

Foreign Language Learning in Older Age from the Perspective of Positive Psychology

Xiaoying Huang

Wuhan University, China

Abstract

This paper gives an overview of the interplay between Positive Psychology (PP) and foreign language learning (FLL) in older age, aiming to provide a framework for understanding how the two fields can inform and enhance each other. It begins by introducing the connection among FLL, Positive Psychology, and healthy aging, highlighting the potential benefits of language acquisition for seniors' (non-)cognitive maintainment, emotion, and social well-being. The paper then reviews the theoretical developments of Positive Psychology in the context of FLL, emphasizing theoretical development such as PERMA and EMPHATICS. Domestic and foreign research on FLL in older adults is reviewed with the discussion on its strengths and deficiencies. The role of foreign language learning as a positive psychological intervention (PPI) for older adults is also discussed, proposing future research directions. Hopefully, this paper could provide potential implications for promoting lifelong learning, mental health, and well-being in older populations.

Keywords

Positive Psychology; Foreign Language Learning; Older Adults; Healthy Aging.

1. Introduction

All Ageing, or senescence, is a ubiquitous and sequential process that covers the entire adult life span of any living creatures, featured by the decline of physiological functions. However, global ageing is a relatively unfamiliar concept for people nowadays, which indeed is becoming a conspicuous demographic shift. In 2020, the number of people aged 60 or over outnumbered children under 5 years old. By 2030, 1 in 6 individuals in the world will be aged 60 years or older. By 2050, this number will double to 2.1 billion and most of the elderly will be living in low- and middle-income countries (World Health Organization [WHO], 2022). The unprecedented pace of population ageing brought by the continued decline in fertility rates and increased life expectancy prioritizes the necessity of healthy ageing.

To a great extent, the pursuit of healthy ageing pertains to the research of Positive Psychology (PP). Healthy ageing refers to the development and maintenance of the functional ability that allows wellbeing in older age and includes the ability to remain independent, to learn, grow and make decisions, and to build and maintain relationships, etc. (WHO, 2020). The aim of maintaining and improving the wellbeing of older people is echoed by the construct of Positive Psychology, which emphasizes the positive aspects of human behavior and the qualities that enable people to live a worthwhile life (Keyes et al., 2012; Seligman & Csikszentmihalyi, 2000). As one of the non-pharmacological strategies, foreign language learning (FLL) plays an important role in healthy ageing from the perspective of PP since older adults' ability to learn and socialize is stressed. Recent research indicates that FLL is an effective and meaningful activity for enhancing seniors' both cognitive and non-cognitive functions. The fact that the extensive neural network which language learning involves (Rodríguez-Fornells et al., 2009) overlaps with the network influenced by age-related cognitive decline (Raz, 2000) entails the

possibility of achieving cognitive benefits by foreign language learning, such as improvement of executive functions, contribution to cognitive reserve, even delay of Alzheimer's disease (Antoniou & Wright, 2017; Xuan et al., 2022). On the other hand, the enhancement of non-cognitive functions is realized through social and psychological wellbeing, and FLL potentially creates an environment that can render seniors' satisfaction and enjoyment (Klimova et al., 2021; Pikhart & Klimova, 2020).

In summary, to get preparation for the global trend of population ageing, this paper attempts to relate Positive Psychology to seniors' foreign language learning and outline current and potential future lines of research.

2. Positive Psychology in Foreign Language Learning

Affective factors, especially emotions, have been noticed and explored by linguists to investigate and identify some critical contributors to language learning success. However, prior research of applied linguistics is dominated by cognitive factors, e.g. language aptitude and learning strategies (Dewaele et al., 2019). On the other hand, under the umbrella of affective research of language learning, just like the foci of general psychology are depression, psychopathic deviation, hypomania, hysteria, etc., the main concerns of affective factors of language learning are negative emotions like anxiety or motivation of learning a new language (Aydın & Tekin, 2023; Dewaele & MacIntyre, 2014; Li et al., 2003). Positive emotions in FLL are underplayed and underestimated.

