in kindergarten and primary school, particularly for disadvantaged children and children enrolled in

high-quality daycare (NICHD ECCRN and Duncan 2003; Magnuson et al. 2006). Bos et al. (2004) report results from an international study where positive effects of pre-school experiences on reading skills were found in fourth-grade children.

2.6. Increased language ability, emerging literacy and a literate environment

Increased language ability

An important step in increased language ability is the detachment of the language from the direct context of experience and action. This increasing decontextualisation is an important precondition for children's school development, as they must be in a position to understand complex language instructions even when the content cannot be derived from the context or from the facial expression or gestures of the speaker. Early and regular experience with books that are read with parents or read aloud to children has proven to be an important factor in the successful acquisition of written language (Wade and Moore 2000). Studying picture books also facilitates the process of continual detachment from context (Heath 1982).

Middle-class parents in particular encourage their children at an early stage to abstract from the concrete situation and context (Heath 1982). "Speech [must] be offered not only in order to accompany action but also ... to trigger action and ultimately to replace it" (Bertau and Speck-Hamdan 2004: p. 110; my translation).

Sigel and Saunders (1983) consider spatial and/or temporal distancing of adults in interaction with children as particularly beneficial for the development of the communicative and cognitive abilities of pre-schoolers. They prove, firstly, that educators can achieve a greater level of distance by means of specific qualification programmes and, secondly, that children in groups with trained educators have a more strongly developed ability to carry out intellectual operations by means of representations of the natural environment than the children in a control group (Sigel and Saunders 1983). Role-playing also fosters decontextualisation, as the children in such situations must mediate ideas for planning events with one another (Andresen 2005).

The development of abstract concepts and of a rich and selective lexicon is stimulated by the participation of parents and children in interactions aimed at the exploration of objects, because language is used in an analytical, explanatory and argumentative fashion in such actions and hypotheses are proposed and tested (Snow and Kurland 1996). The development of conversational and narrative competence is promoted by exchanges with adults who listen patiently and ask targeted questions about any necessary missing information (Andresen 2005; Tomasello 2002).

This is an important developmental step with regard to the acquisition of written language (Bertau and Speck-Hamdan 2004).

Emergent literacy

The developmental tasks and research findings presented above, with regard to their significance for the subsequent acquisition of written language as an advanced form of language development, refer to fundamental cognitive processes at the interface between language and thought in children of kinder-garten age. The notion of emerging literacy can be distinguished from other perspectives on the acquisition of reading skills insofar as it assumes that the development of pre-reading is a continuous process and that the skills needed for reading are gradually developed from birth onwards (Sulzby and Teale 1991). Emergent literacy comprises the abilities, knowledge and skills considered to be necessary preliminaries for the acquisition of reading competence. Sulzby (1994) assumes that literacy competence develops practically from birth ('emergent literacy'). Snow et al. (1998), in their work on the prevention of reading and writing problems, list the following abilities and skills as a precondition for the acquisition of the written language: advanced language development, phonological sensitivity, early knowledge of the connection between letters and sounds, awareness of the significance of literacy in society and the ability to recognise printed matter in the environment. Children usually acquire this competence from early childhood onward. In their study of the acquisition of reading skills in children from 34 countries, Mullis et al. (2003) found that succes-

ful readers had gained experience with literacy activities in the years before starting school.

Experience with the written language and activities such as reading aloud and looking at and discussing books with parents or caregivers have proven to be beneficial for the development of literacy skills (Dannenbauer 1983; Sassenroth 1991; Sylva et al. 2001; Wade and Moore 2000). The interactions that Snow (1991, 1999) characterised as 'print talk'²¹ require knowledge of the representational functions of written language and phonological competence. Rhymes, poetry and wordplay also direct the children's attention to formal aspects of the language (Sylva et al. 2001; Warren-Leubecker and Carter 1988) and playful, exploratory activities with the letters of the alphabet help children to realise that the spoken language consists of individual phonemes (Andresen 2005; Wehr 2001). Observing adults reading or writing, as well as having an adult direct a child's attention to printed matter and to single letters in the surroundings help to foster children's literacy (Schickedanz et al. 1990; Sylva et al. 2001; Wade and Moore 2000).

