


Language learning in older adults: Interdisciplinary perspectives

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1. Introduction: Aims of the workshop

The workshop brought together researchers from different disciplines with the aim of enhancing our understanding of the processes of language learning and use in later life, as well as the various factors influencing these processes.¹ An exchange of expertise among different disciplines enabled us to learn from each other about the strengths and weaknesses of the main methodologies and predominant theoretical models in our respective fields. The workshop was a one-day event comprising four one-hour plenary sessions, a poster session preceded by a poster slam during which presenters had one minute each to advertise their posters in plenary, and a concluding group discussion that summarised the main themes with a view to outlining a research agenda (see below). The workshop was deliberately small in order to encourage networking and interaction between the approximately 20 participants on site; approximately ten further attendees followed the plenary sessions online.

2. Summary of plenary and poster presentations

The first plenary by Outi Tuomainen (University of Potsdam) focused on older adults' speech perception and production in communicative situations. In a series of studies, interactive communicative speech was elicited by means of spot-the-difference picture tasks. Communication between participants took place either in good listening conditions where both speakers could hear each other normally, or in various adverse conditions. The resulting comparisons gave the research team a sense of the degree to which a person is able to adapt their speech to overcome difficult listening conditions – a skill that is of paramount importance in speech communication in everyday life. Findings from two large-scale studies involving 197 speakers were presented, with a focus on speaking or vocal effort, listening effort and communicative efficiency in younger and older talkers.

The second plenary by Simone Pfenninger (University of Zurich) reported on the interplay of multiple factors over time from a dynamic systems perspective in the instructed second language (L2) learning of healthy older adults. Drawing on a micro-developmental approach, both inter-learner variation with an emphasis on the dynamic nature of the cognition-affect interface and intra-learner variation were identified. The latter was evident in inconsistency, in the sense of intra-individual variation across trials within tasks at one point of measurement; dispersion, in the sense of intra-individual variation across different types of tasks within a single session; and variability, in the sense of intra-individual variation within tasks in individual time-serial data based on repeated observations. It was argued that a better understanding of differences in the levels of a developmental variable within and across language learners can help us refine interventions in the third age.

¹The event was held at the University of Essex, Colchester, UK on 23 June 2022.

The third plenary by Merel Keijzer (University of Groningen) was concerned with language learning in both healthy older adults and older adults experiencing cognitive or mood problems. The focus was on the bidirectional influence of individual cognitive, social and linguistic factors in relation to bilingualism and L2 learning, based on studies conducted in the Bilingualism and Aging lab (BALAB-www.balab.nl) that make use of randomised controlled trials to show the cognitive and socio-affective effects of introducing a bilingual experience later in life, as opposed to other intervention types such as musical training. The aim is to shed light on the mechanisms underlying the effects of bilingualism as a life experience, especially as it pertains to cognitive reserve in older adulthood, and to differentiate between healthy older adults and those experiencing late-life cognitive impairment and depression.

The fourth plenary by Thomas Bak (University of Edinburgh) focused on the neurology of multilingualism and language learning in later life by contrasting the commonplace idea that additional language learning will potentially cause confusion in cognitively impaired older adults with the concept of cognitive reserve, which emphasises potentially positive effects of late-life language learning. Recent research has shown that multilinguals display symptoms of dementia several years later than monolinguals and that their cognitive functions recover better after a stroke than those of monolinguals – findings that have triggered calls for introducing language learning as an intervention that could counteract cognitive ageing. The talk sought to reconcile the opposing narratives of ‘confusion’ versus ‘cognitive reserve’ by relating them to new insights in the neuroscience of healthy and pathological ageing.

The poster by Jelle Brouwer and colleagues (University of Groningen) focused on language learning in older adults with a history of depression. In a qualitative study of participants’ expectations of and experiences during a language course, beneficial effects in terms of learner satisfaction, self-efficacy and encounters with digital technology were uncovered; they clearly outweighed reports of negative experiences and suggestions for improvements.

The poster by Helga Donnerer (University of Essex) reported on work in progress that compares a monolingual with a multilingual approach to language teaching with third-age foreign language learners at beginners’ level. A pilot study trialling the multilingual approach identified overall positive perceptions among learners. The main study focuses on older adults’ progress in the target language in the context of the two different teaching approaches, learners’ development of metalinguistic awareness, and the role of their language learning history and beliefs about language learning.

Jodi Emma Wainwright’s (Open University) poster reported on a qualitative study with older adults attending a blended-learning language course with the online element on Moodle. The findings showed that technology-based language learning proved to be a liberating activity for the participants, with the online format offering compensatory benefits that enabled positive outcomes for all learners.

The poster by Willem van Boxtel and Laurel Lawyer (University of Essex) investigated syntactic processing in older adults by means of self-paced reading tasks and event-related potential measures. The participants exhibited intact syntactic priming and lexical boost effects on reading times – a finding that contradicts accounts suggesting that older adults’ sentence processing is impaired. Task demands in previous studies may have been responsible for findings indicating declining processing abilities in later life.

3. Conclusions and outcomes

The discussion session at the end of the workshop resulted in two main conclusions that should inform a future research agenda: first, there is a need to focus on the individual rather than rely on group averages, and second, it is necessary to bring about a change in the discourse surrounding language in later life as well as ageing more generally. Both issues draw on interdisciplinary insights and highlight the desirability of a continued exchange of views, experiences and expertise across research fields.