The call to acknowledge the presence of the positive aspects of life in the late 20th century enabled psychologists to pay attention to the prevention of mental disorders, rather than the disorders per se, leading to the onset of positive psychology (Li et al., 2003). Although the term "positive psychology" was first used by Maslow (1954), it was Seligman who introduced the theory of Positive Psychology in 1998 and noted that psychology, apart from the study of weakness and damage, was supposed to be the study of strength and virtue as well (Seligman, 1998; Seligman & Csikszentmihalyi, 2000). Seligman (2018) postulated that in the state of PERMA, the wellbeing of individuals can be achieved, namely, people can thrive and flourish with positive emotion (P), engagement with activities that stretch one's strengths (E), development and maintenance of positive social relationships (R), the quest for meaning by fighting for a cause beyond oneself (M), and recognition of areas of accomplishment and achievement (A), which are the basis of wellbeing. Since its foundation, PP has been developed and applied through a multitude of empirical studies concerning how to improve the wellbeing of normal people (Seligman & Csikszentmihalyi, 2000; Shao et al., 2020).

The interest in the connection between the PP and FLL flourished after 2014, followed by studies in applied linguistics with recognition of elements of Positive Psychology. Dewaele et al. (2019) distinguished the use of Positive Psychology in applied linguistics into two periods. The first period entitled new developments in the periphery dates from 2012 to 2015 and starts with the study of MacIntyre and Gregersen (2012) which explicitly elucidates the power and the importance of Positive Psychology in facilitating language learning. During this early period, most research aims to relate positive or negative emotions to FLL to investigate the specific effects. For instance, Chaffee et al. (2014) examined how 100 Canadian language learners adjusted their positive attitude towards FLL when faced with foreign language classroom anxiety (FLCA) and found that positive reappraisals could effectively assuage anxiety imposed by a controlling teacher. Besides, PP interventions start to receive consideration and investigation as in Murphey's study (2014) in which 155 Japanese students shared and taught short English affirmation songlet-routines with each other over 4 years and the results showed that most students indicated several types of well-becoming.

The second period (2016-present) witnessed the blossom of PP in FLL research. One of the theoretical developments in this period starts with Oxford's modification of PERMA, with emphasis on context and culture, into EMPHATICS, which stands for "Emotion and empathy, Meaning and motivation, Perseverance, including resilience, hope and optimism, Agency and autonomy, Time, Hardiness and habits of mind, Intelligences, Character strengths, Self factors (self-efficacy, self-concept, self-esteem, self-verification)" (Oxford, 2016, p. 11). Most studies in this period adopt theories of PP to understand variations of emotions over time, from individual or group levels, or from different contexts. The dynamic system theory is widely applied to observe the interactions and variations of emotions between language teachers and learners. Also, the complexity and the ambivalence of emotions are admitted and confirmed by scholars. For example, Chen et al. (2019) investigated how passion affected 260 high school L2 learners both in L2 and outside in one's life and found that being passionate about L2 learning contributes to L2 learning and the wellbeing of learners. Jin & Zhang (2018) explored the pattern of which foreign language classroom enjoyment dimensions affected foreign language achievement and concluded that Enjoyment of Foreign Language Learning had a direct effect on learning outcomes while Enjoyment of Teacher Support and Enjoyment of Student Support indirectly influenced language achievement via Enjoyment of Foreign Language Learning. The same authors also revised and refined the Chinese version of the Foreign Language Enjoyment Scale and claimed the new 16-item scale showed a more solid dimensional division and better psychometric properties than Li et al.'s (2019) scale (Jin & Zhang, 2019).

The development of PP in FLL research shows how linguists and psychologists work together to form more convincing, systematic, and self-contained theories and constructs. The excessive number of cross-sectional studies was pointed out and more longitudinal research appeared; the threat of oversimplification of emotions as either positive or negative was buffered and the ambivalence and fluctuations of emotions were admitted; the differences among individuals within a group and the overlap between groups were paid more attention; more scholars have been trying diverse methods and novel tools to measure emotions in a more clear and objective way (Dewaele et al., 2019).