In various studies, the SES of the parents was found to be a variable influencing literacy skills and the onset of reading (see National Assessment of Educational Progress 1991; Raz and Bryant 1990). Korat (2005), for example,

²¹ When books are looked at and/or read, the form's features are discussed; the children try to identify the letters and run their fingers over the text, deciding which line or word should be read, etc.

found that the phonological awareness and the recognition of letters among 5–6-year-olds with low SES were significantly poorer than among children of middle SES. Duncan and Seymore (2000) made similar findings in a longitudinal study of 5–8-year-old children.

In every annual inquiry, they found significant differences in lexicon, in the recognition of

letters and in word reading from the first class on. The results were usually interpreted as indicating that children with a low SES have less literacy experience in the pre-school period than children with middle and high SES. Evidence for this can be found in, among others, Aram and Levin (2001), Bus et al. (2000) and Purcell-Gates (1998).

Chapter 3: Language development and school success

Reading is closely linked both to the prior development of oral language and to the subsequent attainment of literacy. It is generally assumed that it is a language-based skill (see Menyuk et al. 1991). Children with pre-school deficits in language development run an increased risk with regard to the effective acquisition of literacy skills (Catts 1993).

Several studies have established that phonological awareness – generally described as the ability to recognise and manipulate the sound structure of a language by differentiating and identifying the phonemic units – is an important skill influencing the acquisition of the written language (see Goswami and Bryant 1990; Schneider 2004). According to Stanovich (1994), phonological skills are a better predictor than intelligence of the speed and efficiency with which children learn to read. The significance of phonological awareness for the acquisition of the written language has been demonstrated for several orthographic languages and even for Chinese, which has a non-orthographic writing system (see Limbird 2006). Pratt and Brady (1988) have ascertained that there is a significant relationship between phonological awareness and reading and writing until well into adult age, although it grows weaker after the first few years at school (Schneider and Näslund 1999). The reading and writing of texts increasingly becomes the foundation on which the lessons are built (Kirsch et al. 2002; Sweet and Snow 2003).

Apart from phonological awareness, grammatical and semantic skills are fundamental for the development of reading competence. In this case, however, the research situation is not uniform. Lombardino et al. (1997) found, for example, that expressive and passive language and phonological awareness are the best predictors for the reading competence of nine-year-olds. Contradictory findings have been made, for example, with regard to the role of syntactic skills in the acquisition of reading competence. Whereas Mann (1984) ascertained that they had an influence, Shankweiler et al. (1995) established no positive effects. They found instead that morphological knowledge was a significant factor affecting reading competence. In their research, Vellutino et al. (1991) found that lexicon was the strongest predictor of reading competence.

Various studies show that reading comprehension has an effect on school performance as a whole and that it is related to SES. International studies such as PISA (Baumert et al. 2002), which tested the reading competence of 15-year-olds, and IGLU (Bos et al. 2004), which examined reading comprehension of fourth-grade elementary school-children, have shown that pupils with a lower SES and those with a migration background are less competent in reading than children of higher SES and without a migration background.

Baumert and Schümer (2002) assume that low reading skills have a cumulative effect on school performance in all subjects. Blum et al. (2004) demonstrated that low reading skills had a negative influence on attainment in mathematics. These findings are supported by Jordan et al. (1992) who ascertained that pupils with low SES had more difficulty solving textual problems in mathematics than children with higher SES, although there were no differences in the case of pure mathematical calculation.

Despite the varying results regarding which forms of oral language competence specifically influence reading skills, it can be said, in summary, that pre-language and meta-language competences such as phonological awareness influence the ability to read and the acquisition of written language. These in turn have an influence on academic performance. Lower levels of competence in language and literacy development have been found in children from socially disadvantaged families and among migrants (see chapters 2.2 and 2.4).

Chapter 4: Models and programmes for fostering language development and literacy in infancy and early childhood

In recent years, several intervention programmes have been created to foster children's general learning abilities. In this chapter I present a selection of intervention programmes that focus in particular on language and literacy development. For further reading about language and literacy intervention programmes, I recommend an overview by Justice and Pullen (2003).

