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Overview

This volume presents a comprehensive overview of the state of the art of the conjunction of two important fields of scientific inquiry: language and creativity. In doing so, it declares a sound position of the cross-disciplinary approach incorporating efforts of scholars working in both areas. The volume extensively deals with how language use interplays with creative practice. This chapter adds a cognitive developmental perspective, in which language is perceived as a dynamic system undergoing constant modifications at both intra- and inter-personal levels (see also Langlotz, Chapter 2; Veale, Chapter 22). We start from scratch and develop into fully functioning language users. Acquisition of such a complex cognitive system inevitably leaves a trace on an individual’s general cognition. Development of the latter may spur creative development. Indeed, increase and decrease in creative performance with age is well documented in creativity literature (for example Johnson, 1985; Torrance, 1968). In other words, it is prudent to consider the relationship between language and creativity in a developmental perspective, and to look at how language acquisition influences an individual’s creative potential. In this framework, a synergy of scientific investigation in both fields flows from the theoretical framework of linguistic relativity (Lucy, 1997; Pavlenko, 2014): a reciprocal effect of language and thought plays out in the relationship between linguistic expression and creative thinking. Thus this chapter explores the relationship between language and creativity by addressing contemporary trends in language acquisition and use from the perspective of creative cognition.

It is evident that vastly increased human mobility, communication technologies, and the accelerating integration of the global economy have increasingly abolished geographic boundaries and brought together people from different cultural and linguistic backgrounds. The close interaction of people speaking different languages emphasises the phenomenon of multilingualism as never before. New scientific research reflects on these tendencies and provides a rapidly growing body of empirical investigation into the phenomenon of multilingualism. This chapter introduces this phenomenon to the language–creativity equation, and provides a tentative answer to the following question: what cognitive mechanisms underlying creative thinking could benefit from the acquisition and use of multiple languages?
The chapter starts with an outline of the multilingual creative cognition framework. As we will see, studies show that speaking multiple languages extends our cognitive capacities. Creativity can be explained by enhanced normative cognition – that is, multilingual practices may strengthen certain cognitive functions, which in turn may lead to increases in our creative potential. A series of studies conducted in various geographic, linguistic, and cultural locations have revealed that language and culture-related factors have an impact on the development of the specific cognitive mechanism underlying an individual’s creative performance. The chapter presents a brief overview of these studies and employs their findings to strengthen the theoretical framework of multilingual creative cognition. Specifically, it identifies the cognitive mechanisms underlying creative thinking, which are potentially encouraged by an individual’s cross-linguistic and cross-cultural experiences. The chapter concludes with a discussion of potential applications of the multilingual creative cognition framework. Specifically, it proposes an educational model that accounts for both multilingual and creative aspects of human development. Both multilingual and creative educational models are gaining increasing credibility in the scientific, educational, and legislative communities. They recognise the necessity of fostering students’ creative potential and multilingual competence. The analysis of various teaching strategies inherent to both types of education programme shaped the construction of a theoretical framework for the bilingual creative education programme (Kharkhurin, 2012a).

**Theoretical framework**

The scientific inquiry into multilingual creativity appears at the intersection of two highly elaborated fields: multilingualism and creativity. Similar to many other topics in scientific scholarship, in-depth research in both disciplines reveals more questions than answers and makes the subject matter increasingly confusing. This confusion is reflected in a major controversy around the definition of each of these phenomena (for example Cook & Li Wei, in press; Kharkhurin, 2014; Runco & Jaeger, 2012). The discussion of these controversies falls beyond the scope of this chapter; instead, this section presents the definitions of these phenomena adopted in contemporary multilingual creativity research.

Multilinguals1 are considered to be individuals who are fluent in all of their languages or those who actively use, or attempt to use, more than one language, even if they have not achieved fluency in all of them (Kroll & de Groot, 1997). This definition addresses the notion that multilinguals do not form a homogeneous group and that the majority of individuals speaking more than one language hardly display equal command of these languages. Their linguistic competence is contingent on the age and circumstances of acquisition of respective languages and the context (for example social, cultural, emotional) in which these languages are acquired and used. Multilinguals are assumed to possess a highly dynamic language system, in which individual languages interact and influence each other. It is assumed that speaking multiple languages not only adds to an individual’s linguistic repertoire, but may also influence his or her cognitive functions, conceptual representations, and even personality traits (compare ‘linguistic multicompetence’: Cook & Li Wei, in press) – that is, it has an impact on the whole mind (on all language and cognitive systems). It follows, then, that variations in acquisition and use of languages would have ramifications for the individual’s cognitive development.