In general, PP in FLL focuses on how to optimize language learning and teaching through the integration of positive emotions (Mercer et al., 2018). Based on the foregoing research, the implementation of PP education potentially contributes to FLL by helping learners recognize their strengths, thus overcoming obstacles (Gregersen, 2016; Mercer et al., 2018; Murphey, 2016). However, it is still necessary to develop robust measurement of subjective feelings and encourage mixed methods to ensure methodology diversity. And more longitudinal studies are needed to see the long-term patterns and effects, with comparison among other pedagogical methods. On the other hand, although further Positive Psychological interventions (PPI) ought to be explored, the balance and combination between learning outcome and positive emotion should be handled according to the learners in question, as current PPIs focus less on linguistic achievement but more on learners' and teachers' wellbeing, feelings, sense of control over their lives, etc. The PPIs need to be modified according to different learners with different goals.

3. Foreign Language Learning in Older Age

So far, there is a great deal of research on various aspects of FLL, but the research on FLL in older age has been underexplored and downplayed. Different from younger adults, e.g. undergraduates, who often learn a foreign language with extrinsic and instrumental motivation, senior adults generally learn a foreign language with intrinsic and integrative motivation (Belnap et al., 2016; Dewaele & MacIntyre, 2014; Zhang, 2013), which distinguishes themselves from the general research participants in FLL studies and deserves in-depth investigation.

The quantity of domestic research on FLL in older age is small and it mainly revolves around seniors' motivation and characteristics of learning a foreign language, suggestions for developing ageing language education, and foreign language classroom anxiety (FLCA). Research has shown there are diverse motivations for FLL for older adults with different social and cultural contexts. Based on questionnaires and interviews, Ji (2015) studied the motivations of 123 old adults and found that maintenance of a youthful attitude, enrichment of the meaning of life, and friends-making and social participation are the top three reasons for learning a foreign language. Zhang (2013) used questionnaires to investigate the reasons of 62 old adults for FLL, and the priority of the enhancement of cognitive functions and longevity was reported. Besides, visiting relatives who live abroad, tourism, and learning about English culture were also included. On the other hand, Zhang and Feng's research (2018) suggested that the top three motivations of FLL in the aged are improving the level of knowledge, getting along with grandchildren, and killing time.

To sum up, in spite of the diverse motivations of FLL in older age, the consensus is reached that senior adults generally learn a foreign language with intrinsic and integrative motivation. However, the domestic research on FLL in older age is not supposed to delimit itself by simply focusing on the foregoing topic and the qualitative method. The diversity of methodology should be considered and tried, which is conducive to clear, convincing, and objective results. The research objectives should forge beyond the motivations, characteristics or suggestions, new implications could be possibly discovered through the investigation of computer-assisted foreign language learning, the observation of both cognitive and non-cognitive effects of FLL, and the research on the short-term, long-term, and even lifelong FLL in older age, etc. As ageing is germane to both physical, psychological, and cognitive decline, it provides fertile grounds for interdisciplinary perspectives as well.

On the other hand, a host of studies abroad focus on the cognitive and non-cognitive benefits brought by the FLL. The cognition traditionally involves mental states which are generated and informed by information input, processing, storage, and transmission (Bender & Beller, 2013). The non-cognitive factors are associated with psychological process such as attitudes, emotions, beliefs, and attributes, etc. (Bender & Beller, 2013; Butler, 2019). Both cognitive and non-cognitive functions, especially the cognition and emotions, have long been dichotomized (Oatley et al., 2011), but now are considered deeply intertwined (Calkins & Bell, 2010).

The studies of the effects of FLL on healthy cognitive ageing follow the research which confirms the age-related cognitive decline. In spite of the absence of acknowledged mechanism, a large quantity of studies yields evidence that bilinguals confer a general "bilingual advantage," including enhancement in executive function (Bak et al., 2014; Bialystok et al., 2004; Ong et al., 2017), improvement of cognitive reserve (Abutalebi et al., 2015; Jafari et al., 2015; Luk et al., 2011), and even several years' delay in the onset of dementia (Alladi et al., 2017; Bialystok et al., 2007; Woumans et al., 2015). However, the question that whether cognitive improvements remain if FLL is initiated in older adulthood is still an open research question, as there is rarely recent research on this topic. Still, a positive sign is observed in Bak et al.'s study (2016) in which 33 participants of a one-week Scottish Gaelic course were compared to two groups and found that improved attentional functions were observed after short-term intensive language learning. Moreover, with continuous practice, these short-term effects could be retained.