Language intervention programmes can essentially be distinguished according to whether they stimulate language development and literacy experience outside the home (daycare-based programmes) or foster language skills within the home environment (home-based programmes).

Home-based interventions

The following describes a project that I have chosen for its effectiveness with regard to both cost and outcome. It is based on the emergent literacy approach of Sulzby and assumes that early experience with books improves children's competence (Sulzby 1994).

In the project A Sure Start with Books (Wade and Moore 1993, 2000), which was carried out in Great Britain, approximately 300 parents

received materials such as children's books, posters, poetry cards and information on library services. These were handed out to them during a health examination for their nine-month-old children in the Health District of Birmingham. A first evaluation of the results was made by means of a questionnaire, which revealed that the parents had spent more time on shared reading than they would have done without the materials. Overall, the parents had developed a positive attitude towards books.

As there was initially no control group, a group consisting of 29 comparable pairs of parents²² was subsequently set up. The evaluation of observations of the two groups in their homes during adult-child shared reading sessions revealed that the interactions in the original group differed from those in the control group. The children in the original ('Bookstart') group showed higher attentiveness and concentration, participated more actively, leafed through the books more frequently, asked more questions and responded more often to the questions of their parents than the children in the control group. A further comparison of the children from the Bookstart group was undertaken with a newly chosen control group of 41

²² The percentage distribution of these parents was comparable to that of the original group with respect to the sex and age of their children, their ethnic group and the language spoken in the family and nursery experience.

six-to-seven-year-old children, who had been selected by means of teacher ratings in the fields of English, mathematics and the natural sciences. The comparison revealed that the children from the Bookstart group were significantly superior in all the fields. “The implication of these findings is that the Bookstart group had not only been better prepared for starting school, but had maintained its superiority throughout their first years of primary education” (Wade and Moore 2000: p. 44).

The Even Start Literacy Program is the largest project carried out in the United States with the aim of improving the academic performance, and especially the reading competence, of children from families with low SES. Even Start projects, which are distributed throughout the United States, offer various services to parents: daycare for the children, parenting education and joint parent–child activities. The choice of services and the frequency with which they were taken advantage of was left to the parents’ discretion.

In addition, the Even Start project assumed that children whose families receive the combined support of daycare services, parenting education programmes and parent–child activities profit more than they would if they only attended a daycare centre. In order to evaluate the effects of the project, researchers took a sample of 453 families from Even Start projects from across the USA.²³ A total of 163 families were included in

the control group. The families were assigned to the control and Even Start groups on the basis of their percentage share of participation in the services offered, so that those families with a lower level of participation were placed in the control group. The parents in the control group were not allowed to take advantage of Even Start project services for one year. With regard to income, education and profession, all of the families were underprivileged. While Even Start children and parents made gains on literacy assessments and other measures, the increase in competence was not significantly different from that of the families in the control group in either the post-test or the follow-up (St Pierre and Ricciuti 2005).

Further analyses revealed, however, that children who spent more time in daycare had a higher level of literacy. Children whose parents participated more intensively in the Parenting Education programme also showed higher growth rates in literacy skills. In contrast, more time spent in the Adult Education programme had negative effects on the literacy outcomes of the children (St Pierre and Ricciuti 2005).

Childcare interventions

Next I present an intervention model carried out in Germany, called the ESiA language project (Erzieherfortbildung zur sprachlich-integrativen Anregung = nursery teacher training in integrative language stimulation) (Beller et al. 2006). The aim of the project was to improve the

²³ This corresponds to 35% of the families in the entire project.

ability of nursery teachers to stimulate 1–3-year-old children in daycare centres in a purposeful way by means of systematic intervention.

In accordance with the interactionist approach to language acquisition, the project began with the assumption that a targeted increase in language interaction between the nursery teacher and the child and among the children themselves can increase the verbal and cognitive interaction of the child with its social and physical environment and hence foster language development.