During the past few decades, research in the area of bilingual cognitive development has made tremendous progress and provided evidence supporting the notion that speaking more than one language extends, rather than diminishes, an individual’s cognitive capacities (see, for example, Bialystok, 2005, for an overview). There is a strong argument in the
literature that multilingual development may result in establishing specific architectures of the mind that are likely to promote later cognitive advantages. On the other hand, according to the creative cognition approach, creativity is considered a product of normative cognitive functioning.

The conceptual framework of creative cognition rests on two major assumptions. First, according to the psychometric tradition, creative capacity is perceived as an ability to initiate multiple cycles of divergent and convergent thinking (Guilford, 1967). A combined effort of these two types of thinking creates an active, attention-demanding process that allows generation of ideas satisfying the defining characteristics of a creative product: novelty (that is, original or unexpected) and utility (that is, useful or meeting task constraints) (see Mayer, 1999, for an overview). Over the last half-century, numerous studies have provided evidence for the ability of divergent thinking tests to predict certain aspects of creative problem-solving performance and real-world creative achievement. Although, as Runco (1991: ix) argued, ‘[d]ivergent thinking is not synonymous with creative thinking’, many researchers believe that divergent thinking is a defining component of the creative process (Lubart, 2000). Guilford (1967) associated the properties of divergent thinking with four main characteristics: fluency (the ability to rapidly produce a large number of ideas or solutions to a problem); flexibility (the capacity to consider a variety of approaches to a problem simultaneously); elaboration (the ability to think through the details of an idea and carry it out); and originality (the tendency to produce ideas different from those of most other people).

Secondly, ‘ideas and tangible products that are novel and useful are assumed to emerge from the application of ordinary, fundamental cognitive processes to existing knowledge structures’ (Ward, 2007: 28). An individual’s creative performance can be understood in terms of the use of specific processes, and the richness and flexibility of stored cognitive structures to which these processes are applied (Ward, Smith, & Vaid, 1997). Creative capacity is therefore assumed to be an essential property of normative human cognition (Ward, Smith, & Finke, 1999), and an increase in general cognitive functioning may facilitate an individual’s creative abilities.

Hence, if multilingualism facilitates general cognitive functioning and results in more elaborate cognitive structures and/or functioning, it may also facilitate creative functioning (Kharkhurin, 2012a).

**Empirical evidence**

Unfortunately, the relationship between multilingualism and creativity has not received adequate consideration in the scientific community. The reasons for this oversight can be presented as a threefold argument. First, as became evident from the previous discussion, both theoretical constructs are fuzzily defined, and researchers still struggle with a precise description of the phenomena (Simonton, 2008).

Secondly, the impact of multilingualism on creativity is mediated by the effects of multicultural experience. On one side, the term ‘culture’ has numerous overlapping and misleading meanings, which hampers adequate quantitative analysis of its relation to cognitive functioning. On the other side, the influence of sociocultural context on an individual’s creative abilities has in itself received substantial attention in the scientific community (for example Leung et al., 2008; Lubart, 1999; Niu & Sternberg, 2001).

Thirdly, the research into creativity has virtually no overlap with that of multilingualism. Although both fields are largely developed and have received a substantial amount of empirical investigation, the studies focusing on the intersection of these two areas are few.
Creative performance of bilinguals and monolinguals

In her seminal review paper, Ricciardelli (1992b) reports twenty-four studies that took place between 1965 and 1992. In the decade following, this scarce research was complemented by six dissertations, six peer-reviewed journal articles, and one book. In total, bilingual research in creativity produced approximately forty studies over forty years. Only recently has this topic received systematic empirical investigation in my own longitudinal project studying cognitive processes underlying multilingual creativity (see an overview in Kharkhurin, 2012a). After that, five additional studies addressing the relationship between bilingualism and creative and insightful problem solving have appeared in various publications. Two more studies focus on bilingual and gifted populations. Most of the studies have been conducted with children and only recently were they complemented by research with college students. In most of these studies, creativity was assessed by divergent thinking tests, and the comparison was made between bilingual and monolingual groups.