Although the evidence of improved cognitive functions in older adults is ample, the robustness of the foregoing bilingual advantages still remains hotly debated due to failure of replication, inconsistent results, even alleged "publication bias", etc. (Antoniou & Wright, 2017; de Bruin et al., 2015). The exact agreement might not be reached without further exploration of the working mechanisms responsible for the bilingual advantages, development of neurosciences and measuring instruments, and cautious consideration of other factors.

The non-cognitive benefits brought by FLL to seniors are closely related to the constructs of PP. The following section of this article is devoted to delineating the non-cognitive benefits brought by the FLL.

4. FLL as a PPI in Older Age

So far, there is a large amount of research concerning FLL with respect to PP conducted among young learners (Gabryś-Barker & Gałajda, 2016), but inadequate attention is attached to FLL as a positive psychological intervention (PPI) in older adults. The bridge connecting FLL with PP is the pivotal notion of wellbeing, which is also the pillar of PP. Wellbeing, as the basis of flourishing, is comprised of five components previously referred to as PERMA (Seligman, 2018). It is closely relevant to the quality of life (QoL), which can be gauged according to both objective parameters, such as physical ability, and physiological health, etc. and subjective parameters such as positive psychological resources including fun, hope, courage, satisfaction, creativity, happiness, and resilience, etc. (Pikhart et al., 2021). Among the various activities that potentially help to improve the QoL, FLL, as one of the ways of lifelong learning, starts to receive attention. Indeed, the non-cognitive benefits of FLL in older adults are mostly researched from the perspective of subjective parameters.

The improved QoL among seniors influenced by FLL as a PPI mainly pertains to the delight of lifelong learning, the satisfaction of reasonable consumption of time in learning a new language, and the sense of belonging due to social participation, etc. Lifelong learning has been deemed to the fore in active ageing and wellbeing (Choi & Cho, 2021; Escuder-Mollon et al., 2014). Enhancement of QoL can be achieved through FLL, which leads to the development of stronger self-efficacy beliefs and becoming more motivated (Smithers & Gray, 2018). The by-product of lifelong learning is the benefits of social health, as shown in Narushima et al.'s research (2018), in which learning in the form of communication among teachers and classmates develops social connections and a stronger sense of identity in the community, and exerts considerable influence on life satisfaction. FLL, as a social activity in the case of class learning, could stimulate social wellbeing thus leading to the maintenance of cognitive functions (Klimova & Pikhart, 2020). The effects of FLL as a PPI, which is featured by social participation and lifelong learning, are partially supported by Lee & Park's study (2021) which indicates that healthy aging is positively informed by positive psychological capital through social support and learning flow. Overall, there is also research supporting FLL as an effective PPI for seniors' psychosocial rehabilitation. Klimova et al. (2021) conducted research with two groups of senior learners aged 55 years and more (105 Czech and 100 Polish respondents) and the findings showed that FLL played an indispensable role as a non-pharmacological tool of healthy ageing and older learners' high satisfaction and subjective feelings of well-being were observed when attending foreign language classes. Similarly, Pikhart et al. (2021) delivered online questionnaires to two groups of older individuals at the age of 55+ from Poland and the Czech Republic and found that those who had engaged in FLL had reached high levels of subjective happiness. Pikhart & Klimova (2020) examined an experimental group and two young control and elderly control groups and found that different from younger learners, language training is an effective tool for improving the subjective wellbeing of older people regardless of objective progress in FLL.

In sum, through the mediation of the notion of "wellbeing", FLL is combined with PP to investigate the non-cognitive benefits brought to older adults, and research has shown FLL could play a pivotal role by means of social support and lifelong learning. However, several limitations should be pointed out. Firstly, there are still limited studies concerning the senior group and connecting the FLL to PP. With the fact accomplished that huge quantities of FLL studies are conducted on younger learners, it is time to turn the attention to the senior FLL from an interdisciplinary perspective, specifically the PP. Secondly, as WHO (2022) indicates that 80%

of older people will be living in low- and middle-income countries in 2050, the conduction of similar research in a wider and, hopefully, more international context, especially in low- and middle-income countries is necessary. Thirdly, although the research objective is the subjective feelings and wellbeing of older learners, the adopted methodology cannot be limited to qualitative methods, which represent a number of inherent shortcomings such as the problem of validity and the “self-flattery” syndrome caused by self-rating, and the difficulty of interpreting the results due to cross-cultural differences, etc. (Brown, 2014). The methodology diversity should be taken into account by using mixed methods. Fourth, the oversimplification of emotions as either positive or negative still exists and undue emphasis on positive feelings may lead to the neglected fact that emotions are complex, ambivalent, and fluctuant.