In the intervention, which lasted 20 weeks, a trained member of the project served as a model for the nursery teacher with regard to language stimulation and the practice of a democratic educational style. Trained project members (interveners) undertook targeted interventions in everyday situations such as changing diapers, free play, meal times and guided activities during weekly visits. The intervener first presented a model of language stimulation and educational style for discussion by the nursery teachers. In order to strengthen and deepen the effects of the intervention and to encourage reflection and discussion on the stimulation level each nursery teacher had achieved, the intervener and the teacher made video recordings of each other's performance in these situations at regular intervals during the course of the 20-week intervention. These 5–10-minute video sequences were analyzed and discussed with the help of the micro-teaching method. The recorded scenes involving the intervener were also used to guarantee the quality of the intervention in a continuous

way. The intervener introduced into these daily activities forms of behaviour such as actions accompanying speech and interactive language; for example, asking open questions, reacting to the child's experiences, initiating conversations with the children, inquiring about the opinions and intentions of the children and encouraging language exchanges between them. On the one hand, these forms of behaviour guaranteed a suitable input of richly varied language and, on the other, they stimulated the child's own language production. The children's language utterances were taken up and then modelled and extended by means of corrective feedback and expansions. The language stimulation was accompanied by a caring and accepting educational style, which took into account the children's needs and guaranteed their autonomy.

The results showed that the language stimulation level attained by the nursery teachers in the intervention group – i.e. the quantity and quality of their language input – was raised significantly by the purposeful and systematic interventions when compared with changes in the control group. As well, in the intervention group the children's language and cognition developed significantly better than in the control group over the same period of time. The sample included both children for whom German was their first language and children from a migrant background who were learning German as a second language. No evidence was found for an interaction between the effects of the intervention on the language development of the children and their language of origin. This means that the intervention was as

successful for children of German origin as for migrant children (Beller et al. 2006).

Another intervention study by Neumann and Rosko (1993) showed that installing a literacy corner (office setting) in head start daycare centres for children from poor families increased the children's literacy activities and improved environmental word reading and their ability to read functional print. I would like to briefly present this study for two reasons: the intervention could be easily and cost-effectively replicated and it featured two types of intervention concerning educational style that have shown interesting results.

In the two intervention groups, they installed the same play area: a literacy-enriched office setting in the pre-school classrooms. In the office setting were a telephone, a calendar, paper, pencils, a telephone book, envelopes, stamps, a mail box, play money and seven signs with different messages, e.g. 'Office', 'We are open' etc. The office was open three times a week over a five-month period. Whereas the office setting was the same in both intervention groups, the intervention differed concerning the adult's role. In one intervention group (Group 2) a parent-teacher²⁴ was instructed to sit outside the office setting and to observe and take notes on the children's play. In the other intervention group (Group 1), the parent-teacher was an active participant during children's free play in the 'office'.

The parent-teachers were told that children would need no didactic teaching of letters but rather conversation 'that might integrate their knowledge of the world' (Neumann and Rosko 1993: p. 103). The parent-teacher could contribute to extending the children's play by ordering a pizza or writing a list, for example. The third group was the control group, which had no office setting or parent-teacher.

A pre-test of early reading showed no differences between the three groups. Results showed that the office setting increased children's literacy-related play activities from 2–3 percent in the first week to 22–24 percent eight weeks after starting the intervention. In the control group, literacy-related play activities remained at 3 percent. In the post-test, the children of the three groups differed significantly in a reading task involving environmental print (e.g. printed signs and messages in the children's environment). Children in Groups 1 and 2 had significantly higher scores than those in the control group. Significant differences between the two intervention groups were found – the role of the 'interactive' adult contributed significantly to children's learning of environmental print. In a functional print task, the children from the two intervention groups scored significantly higher than children in the control group, but there was no significant difference between the two intervention groups.

²⁴ This intervention consisted of six volunteers – all parents of children in the study group – who received instruction from the program coordinator.

Chapter 5: Conclusions: Implications and recommendations for practice

No theories or hypotheses about first and second language acquisition have been empirically proven to date. According to Oskaar (2003), a theory about language acquisition should refer to changes and development and be able to explain underlying processes. Different linguists' approaches lead to different nativist and behaviourist theories about L1 and L2 acquisition. Interactionist positions deriving from developmental psychology contributed to a convergence of the different concepts and were first introduced into the field of L1 acquisition, whereas interactionist theories of second language acquisition developed later. This may be because theories of L2 learning were focussed on formal language instruction in school. This of course was not the case for L1 acquisition. With the increasing numbers of immigrants in the United States and Europe, the focus on L2 learning changed and necessitated other methods.