The results of these studies have delivered a relatively consistent pattern of findings. Bilinguals were found to systematically outperform their monolingual counterparts on divergent thinking tests. These studies demonstrated bilinguals’ advantages on divergent thinking traits, such as fluency (for example Carringer, 1974; Hommel et al., 2011; Jacobs & Pierce, 1966; Karapetsas & Andreou, 1999; Ricciardelli, 1992a), flexibility (for example Adi-Japha, Berberich-Artzi, & Libnawi, 2010; Carringer, 1974; Konaka, 1997), elaboration (for example Kharkhurin, 2008; Srivastava & Khatoon, 1980; Torrance et al., 1970), and originality (for example Cummins & Gulutsan, 1974; Kharkhurin, 2009; Konaka, 1997; Okoh, 1980), on insight problems (Cushen & Wiley, 2011), and on structured imagination tasks (Kharkhurin, 2009). In the rare cases in which monolinguals outperformed bilinguals (Fleith, Renzulli, & Westberg 2002; Garcia, 1996; Gowan & Torrance, 1965; Lemmon & Goggin, 1989; Stephens, 1997; Torrance et al., 1970), it was argued that the latter were not sufficiently fluent in either of their languages for creative advantages to occur (compare the threshold hypothesis of Cummins, 1976; see also Ricciardelli, 1992a).

However, as noted earlier in the chapter, people in bilingual and monolingual groups seem to have two distinct cognitive structures. This means that their comparison would not shed any light on creative advantages of the former; thus a body of empirical data accumulated in bilingual creativity research would not illuminate the important determinants of creative performance inherent to multilingual individuals. It is therefore prudent to systematically investigate multilingual speakers with different histories of language acquisition and use to identify what factors can facilitate the cognitive processes underlying creativity.

Factors of language acquisition and use facilitating creative cognition

Language proficiency appears to be the first factor that might have an impact on multilingual creative performance. Indirect evidence for the role of language proficiency in an individual’s creative abilities comes from the studies comparing bilinguals with monolinguals. Cummins’ (1976) threshold theory predicts that bilinguals need to achieve high levels of proficiency in both of their languages before bilingualism can promote cognitive advantages. This was demonstrated in the studies with bilingual children and college students, which revealed greater divergent thinking performance of participants with high proficiency in both languages, as compared to their linguistically unbalanced counterparts. For example, Ricciardelli’s (1992a) study with Italian-English bilingual and English monolingual children revealed that only bilinguals with high proficiency in both languages showed greater fluency and imagination
compared with their monolingual counterparts. Similarly, Lemmon and Goggin’s (1989) study with Spanish-English bilingual college students found that the tendency of monolinguals to outperform their bilingual counterparts on fluency and flexibility was ascribed to those participants classified as a low proficiency group. In the same fashion, Konaka (1997) reported that the degree of bilingual balance – based on the score computed from Japanese-English bilingual children’s self-rating and their performance on the Word Association Test (Lambert, 1956) – significantly predicted performance on fluency, flexibility, and originality.

A few recent studies conducted with different types of bilinguals in various geographic locations and cultural contexts confirmed the effect of language proficiency on creative capacities. Bilinguals with high scores on both English and Russian versions of the Picture Naming Test (Kharkhurin, 2012b) performed better on elaboration than those with moderate scores on either or both of these versions (Kharkhurin, 2008). Similarly, Farsi-English bilinguals highly proficient in both languages (assessed by the same Picture Naming Test) outperformed their unbalanced and moderately proficient counterparts on fluency (Kharkhurin, 2009). Moreover, Lee and Kim (2011) found that more balanced Korean-English bilinguals (whose level of bilingualism was assessed by the Word Association Test) obtained higher creativity scores than their less balanced counterparts. These findings were complemented by those of another study conducted with bilinguals with different proficiency levels in English (Kharkhurin, 2011). This study revealed that more linguistically proficient bilinguals tended to score higher on originality and revealed more unstructured imagination, as measured by the Invented Alien Creature test (compare Ward, 1994).