Future development in this field can be possibly oriented in the following lines. With the development of digitalization, technologies such as FLL applications, computer-assisted FLL and artificial intelligence, etc. could be exploited in future research to observe the influences brought by digitalization. Secondly, further division of senior groups according to their age may be considered to find out subtle factors. In fact, some studies have categorized periods of late adulthood into young-old, old-old, and oldest-old (Chou & Chi, 2002; Garfein & Herzog, 1995), but the specific age band in each category has not been agreed upon, which needs to be developed in the future. Thirdly, with the considerable number of studies on youngsters’ FLL, the role of young adults, even teenagers and children, in seniors’ FLL as companions, classmates, or instructors, can be explored to optimize ageing language education. Finally, as mentioned above, similar and innovative research is encouraged to be conducted globally and the complexity and fluctuations of emotions ought to be taken into consideration.

5. Conclusion

This paper attempts to relate Positive Psychology to seniors’ foreign language learning and has outlined current and potential future lines of research. It has to be admitted that it is difficult to capture a comprehensive view of a field in full expansion, but it is joyful to draw the profile of the emerging development of PP in applied linguistics, especially in seniors’ FLL.

With only about 20 years of development, Positive Psychology is still a fairly new branch of general psychology. And when it comes to the application for teaching and learning second or foreign languages, there has been not much being done (Gabryś-Barker & Gałajda, 2016), especially the FLL in older age. MacIntyre and Mercer (2014) argued that Second Language Acquisition (SLA) researchers might have an edge over psychologists as they have forged much further in the variety and mixture of epistemological and methodological stances. SLA research has embraced different understandings of empirical studies, including those adopting systematic and rigorous qualitative methods. The FLL with the PP perspective is believed to go further with the collective efforts of both linguists and psychologists.

References

- [1] Abutalebi, J., Guidi, L., Borsa, V., Canini, M., Della Rosa, P. A., Parris, B. A., & Weekes, B. S. (2015). Bilingualism provides a neural reserve for aging populations. *Neuropsychologia*, 69, 201–210. <https://doi.org/10.1016/j.neuropsychologia.2015.01.040>
- [2] Alladi, S., Bak, T. H., Shailaja, M., Gollahalli, D., Rajan, A., Surampudi, B., Hornberger, M., Duggirala, V., Chaudhuri, J. R., & Kaul, S. (2017). Bilingualism delays the onset of behavioral but not aphasic forms of frontotemporal dementia. *Neuropsychologia*, 99, 207–212. <https://doi.org/10.1016/j.neuropsychologia.2017.03.021>
- [3] Antoniou, M., & Wright, S. M. (2017). Uncovering the Mechanisms Responsible for Why Language Learning May Promote Healthy Cognitive Aging. *Frontiers in Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.02217>