However, because of the complexity and heterogeneity of the phenomenon of bilingualism, there are limits as to how completely any theory can account for the acquisition of a second language. An important educational task is to introduce more critical evaluation of different theories as well as of research findings to prevent the dissemination of wrong assumptions concerning the priority of any one theory. This would not confuse nursery or pre-school teachers; it would, however, go a long

way to prevent absolutistic thinking about the acquisition of a second language.

My own experience in training workshops for educators is that parts of the threshold hypothesis are commonly accepted, especially the assumption that migrant children are often 'semilingual', i.e. that they did not sufficiently acquire either their native language or the target language. Most of these teachers are monolingual and not able to assess the child's native language proficiency. They simply assume that the child has only 'semilingual' proficiency in both languages. As I pointed out earlier (see chapter 2.2), most migrant children are dominantly bilingual at school entry and not 'semilingual'. The empirically unproven but (among practitioners) common assumption of 'semilingualism' tends to consider the child's language development as pathogenetic. The target language development of migrant children may be delayed when compared with that of native children, but there is only a small percentage – similar to L1 learners – of children with specific language impairment.

In chapters 2.1 and 2.2, I referred to studies of interactions between mothers and children with delayed or impaired language development that showed that the mothers cognitively understimulated their children, despite the fact that they were informed about their child's specific impairment and their average

intelligence scores. In contrast, offering a rich and stimulating environment has proven to have a positive impact on language acquisition (see chapter 2.1). But it remains a fact that children with delayed language acquisition – as well as children in whom ‘semilingual’ proficiency is assumed – receive poorer verbal stimulation and insufficient demands on their cognitive capacities.

In what follows, I’ll concentrate on what could be done in pre-school settings to foster children’s language acquisition. Several studies (see chapters 2.1, 2.2 and 2.3) showed that language is better acquired in informal instructional settings and in daily routines than in formal instruction settings. There is strong research evidence that input of both high quality and quantity in daily adult–child interactions has a positive effect on children’s language development.

Several caregiver behaviours concerning language stimulation and their effect on language development are presented in this paper. In natural settings, effective language-stimulating behaviours include providing verbal input rich in vocabulary and complexity, stimulating the child’s verbal production and modelling the child’s outcome. This approach should be implemented systematically in daycare settings through caregiver training. A major role in daycare settings concerns the frequency of one-on-one interactions, which seem to be a successful way for the teacher to adapt to the child’s individual development, needs and interests.

Research has shown that children who are more sociable and active in seeking contact with peers

acquire language faster. These findings show that measures to improve language development should focus on caregiver behaviours concerning verbal input and modelling the child’s output as well as on the structural components of group settings. An accepting, child-oriented and autonomy-granting educational style supports children’s interaction with their social and physical environment and motivates them to share these experiences with others in verbal interactions. An intervention model that successfully improved these adult behaviours (see chapter 4) through systematic intervention has shown significant positive effects on children’s verbal and cognitive development.

Daycare environments should provide cognitive stimulating material and activities, and the teacher should verbally mediate these activities by stimulating and encouraging the child’s experience through questions (for example: What would happen if ...? Why did this happen? What do you think about ...? Have you seen this elsewhere?), which foster thinking and decontextualizing (see chapter 2.4). Daycares should make available literacy activities such as reading books, storytelling, exploring letters and their corresponding sounds, visiting the library, playing in literacy corners with writing materials (such as a ‘post office’) and activities that foster phonological awareness such as rhymes, finding objects whose name begins with a certain letter, etc. (see chapters 2.4 and 4).

In the past few decades, several training methods for acquiring phonological awareness have been developed and have shown positive

effects on reading and writing development in the first grades of elementary school. There is no research showing that these skills could be fostered in the natural daycare setting without formal instruction. But there are implications that these skills can be developed through literacy activities in a rich, stimulating environment (see chapter 2.4).