The second factor refers to the age at which individuals acquire their languages. Traditionally, the distinction is made between simultaneous and sequential bilinguals (McLaughlin, 1984). Simultaneous bilinguals learn both of their languages from the onset of language acquisition. The sequential bilinguals learn their second language after the age of 5, when the basic components of first language are already in place. Sequential bilinguals are further divided into early and late, reflecting the age at which second-language acquisition occurred (Genesee, 1978). A group of simultaneous Armenian-Russian bilinguals scored higher on flexibility and originality than their sequential counterparts, who started to learn one of the two languages between two and four years later (Kostandyan & Ledovaya, 2013). There is also evidence that Russian-English bilinguals who acquired a second language at a younger age scored higher on fluency and flexibility (Kharkhurin, 2008). Similarly, bilinguals who acquired their second language (English) by the age of 6 tended to solve insight problems more readily than their counterparts, who acquired a second language after this age (Cushen & Wiley, 2011).

The third factor addresses a defining feature of multilingualism – namely, code switching – the alternation and mixing of different languages in the same episode of speech production. Code switching has been argued to be a creative act (for example Li Wei & Wu, 2009). For example, linguists working in the linguistic ethnography tradition replaced code switching with other terms such as ‘translanguaging’ to capture its creative and dynamic nature (see a review in Garcia & Li Wei, 2014). They investigated the use of translanguaging in diverse contexts, from literature and drama, to pop songs, new media, and public signs (for example Androutsopoulos, 2013; Chik, 2010; Jonsson, 2005; Sebba, Jonsson, & Mahootian, 2012). These studies consider code switching to be not only a juxtaposition of different grammatical structural elements, but also an expressive and creative performance. Bhatia and Ritchie (2008) reveal various facets of bilingual creativity through code switching as it manifests itself in the day-to-day verbal behaviour of a bilingual. They argue that code switching is essentially an ‘optimising’ strategy.
rendering a wide variety of new meanings that the separate linguistic systems are incapable of rendering by themselves. The only empirical evidence for the relationship between code switching and creativity is Kharkhurin and Li Wei’s (2015) finding that those individuals who switch codes frequently and regularly obtained higher scores on originality than those who do not do so in their everyday practice.

The fourth factor reflects the context of language acquisition and use. The studies of bilingual creativity generally disregarded the fact that most participants in the target samples experience and participate in more than one culture. These individuals are primarily immigrants, migrant workers, members of minority groups, or foreign students exposed to different educational systems. They acquire each of their languages in the respective cultural environments in which different cultural cues are available (Pavlenko, 2000). Therefore, in addition to acquiring several languages, they can also adopt a range of multicultural values and beliefs. Acculturation studies support this view by demonstrating that language acquisition is often accompanied by adoption of the cultural values of the country in which this language is acquired (for example Birman, Trickett, & Vinokurov, 2002; Gordon, 1964). On the other hand, creativity research has demonstrated that the specific economic, political, social, and cultural aspects of the environment can have a considerable influence both on levels of creative potential and on how creativity is evaluated (for example Lubart, 1999). Sociocultural values and norms determine and shape the concept of creativity, which in turn may influence the manner in which creative potential is apprehended and incarnated. Hence, if multilinguals acquire their languages in different cultural environments, they are most likely to have been exposed to different sociocultural environments. This multicultural experience encourages a variation in the development of creative potential. Therefore multilingual individuals’ experience with multiple sociocultural settings may increase their creative potential.

This argument finds support in cross-cultural research demonstrating that the effect of multilingualism on creative performance is often confounded with the effect of multiculturalism (see Kharkhurin, 2012a, for a discussion). For example, Kharkhurin (2008) found that the length of residence in the new cultural environment was related to Russian-English bilingual college students’ fluency, flexibility, and elaboration above and beyond the effect of bilingualism. Similar findings were obtained by Maddux and Galinsky (2007), who found that the amount of time that MBA students from forty different nations had lived abroad significantly predicted creative solutions of Duncker’s (1945) candle-mounting problem when the effect of bilingualism was controlled.