With regard to the first point, we acknowledged the theoretical, methodological and practical importance of looking at individuals, their histories and their requirements, as situated in specific

contexts. What is usually and conveniently classified under the age rubric is not simply a temporal issue, but rather involves an interplay of chronological age with life experiences and the environment.

In theoretical terms, our proposed approach sits well with the overarching paradigm of complex dynamic systems theory, which seeks to do justice to the fact that a multitude of variables consistently interacts, that variability and change are ever-present and entirely expected, and that there can be no one-size-fits-all solution – indeed, especially among older adults we can expect even more inter- and intra-individual variation than in younger individuals, since older people have traversed more life stages than younger people.

In methodological terms, we must therefore endeavour to display and utilise data characterised by variability in an informative manner, and we must not dismiss variability as noise or measurement error. Connections between and mutual influences among different variables are not only worthy of consideration but should constitute an essential part of our analyses if we want to obtain a full and detailed picture of development.

In practical terms, it is important to realise that different approaches work for different people, and it is therefore unwise to try and suggest a single solution for all. Analogous to recent developments in personalised medicine or nutrition, for instance, it is therefore our declared aim to establish what works for whom, when and how, but without losing sight of the need for a certain level of generalisation. The latter is useful and necessary to derive implications for practice, whether in health, social or educational settings. Methods such as generalised additive modelling in combination with cluster analysis that allow for the grouping of cases by drawing out patterns of inter-individual variation can help achieve this aim. In other words, we believe that a focus on the individual can be entirely compatible with generalisability.

With regard to the second point, we advocate a more positive discourse surrounding later life stages. The current narrative of ageing as a period of physical, cognitive and psychological decline is clearly culturally determined, with western socio-political norms positing young adulthood as the desirable apex of life. Peak performance in terms of physical stamina and economic prowess – producing income, driving up profit margins, generating wealth – is highly prized. This has led to a deficit-oriented narrative on ageing, with terminology such as ‘successful ageing’ implying that it is the sole responsibility of the individual to try and maintain youthful characteristics for as long as possible. However, this constitutes an impossible challenge, with failure inevitable for every one of us at some point in our lives.

At first glance, the young-adult ideal may seem natural to us, given that we have had life-long exposure to the cultural values it is built on, but we believe that through conscious reflection we can step away even from highly ingrained conventions. Universal phonemic discrimination abilities disappear before an infant has reached the age of 12 months, and the human immune system declines after the age of 12 years, yet we do not consider infants or children to be in the prime of life. In other words, everything is relative, and humans can change what humans have put in place.

Therefore, we argue that emphasising positive dimensions of ageing such as greater life experience, a better understanding of the big picture, a more fully developed personality and greater wisdom, as well as a focus on the environment and the responsibility of society at large in addition to a focus on the individual’s responsibility, can constitute steps towards a more positive rhetoric. Whereas biological ageing and thus the association of chronological age with a greater likelihood of physical health are facts, psychological ageing can be a boon. What is more, it is possible to focus on achievement in all areas, for example, by emphasising that compensation strategies perfect functionality in any given domain instead of seeing them primarily as covering up a loss. Looking towards the philosophical traditions of other cultures will be informative in this regard, and it is here that interdisciplinarity comes into play again. The workshop brought together experts in applied and psycholinguistics, psychology, social and neurological branches of medical science and health. We believe we can learn more by inviting exchanges with further disciplines, such as anthropology, sociology and sports and rehabilitation science, to name a few.

4. The TALL Network

In acknowledgement of the fact that the ‘third age’ is one of the few positive terms used to refer to adults in later life, the following researchers have formed a network of third-age language learning (or TALL): Thomas Bak (University of Edinburgh), Jelle Brouwer (University of Groningen), Faith Chiu (University of Essex), Dilys Eikelboom (Radboud University), Yan Gu (University of Essex and University College London), Eva Gutiérrez-Sigut (University of Essex), Merel Keijzer (University of Groningen), Simone Pfenninger (University of Zurich), Christine Pleines (Open University), Karen Roehr-Brackin (University of Essex), Outi Tuomainen (University of Potsdam) and Jodi Emma Wainwright (Open University). We aim to:

- formulate a more balanced and thus a more positive narrative surrounding language learning and use in later life, and ageing more generally;
- continue exploring inter- and intra-individual developmental trajectories as well as the interactions of multiple variables in older adults’ language learning and use, with a view to formulating explanatory accounts and therefore allowing for a level of generalisation that is theoretically useful as well as applicable in practice, including in language teaching and social and health care;
- apply the call for a personalisation of approaches to our own research practices by employing measures and tasks that are appropriate for older participants, by avoiding methodological reductionism when interpreting findings and conducting research so that any observed age effects are not implicitly rendered synonymous with depreciation, by including participants’ own perspectives to identify aspects of context that are salient to particular individuals and thus help constrain the multitude of potential learner-external and learner-internal factors to be considered, and by drawing on analytic methods that enable us to make sense of complex, dynamic data patterns;
- develop interdisciplinary collaborations that can inform all of the above.