- [4] Aydın, S., & Tekin, I. (2023). Positive psychology and language learning: A systematic scoping review. *Review of Education*, 11(3). <https://doi.org/10.1002/rev3.3420>
- [5] Bak, T. H., Long, M. R., Vega-Mendoza, M., & Sorace, A. (2016). Novelty, Challenge, and Practice: The Impact of Intensive Language Learning on Attentional Functions. *PLOS ONE*, 11(4), e0153485. <https://doi.org/10.1371/journal.pone.0153485>
- [6] Bak, T. H., Nissan, J. J., Allerhand, M. M., & Deary, I. J. (2014). Does bilingualism influence cognitive aging? *Annals of Neurology*, 75(6), 959–963. <https://doi.org/10.1002/ana.24158>
- [7] Belnap, R. K., Bown, J., Dewey, D. P., Belnap, L. P., & Steffen, P. R. (2016). 12 Project Perseverance: Helping Students Become Self-Regulating Learners. *Positive Psychology in SLA*, 282–302. <https://doi.org/10.21832/9781783095360-013>
- [8] Bender, A., & Beller, S. (2013). Cognition is . . . Fundamentally Cultural. *Behavioral Sciences*, 3(1), 42–54. <https://doi.org/10.3390/bs3010042>
- [9] Brown, H. D. (2014). *Principles of language learning and teaching: A course in second language acquisition* (6th ed.). Pearson Education ESL.
- [10] Butler, Y. G. (2019). Linking noncognitive factors back to second language learning: New theoretical directions. *System*, 86, 102127. <https://doi.org/10.1016/j.system.2019.102127>
- [11] Calkins, S. D., & Bell, M. A. (2010). Introduction: Putting the domains of development into perspective. In S. D. Calkins & M. A. Bell (Eds.), *Child development at the intersection of emotion and cognition* (pp. 3–13). American Psychological Association. <https://doi.org/10.1037/12059-001>
- [12] Chaffee, K. E., Noels, K. A., & McEown, M. S. (2014). Learning from authoritarian teachers: Controlling the situation or controlling yourself can sustain motivation. *Studies in Second Language Learning and Teaching*, 4(2), 355–387. <https://doi.org/10.14746/ssl.2014.4.2.9>
- [13] Chen, X., Padilla, A. M., & Vallerand, R. J. (2019). The Facilitative Role of Two Types of Passion in Second Language Learning. *PsycEXTRA Dataset*. <https://doi.org/10.1037/e509752019-001>
- [14] Choi, I., & Cho, S. R. (2021). A Case Study of Active Aging through Lifelong Learning: Psychosocial Interpretation of Older Adult Participation in Evening Schools in Korea. *International Journal of Environmental Research and Public Health*, 18(17), 9232. <https://doi.org/10.3390/ijerph18179232>
- [15] Chou, K. L., & Chi, I. (2002). Successful Aging among the Young-Old, Old-Old, and Oldest-Old Chinese. *The International Journal of Aging and Human Development*, 54(1), 1–14. <https://doi.org/10.2190/9k7t-6kxm-c0c6-3d64>
- [16] de Bruin, A., Treccani, B., & Della Sala, S. (2015). Cognitive Advantage in Bilingualism. *Psychological Science*, 26(1), 99–107. <https://doi.org/10.1177/0956797614557866>
- [17] Dewaele, J. M., & MacIntyre, P. D. (2014). The two faces of Janus? Anxiety and enjoyment in the foreign language classroom. *Studies in Second Language Learning and Teaching*, 4(2), 237–274. <https://doi.org/10.14746/ssl.2014.4.2.5>
- [18] Dewaele, J. M., Chen, X., Padilla, A. M., & Lake, J. (2019). The Flowering of Positive Psychology in Foreign Language Teaching and Acquisition Research. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.02128>
- [19] Escuder-Mollon, P., Esteller-Curto, R., Ochoa, L., & Bardus, M. (2014, May). Impact on Senior Learners' Quality of Life through Lifelong Learning. *Procedia - Social and Behavioral Sciences*, 131, 510–516. <https://doi.org/10.1016/j.sbspro.2014.04.157>
- [20] Gabryś-Barker, D., & Gałajda, D. (Eds.). (2016). *Positive Psychology Perspectives on Foreign Language Learning and Teaching*. Springer. <https://doi.org/10.1007/978-3-319-32954-3>
- [21] Garfein, A. J., & Herzog, A. R. (1995). Robust Aging among the Young-Old, Old-Old, and Oldest-Old. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 50B(2), S77–S87. <https://doi.org/10.1093/geronb/50b.2.s77>