Another line of research proposes that, in addition to directly contributing to this performance, the specific settings of the sociocultural environment to which an individual is exposed may modulate the impact of multilingualism on creativity (for example Kharkhurin, 2010; Leung et al., 2008). This idea stems from cross-cultural research in creativity demonstrating that variations in the manner of socialisation, degree of self-perception and self-expression, and education and social conduct may modulate the differences in creative performance of the representatives of different cultures (for example Kharkhurin & Samadpour Motalleebi, 2008; Niu & Sternberg, 2001; Zha et al., 2006). If individuals’ creative potential may be influenced by their experience with different cultures, the variations in multilinguals’ cultural settings may have an impact on different aspects of their creative thinking. For example, Kharkhurin (2010) compared Farsi-English bilingual and Farsi monolingual college students residing in the Middle East with their Russian-English bilingual and English monolingual counterparts residing in the United States. The study demonstrated that the interaction between bilingualism and the sociocultural environment had a significant influence on creative performance. Moreover, this study speculated that the cultural distance between the environments to
which bilingual groups were exposed in the respective countries could also play a role in an individual’s creative behaviour.

The fifth factor also addresses the context of language acquisition and use. However, this one is concerned with emotional experience. Creativity literature regards an individual’s emotional state as an important determinant and powerful engine of creative behaviour (for example Averill, Chon, & Hahn, 2001; Kaufmann, 2003). Various researchers have claimed that emotions can either help or hurt creative endeavours (for example Montgomery, Hodges, & Kaufman, 2004; Russ, 1999). At the same time, extensive literature demonstrates that bilinguals’ emotions are realised differently in their different languages and that bilingual individuals have particular preferences for one or another language when it comes to expression of their emotions (see Pavlenko, 2006, for an overview). The experience of different emotions in different linguistic contexts can therefore lead to a variation in creative performance. Kharkhurin and Altarriba (accepted) tested this hypothesis with Arabic-English bilingual college students, who were induced into positive or negative mood states using either Arabic or English linguistic contexts. The study revealed an interactive effect of the emotional state and linguistic context on an individual’s creativity. Specifically, participants obtained significantly greater non-verbal originality when they were induced to a positive mood state while being tested in English or to a negative mood state while being tested in Arabic, as compared to when they were induced into a positive mood state while being tested in Arabic or a negative mood state while being tested in English. The role of emotions in multilingual creativity was hinted at in Kharkhurin and Li Wei’s (2015) study, which provided an interesting account in which emotion-triggered code switching resulted in activation of creative capacities. Specifically, code switching induced by a particular emotional state appeared to relate to increase in originality in thinking. Research on the relationship between multilingualism and emotions provides evidence that code switching is often triggered by the speaker’s emotions and other affective factors (for example Dewaele, 2010; Pavlenko, 2005). This, in turn, could boost creativity, possibly because code switching breaks the conventional conversational routine by introducing different, emotionally laden elements of language.

Cognitive mechanisms underlying multilingual creativity

So far, I have identified five factors of language acquisition and use that might contribute to multilingual creativity: language proficiency; age of language acquisition; code switching; cross-cultural experiences; and emotional experiences. Now, I will explore the cognitive mechanisms underlying creative thinking, which are potentially facilitated by multilingual practice.

Recall that, in psychometric literature, creative thinking is perceived as an ability to initiate multiple cycles of divergent and convergent thinking (Guilford, 1967). The fundamental difference between these two processes is that convergent thinking is a conscious attention-demanding process, whereas divergent thinking occurs in an unconscious mind in which attention is defocused (for example Kasof, 1997; Mendelsohn, 1976) and thought is associative (for example Koestler, 1964; Mednick, 1962; Ward, Smith, & Vaid, 1997). Convergent thinking seeks one correct answer to a question or solution to a problem, which question or problem must have a single answer or solution (Runco, Dow, & Smith, 2006). Divergent thinking, on the other hand, involves a broad search for information and generation of numerous novel alternative answers to a question or solutions to a problem, which question or problem has no single solution (Guilford, 1967). The solutions generated during divergent
thinking are subsequently evaluated during convergent thinking, which narrows all possible alternatives down to a single solution. There is evidence that multilingual practice facilitates both divergent and convergent thinking: the former may benefit from the specific architecture of multilingual memory; the latter may benefit from multilinguals’ highly developed selective attention.