I pointed out above that there is no clear empirical basis for the common assumption that pre-school children are able to acquire a second language faster than older children (see chapter 2.2). Developing fluency in a second language that is comparable to a native speaker's proficiency takes several years. These finding should make clear the error in believing that daycare for migrant children provides sufficient exposure to the target language to prepare them for school instruction, even in high-quality daycare settings. These children may be better prepared for schooling, but school instruction should also focus on fostering language development. This also applies to native language-speaking children with low-SES backgrounds. The idea of a head start for low-SES and immigrant children does not imply that these children need no continued fostering of their language development.

There are only a few studies that focus on the development of the target language among migrant children in pre-school settings. Further research is needed. Research findings showed that children go through several stages when acquiring a second language and that there is a stage in which they do not communicate

verbally. The duration of this stage seems to be longer for younger than for older children (see chapter 2.2). The individual differences among L2 learners are great (see chapter 2.2); pre-school children seem to use different strategies in the process of learning the target language, while less successful learners appear to use less verbal and more non-verbal strategies for a longer period (see chapter 2.1). An accepting and child-oriented educational style should afford each child the time he or she needs, without pressuring such children to communicate verbally. However, the non-verbal communicative cues of the child should be recognised and systematically transferred into verbal language by the caregiver. For example, when a child is looking at something, the caregiver should say, for example: "Do you want this? Do you want me to get it for you?" For children using a telegram style of communicating, caregivers should mediate the child's utterance through corrective feedback and expansions (as for L1 learners). It was an interesting observation in our follow-up study of the ESiA language project (see chapter 4) that children began to use the corrective feedback in their peer group conversations.

As I pointed out earlier, it is important to provide age-appropriate or, even better, developmentally appropriate cognitive stimulation for children with insufficient language abilities. Whereas it is important to make sure that children are able to comprehend what is said to them, the caregiver should be aware that information-processing capacity is usually age-appropriate and that all children need complex

verbal input in order to develop a rich and diverse language. Caregiver's verbal addresses to L2 learners could be similar to utterances to younger L1 learners, where important words are stressed by intonation. This enables the child to filter the important information.

Code-switching and language mixing were identified as learning strategies (see chapter 2.2). The common assumption that children who use single words from their native language in utterances of the target language are not able to differentiate between languages seems to be false; although this may be the case for some children, code-switching should not be condemned as a linguistic impairment. Children who are able to differentiate between languages may try to use single words as a communicative strategy, depending on whether the addressee is able to understand the word and would consider code-switching as a positive and welcome strategy. Caregivers who learn a few important words in the L2 learners' primary language may send a positive sign to the child that his or her language is welcomed and even fruitful for communicating. The parents of L2 learners could supply some important words in the child's native language, and it may also raise the child's motivation to integrate into the group.

Recommendations for parents should stress the evidence of language stimulation and literacy activities at home, whether their children are acquiring their first or second language. As I mentioned earlier (chapter 2.2), a higher frequency of contact with the target language, be it through peers or external sources such as

television and books, had a positive impact on children's linguistic development. The frequency of using the target language at home had no positive impact; of course, this may be due to differences in the parent's proficiency in the target language. Fostering the native language had no negative effect on the proficiency of the target language (chapter 2.2). Recommendations for migrant parents include communicating in their native language or, better yet, in the language in which they feel most proficient to provide a rich and stimulating verbal environment for their children.

This paper does not address in detail the question of whether bilingual native-language education for migrant children is more effective for language development and later school success. There are simply no empirical studies examining this topic for children of pre-school age, only on language development in informal education. Some studies have found positive effects on target language development and school success for bilingual or native instruction in migrant children, although some have not. Because of the inconsistency of findings and because many of these studies lacked proper methodology (see chapter 2.2), it must be said that it is still unclear whether schooling in the native language of the children is an effective approach to increasing academic success. Several of the studies cited pointed out that native children from low SES backgrounds also have a higher risk of school failure. Bringing this into the debate should make it clear that the question of which language – the native or the target language – should be used

for instruction language in pre-school and early primary school to foster migrant children's academic achievement is only one possible dimension of the issue. The relationship between language development and school success is complex, even for native children, and a multi-method approach and further research are both needed.