- [22] Gregersen, T. (2016). The positive broadening power of a focus on well-being in the language classroom. In Gabryś-Barker, D., & D. Gałajda (Eds.), *Positive psychology perspectives on foreign language learning and teaching* (pp. 59–73). Springer.
- [23] Jafari, Z., Esmaili, M., Toufan, R., & Aghamollaei, M. (2015). Bilingual proficiency and cognitive reserve in Persian–English bilingual older adults. *Aging Clinical and Experimental Research*, 27(3), 351–357. <https://doi.org/10.1007/s40520-014-0288-x>
- [24] Jin, Y. X., & Zhang, L. J. (2018). The dimensions of foreign language classroom enjoyment and their effect on foreign language achievement. *International Journal of Bilingual Education and Bilingualism*, 1–15. <https://doi.org/10.1080/13670050.2018.1526253>
- [25] Jin, Y. X., & Zhang, L. J. (2019). A Comparative Study of Two Scales for Foreign Language Classroom Enjoyment. *Perceptual and Motor Skills*, 126(5), 1024–1041. <https://doi.org/10.1177/0031512519864471>
- [26] Keyes, C. L., Fredrickson, B. L., & Park, N. (2012). Positive psychology and quality of life. In K. C. Land, A. C. Michalos, & M. J. Sirgy (Eds.), *Handbook of social indicators and quality-of-life research* (pp. 99–112). Springer.
- [27] Klimova, B., & Pikhart, M. (2020). Current Research on the Impact of Foreign Language Learning Among Healthy Seniors on Their Cognitive Functions From a Positive Psychology Perspective—A Systematic Review. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.00765>
- [28] Klimova, B., Pikhart, M., Cierniak-Emerych, A., Dziuba, S., & Firlej, K. (2021). A Comparative Psycholinguistic Study on the Subjective Feelings of Well-Being Outcomes of Foreign Language Learning in Older Adults From the Czech Republic and Poland. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.606083>
- [29] Lee, K., & Park, J. (2021). Relationships between Positive Psychological Capital, Social Support, Learning Flow and Successful Aging of Older Adult Learners. *Journal of Lifelong Learning Society*, 17(1), 147–172. <https://doi.org/10.26857/jlls.2021.2.17.1.147>
- [30] Li, C. C., Dewaele, J. M., & Jiang, G. Y. (2019). The complex relationship between classroom emotions and EFL achievement in China. *Applied Linguistics Review*, 11(3), 485–510. <https://doi.org/10.1515/applirev-2018-0043>
- [31] Luk, G., Bialystok, E., Craik, F. I. M., & Grady, C. L. (2011). Lifelong Bilingualism Maintains White Matter Integrity in Older Adults. *The Journal of Neuroscience*, 31(46), 16808–16813. <https://doi.org/10.1523/jneurosci.4563-11.2011>
- [32] MacIntyre, P., & Gregersen, T. (2012). Emotions that facilitate language learning: The positive-broadening power of the imagination. *Studies in Second Language Learning and Teaching*, 2(2), 193. <https://doi.org/10.14746/ssllt.2012.2.2.4>
- [33] Maslow, A. (1954). *Motivation and psychology*. Harper.
- [34] Mercer, S., & MacIntyre, P. D. (2014). Introducing positive psychology to SLA. *Studies in Second Language Learning and Teaching*, 4(2), 153–172. <https://doi.org/10.14746/ssllt.2014.4.2.2>
- [35] Mercer, S., MacIntyre, P., Gregersen, T., & Talbot, K. (2018). Positive language education: Combining positive education and language education. *Theory and Practice of Second Language Acquisition*, 4, 11–31.
- [36] Murphey, T. (2014). Singing well-becoming: Student musical therapy case studies. *Studies in Second Language Learning and Teaching*, 4(2), 205–235. <https://doi.org/10.14746/ssllt.2014.4.2.4>
- [37] Murphey, T. (2016). Teaching to learn and well-become: Many mini renaissances. In P. D. MacIntyre, T. Gregersen & S. Mercer (Eds.), *Positive psychology in SLA* (pp. 324–343). *Multilingual Matters*.
- [38] Narushima, M., Liu, J., & Diestelkamp, N. (2018). Lifelong learning in active ageing discourse: its conserving effect on wellbeing, health and vulnerability. *Ageing and Society*, 38(4), 651–675. <https://doi.org/10.1017/s0144686x16001136>
- [39] Oatley, K., Parrott, W., Smith, C., & Watts, F. (2011). Cognition and Emotion over twenty-five years. *Cognition & Emotion*, 25(8), 1341–1348. <https://doi.org/10.1080/02699931.2011.622949>