The functioning of divergent thinking can be explained as an automatic spreading activation mechanism that simultaneously triggers a large number of mental representations. These representations are stored in conceptual memory. The latter is assumed as a pattern of spreading activation (McClelland & Rumelhart, 1985) over a large set of mutually linked units of meaning (or conceptual features) organised in the conceptual networks (Lamb, 1999). The spreading activation mechanism transfers activation between conceptual features providing facilitation for related concepts and inhibition for unrelated ones. This property of the conceptual system was illustrated in priming studies (for example Meyer & Schvaneveldt, 1971), which show that semantically related words tend to influence each other. The associations between distant mental representations can be established as a result of the distributed nature of the conceptual system (see Kharkhurin, 2012a, for details). In light of this discussion, divergent thinking takes place when a large number of, often unrelated, conceptual representations are accessed simultaneously. Spreading activation among distributed conceptual representations may build the links between distant, often unrelated, concepts. A large number of simultaneously activated solutions may establish a rich plane of thought from which original and novel solutions might be extracted.

The specific architecture of multilingual memory is argued to facilitate the greater spreading activation between conceptual representations and thereby to stimulate divergent thinking (see Kharkhurin, 2012a, for a detailed discussion). This may be accomplished through language-mediated concept activation (Kharkhurin, 2007, 2008). The idea of this mechanism is based on the assumption that translation equivalents automatically activate each other through shared conceptual representations (for example concept mediated translation, in Kroll & de Groot, 1997). Although translation equivalents share most of the conceptual features, these representations are not identical (for example Paradis, 1997). Variations in the conceptual representations of translation equivalents may result in the simultaneous activation of additional concepts, which eventually may produce a large pattern of activation over unrelated concepts from different categories. The activation of these concepts is assumed to take place through the lemmas representing the translation equivalents in multiple languages and/or through the word forms (for example phonetic, orthographic) shared by these languages. The evidence for the language-mediated concept activation is provided by the cross-language studies using semantic (see Kroll & Tokowicz, 2005, for a review) and translation (see Altarriba & Basnight-Brown, 2007, for a review) priming paradigms. These studies revealed that automatic spreading activation takes place not only between translation equivalents in different languages, but also between semantically related words in different languages. The elaborate language-mediated concept activation triggers simultaneous processing of a large number of unrelated concepts from different categories – that is, it may stimulate multilinguals’ divergent thinking. The empirical evidence for the language-mediated concept activation was obtained in a study comparing the performance of Russian-English bilingual and Russian monolingual college students on divergent thinking and a cross-language priming tests (Kharkhurin & Isaeva, 2015). The latter presented participants with pairs of Russian words, which were unrelated in Russian, but related through their translation equivalents in English (for example филиал, meaning ‘branch’, is unrelated to дерево, meaning ‘tree’, but ‘branch’ is related to ‘tree’).
Bilingual participants showed stronger priming effect and revealed greater flexibility in thinking than their monolingual counterparts.

The purpose of convergent thinking is to find the single best (or correct) answer to a clearly defined problem (Cropley, 2006). This cognitive function appears inevitable when a large pool of ambiguous divergent thoughts needs to be narrowed down to a single creative solution. The possible candidates should be explored, criticised, and evaluated to select the best fit to the problem. Kharkhurin (2011) argued that individuals’ efficient selective attention may support creative problem solving at the stage at which a conscious attention demanding process assists in narrowing a multitude of possible alternatives down to a single original solution. At the same time, selective attention was demonstrated to benefit from bilingual practice (see review in Bialystok, 2005). Bilinguals’ selective attention is facilitated by their extensive practice with two active language systems, during which they have to solve the conflicts in lexical retrieval, which are unravelled by efficient executive control (Bialystok, 2007; Bialystok & Feng, 2009; Bialystok, Craik, & Ryan 2006). Kharkhurin (2011) identified two control mechanisms of selective attention that may contribute to the improvement of bilinguals’ creative abilities: the facilitation of relevant information was likely to boost the ability to activate a multitude of unrelated concepts and to work through the concepts already activated; and the inhibition of irrelevant information seemed to enhance the capacity to produce original and useful ideas.