The findings concerning language acquisition cited in this paper should and could build a fruitful base for fostering language development in daycare settings, whether the first or the second language is the target. This approach should extend beyond daycare and continue to be implemented in school settings.



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Glossary

Additive bilinguals: Bilinguals with high competencies in both languages (see chapter 2.2)

Aptitude: Language aptitude refers to how well, relative to others, an individual can learn a foreign language in a given amount of time and under given conditions. Language aptitude is operationalised by means of various analytical capacities and working memory, which are considered necessary for the acquisition of vocabulary and the implicit structures of a language (see Carroll 1963).

Balanced bilinguals: Persons with a high degree of linguistic and academic competence in both languages, or with the competence appropriate to their age in both languages

Bilingual language acquisition: The process of acquiring two languages

Circumstantial bilinguals: Bilingual children whose first language is not well recognised

Code-switching: The use of more than one language in conversation, either between sentences or within a single sentence

Contrastive hypothesis: Posits that similar structures in the first and second languages facilitate acquisition of the second language as they can be transferred (see chapter 2.2)

Corrective feedback: The act of repeating a child's incorrect or incomplete sentences in the correct form, e.g. "I goed to supermarket" – "Oh, you went to the supermarket."

Dominant bilingualism: Greater competence in one of the two languages

Dysphasia: A language disorder in which there is an impairment of speech and comprehension. It is caused by brain damage, usually in the left side of the brain, which is responsible for language and communication. (Wikipedia)

Elicit bilingualism: Bilingual children whose first language is socially recognised

Expansions: The act of expanding a child's sentence, e.g., "This is a cup." – "This is a red cup."

Identity hypothesis: Theory postulating that the first language does not influence the acquisition of the structures of the second language.

Inflections: In grammar, inflection (or inflexion) is the modification or marking of a word (or more precisely lexeme) to reflect grammatical (relational) information, such as gender, tense, number or person. (Wikipedia)

Interdependence hypothesis: Assumes that the second language is developed on the basis of an intact first language, that children who do not have an intact first language when they begin to learn the second language will have difficulties in acquiring the second language and that competence in the second language is dependent upon the level of development of the first language.

Interlanguage hypothesis: Views the language of the learner of a second language as an independent and variable system, which contains elements of the first and second language as well as its own distinctive ones.

L1: First language

L1 majority L2 learners: Elicit bilinguals

L1 minority L2 learners: Circumstantial bilinguals

L2: Second language

Lexicon: In linguistics, the lexicon of a language is its vocabulary, including its words and expressions. More formally, it is a language's inventory of lexemes. The lexicon includes the lexemes used to actualise words. A lexicon organises the mental vocabulary in a speaker's mind: First, it organises the vocabulary of a language according to certain principles (for instance, all verbs of motion may be linked in a lexical network) and second, it contains a generative device producing (new) simple and complex words according to certain lexical rules. For example, the suffix '-able' can be added to transitive verbs only, so that we get 'read-able' but not 'cry-able'. (Wikipedia)

MLU: Mean Length of Utterance is a measure of linguistic productivity in children. It is traditionally calculated by collecting 100 utterances spoken by a child and dividing the number of morphemes by the number of utterances. A higher MLU is taken to indicate a higher level of language proficiency. (Wikipedia)

Morphemes: The smallest linguistic unit that has semantic meaning. In spoken language, morphemes are composed of phonemes (the smallest linguistically distinctive units of sound) (Wikipedia). For example, cat – hat; she goes; house – houses

Morphology: The field of linguistics that studies the internal structure of words. (Words as units in the lexicon are the subject matter of lexicology.) While words are generally accepted as being (with clitics) the smallest units of syntax, it is clear that in most (if not all) languages, words can be related to other words by rules. For example, English speakers recognise that the words dog, dogs, and dog-catcher are closely related. English speakers recognise these relations from their tacit knowledge of the rules of word formation in English. They intuit that dog is to dogs as cat is to cats; similarly, dog is to dog-catcher as dish is to dishwasher. The rules understood by the speaker reflect specific patterns (or regularities) in the way words are formed from smaller units and how those smaller units interact in speech. In this way, morphology is the branch of linguistics that studies patterns of word formation within and across languages, and attempts to formulate rules that model the knowledge of the speakers of those languages. (Wikipedia)