- [40] Ong, G., Sewell, D. K., Weekes, B., McKague, M., & Abutalebi, J. (2017). A diffusion model approach to analysing the bilingual advantage for the Flanker task: The role of attentional control processes. *Journal of Neurolinguistics*, 43, 28–38. <https://doi.org/10.1016/j.jneuroling.2016.08.002>
- [41] Oxford, R. (2016). Toward a psychology of well-being for language learners: the 'EMPATHICS' vision. In P. D. MacIntyre, T. Gregersen & S. Mercer (Eds.), *Positive psychology in SLA* (pp. 10–90). *Multilingual Matters*.
- [42] Pikhart, M., & Klimova, B. (2020). Maintaining and Supporting Seniors' Wellbeing through Foreign Language Learning: Psycholinguistics of Second Language Acquisition in Older Age. *International Journal of Environmental Research and Public Health*, 17(21), 8038. <https://doi.org/10.3390/ijerph17218038>
- [43] Pikhart, M., Klimova, B., Cierniak-Emerych, A., & Dziuba, S. (2021). Psychosocial Rehabilitation Through Intervention by Second Language Acquisition in Older Adults. *Journal of Psycholinguistic Research*, 50(5), 1181–1196. <https://doi.org/10.1007/s10936-021-09805-z>
- [44] Raz, N. (2000). Aging of the brain and its impact on cognitive performance. In F. I. M. Craik & T. A. Salthouse (Eds.), *The Handbook of Aging and Cognition* (pp. 1–90). Lawrence Erlbaum Associates.
- [45] Rodríguez-Fornells, A., Cunillera, T., Mestres-Missé, A., & de Diego-Balaguer, R. (2009). Neurophysiological mechanisms involved in language learning in adults. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1536), 3711–3735. <https://doi.org/10.1098/rstb.2009.0130>
- [46] Seligman, M. (2018). PERMA and the building blocks of well-being. *The Journal of Positive Psychology*, 13(4), 333–335. <https://doi.org/10.1080/17439760.2018.1437466>
- [47] Seligman, M. E. P. (1998). Building human strength: Psychology's forgotten mission. *PsycEXTRA Dataset*. <https://doi.org/10.1037/e529932010-003>
- [48] Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5–14. <https://doi.org/10.1037/0003-066x.55.1.5>
- [49] Shao, K., Nicholson, L. J., Kutuk, G., & Lei, F. (2020). Emotions and Instructed Language Learning: Proposing a Second Language Emotions and Positive Psychology Model. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.02142>
- [50] Smithers, R. W., & Gray, J. W. (2018). Enhancing the quality of life in lifelong learners: The influence of a meaning-order approach to pedagogical grammar on motivation and self-efficacy. *Applied Linguistics Review*, 11(1), 129–149. <https://doi.org/10.1515/applirev-2017-0095>
- [51] World Health Organization. (2020, October 26). Healthy ageing and functional ability. <https://www.who.int/news-room/questions-and-answers/item/healthy-ageing-and-functional-ability>
- [52] World Health Organization. (2022, October 1). Ageing and health. <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health>
- [53] Woumans, E., Santens, P., Sieben, A., Versijpt, J., Stevens, M., & Duyck, W. (2015). Bilingualism delays clinical manifestation of Alzheimer's disease. *Bilingualism: Language and Cognition*, 18(3), 568–574. <https://doi.org/10.1017/s136672891400087x>
- [54] Ji Chuanfeng (2015). Research on the Motivation of Middle aged and Elderly Foreign Language Learning from the Perspective of Positive Aging Contemporary continuing education, (05), 72-76.
- [55] Li Jinzhen, Wang Wenzhong, & Shi Jiannong (2003). Positive psychology: a new research direction *Progress in Psychological Science*, (03), 321-327.
- [56] Xuan Wenru, Shen Yuqing, Zhou Miao & Feng Shiwen (2022). A systematic review of bilingual training for improving cognitive function in the elderly Chinese *Rehabilitation Theory and Practice*, (05), 578-584. DOI: 10.3969/j.issn.1006-9771.2022.05.013
- [57] Zhang Jun (2013). Research on English learning motivation of elderly people *Chinese Language Journal (Foreign Language Education and Teaching)*, (11), 90-92+101.
- [58] Zhang Dihang & Feng Zhidong (2018). Market research on English learning for the elderly *Cultural and educational materials*, (04), 218-220.