Practical applications

The research reviewed in this chapter presents a case for a facilitatory relationship between multilingualism and creativity. These human capacities can be nurtured through education, and so this discussion would not be complete without placing it in a pedagogical context. It is evident that programmes intended to foster creativity often operate separately from those offering multilingual instruction, and that researchers and teachers in these areas have mutually exclusive training. They are educated in either creativity- or language-related disciplines. Overall, the academic community generally disregards the potential relationship between multilingualism and creativity (Kharkhurin, 2012a). Similarly, the benefits of merging programmes fostering creative potential and multilingual abilities seem to escape the attention of the educators. However, the efficacy of a programme combining both efforts can be directly inferred from the research reviewed in this chapter. Various factors in individuals’ multilingual development have been demonstrated to facilitate certain cognitive mechanisms underlying their creative capacities. Therefore, by combining multilingual and creative educational strategies, a far greater synergy could be generated: a multilingual creative education programme would capitalise on the assets of both forms of education to establish an effective and comprehensive curriculum. The need for this type of programme turns out to be immense, considering the outcomes of scientific investigation, initiatives advanced by governmental policies, and public opinion (see review in Kharkhurin, 2012a).

Kharkhurin (2012a) proposes a bilingual creative education programme, which constitutes a unified teaching model introducing both language learning and creativity-fostering instruction into the school curriculum. The rationale is not to establish a special programme focusing on children with exceptional abilities, but to suggest modifications to existing curricula and/or the classroom environment to promote multilingualism and creativity in early schooling. The programme is grounded on several conceptual premises. First, it disqualifies
the elitist view, and provides opportunities to enhance the linguistic and creative capacities of all students, regardless of their intellectual and creative predispositions.

This entails the second characteristic of the programme – its scope of application: the programme can be implemented in any school curriculum, depending on the specific details of a given school. The role of the programme coordinator would be to modify the core of the programme to reflect the specificity of the student body and the economic, sociocultural, and political environment of each particular school. Instead of establishing a new school or a special classroom with an entirely new curriculum, this programme suggests necessary modifications to convert any curriculum into one fostering linguistic competences and creative potential. Therefore it reflects the recommendation to the European Union member states (Marsh & Hill, 2009) that methodologies should be developed to modify and improve the effectiveness of existing educational programmes. Moreover, these modifications can be accomplished at a low cost, because they would not require major restructuring of existing school curricula.

Third, the goal of the programme is to facilitate linguistic abilities in a diversity of student populations. This programme is designed not only for migrants who speak their home language and who are attempting to acquire the language of the country to which they have migrated, but for all children who want to acquire an additional language.

Fourth, another goal of the programme is to foster children’s creative potential. The focus of the programme is not on “big C” Creativity’, but on the “small c” creative’ capacities (compare Kaufman & Beghetto, 2009) that are grounded in mundane cognitive functioning and can be applied to everyday problem solving. The outcomes of this programme do not reflect the ambitious aspirations of nurturing eminent individuals (although this perspective should not be excluded); rather, the programme aims at facilitating the overall linguistic, intellectual, and creative competences of young children, thereby meeting the recommendations of certain governmental policies (for example Commission of European Communities, 2008).

Thus the purpose of a bilingual creative education programme is to introduce students to a bilingual school curriculum and to foster the four defining aspects of creativity established earlier in this chapter. To accomplish this goal, the programme utilises a holistic approach that combines cognitive, personal, and environmental factors. This approach considers not only educational aspects directly pertinent to the school curriculum, but also those reflecting a child’s personality and extracurricular settings.

Note, however, that the sketch of this programme presented in the current chapter intends to stimulate the creative thinking in education professionals rather than to provide an explicit step-by-step description of the programme. I direct the interested reader to Kharkhurin (2012a), which presents a detailed description of, as well as the theoretical and empirical considerations underlying, the programme.

Conclusion

This chapter has presented a perspective that reflects the cross-linguistic and cross-cultural interactions in the modern world. It assumed language to be dynamically developing system, which engages linguistic and conceptual representations inherent to different linguistic, social, and cultural contexts. Thus language and thought develop at the intersection of multiple languages and cultures. This is also the case with creativity. The latter is assumed not as a product of eminent creative achievement, but as potency, which may or may not be
developed as a result of intra- and interpersonal experience. Thus this chapter has presented the relationship between language and creativity as the relationship between multilingual practice and creative potential. The dynamic nature of both linguistic and creative systems supplies ever-changing products, which appear difficult to study and to relate to each other. The focus is therefore on the cognitive processes underlying both multilingual practice and creative potential — that is, multilingual creative cognition.