Neologism: A word, term, or phrase that has been recently created (or 'coined'). (Wikipedia)

Overgeneralisation: The act of applying grammatical rules in all situations, e.g. goed instead of went

Phonological awareness: The conscious sensitivity to the sound structure of language. It includes the ability to auditorily distinguish parts of speech, such as syllables and phonemes. The ability to blend and segment phonemes is critical to the development of decoding and spelling skills. Phonological awareness is an important and reliable predictor of later reading ability and has, therefore, been the focus of much research. (Wikipedia)

Phonology: The collection of sounds that form a language(s)

Semantics: The relationship between signs (words or expressions) and the things they refer to (meaning)

Separate development hypothesis: Posits that, after a mixing of the languages in the first two years of life, the two languages develop independently of one another as separate systems.

SES: Socio-economic status

Successive language acquisition: The acquisition of a second language in early childhood when the first is already acquired or in process of being acquired

Syntax: The study of the rules that govern the structure of sentences and that determine their

relative grammaticality. The term syntax can also be used to refer to these rules themselves, as in ‘the syntax of a language’ (e.g., ‘the syntax of French’ or ‘the syntax of Gaelic’). (Wikipedia)

Threshold level hypothesis: States that, under certain conditions, bilingualism can have a negative effect on school success and that positive results can only be achieved when the children are sufficiently competent in their first language.

Time-on-task hypothesis: Assumes that success in the second language is positively related to the amount of contact with the second language. According to Hopf (2005), the learning time available to a student is limited and the offer of additional lessons in the first language reduces the learning time in the second. Consequently, it must have a negative effect on the acquisition of the second language.



About the Bernard van Leer Foundation

The Bernard van Leer Foundation funds and shares knowledge about work in early childhood development. The foundation was established in 1949 and is based in the Netherlands. Our income is derived from the bequest of Bernard van Leer, a Dutch industrialist and philanthropist, who lived from 1883 to 1958.

Our mission is to improve opportunities for children up to age 8 who are growing up in socially and economically difficult circumstances. We see this both as a valuable end in itself and as a long-term means to promoting more cohesive, considerate and creative societies with equality of opportunity and rights for all.

We work primarily by supporting programmes implemented by partners in the field. These include public, private and community-based organisations. Our strategy of working through partnerships is intended to build local capacity, promote innovation and flexibility, and help to ensure that the work we fund is culturally and contextually appropriate.

We currently support about 140 major projects. We focus our grantmaking on 21 countries in which we have built up experience over the years. These include both developing and industrialised countries and represent a geographical range that encompasses Africa, Asia, Europe and the Americas.

We work in three issue areas:

- Through “Strengthening the Care Environment” we aim to build the capacity of vulnerable

parents, families and communities to care for their children.

- Through “Successful Transitions: The Continuum from Home to School” we aim to help young children make the transition from their home environment to daycare, preschool and school.
- Through “Social Inclusion and Respect for Diversity” we aim to promote equal opportunities and skills that will help children to live in diverse societies.

Also central to our work is the ongoing effort to document and analyse the projects we support, with the twin aims of learning lessons for our future grantmaking activities and generating knowledge we can share. Through our evidence-based advocacy and publications, we aim to inform and influence policy and practice both in the countries where we operate and beyond.

Information on the series

Working Papers in Early Childhood Development is a ‘work in progress’ series that presents relevant findings and reflection on issues relating to early childhood care and development. The series acts primarily as a forum for the exchange of ideas, often arising out of field work, evaluations and training experiences. As ‘think pieces’ we hope these papers will evoke responses and lead to further information sharing from among the readership.

The findings, interpretations, conclusions and opinions expressed in this series are those of the authors and do not necessarily reflect the views or policies of the Bernard van Leer Foundation.