How does it work? We have identified the language- and culture-related developmental factors facilitating at least two important cognitive mechanisms contributing to multilingual individuals’ creative performance. According to the multilingual creative cognition paradigm, the acquisition and use of multiple languages appears to have an impact on the structure and/or functioning of an individual’s memory. The strengthening of certain cognitive functions may have an impact on creativity fostering traits, such as cognitive flexibility, tolerance for ambiguity, open-mindedness, and intrinsic motivation (see Kharkhurin, in press, for a discussion). Thus multilingual practice may facilitate creative performance.

In this regard, it is essential to recognise a limited scope of contribution of multilingualism to creativity. The acquisition and use of several languages in several sociocultural environments facilitates certain cognitive functions underlying creativity traits. However, these traits may also develop as a result of life experiences beyond multilingual and multicultural ones. Creative capacity is a complex phenomenon, which can be boosted by a large variety of factors such as talent, education, expertise, motivation, personality traits, personal experience, and socioeconomic and sociocultural conditions. Multilingualism may play an insignificant role here and its effect can be overridden by those factors. In other words, the specific economic, political, social, cultural, and educational aspects of individuals’ development may have an impact on their creative performance above and beyond the effect of multilingualism. This means that multilingualism will not stipulate creativity. It is therefore prudent to talk about a creative potential. Anyone with normal cognitive capacities can reach a level of accomplishment in some domain that results in producing work that some people may consider creative (Amabile, 1983). This means that everyone has a potential to develop creative abilities, but this potential is realised differently in different people because of the variety of factors just mentioned. Multilingual practice would add to this list of factors as the specifics of personal experience. A person may realise creative potential only if a critical constellation of those factors permits it. Multilingual practice appears to have quite an irrelevant role in this process. This notion accounts for a discrepancy between real-life observations and empirical findings demonstrating greater creative performance among individuals speaking multiple languages. In particular, we do not witness exceptional creative accomplishments in the predominantly multilingual countries such as Switzerland, Belgium, or Canada.

Despite the limited contribution of multilingual practice to creative potential, the application of a multilingual creativity paradigm can be immense. A brief discussion of the proposed bilingual creative education programme aims to expand the boundaries of contemporary discourse of education. This new form of education promises to have important ramifications for students’ learning and their future employment. It is important for educators to recognise the positive effect of multilingual creative education, and to start transforming schools into educational enterprises that value linguistic and cultural diversity and creative potential.

Related topics

cognitive stylistics; creativity and translation; creativity in second-language learning; language, creativity, and cognition
Notes

1 In the literature, especially in that reporting earlier research in the field, the term ‘bilingualism’ is used to refer to individuals speaking only two languages. This term reflects a so-called monolingual perspective, in which the users of a second language were considered from the perspective of the first-language users. The second language is added to the first-language competence, and this extra competence was assessed against the only language of a monolingual native speaker. Traditionally, these studies made a direct comparison between bilingual and monolingual speakers. This approach was criticised within the linguistic multicompetence framework (see Cook & Li Wei, in press) based on the ground that individuals speaking more than one language may have a distinct frame of mind that cannot be compared with the monolingual one. Therefore a direct comparison between bilingual and monolingual speakers does not hold. Throughout this chapter, the term ‘bilingualism’ refers to the studies taking a ‘monolingual’ perspective.

2 Kharkhurin (2014) challenged this definition as being biased by a Western perception of creativity. He proposed an alternative four-criterion construct of creativity, which, in addition to novelty and utility, considers two other characteristics typical for an Eastern perception of creativity: aesthetics and authenticity.

3 Limited space of this chapter prevents the author from listing all publications addressing the relationship between multilingualism and creativity. The interested reader can refer to Kharkhurin (2012a), which provides a complete list of these publications.

Further reading


This volume presents an up-to-date view of multicompetence, its main components, how it has developed, the research questions that it has generated, and the methods that have been used to research it.


This volume presents a comprehensive overview of creativity research, covering such diverse topics as the brain, education, business, and world cultures.


This monograph presents the results of the empirical investigation into the impact of multilingual practice on an individual’s creative potential.


This volume comprises essential reading for cognitive psychologists, linguists, applied linguists, and educators who wish to better understand the cognitive basis of bilingualism.


This textbook presents an integrative introduction and extensive references to the theories and themes in research on creativity.

References


Multilingual creative cognition


