

Commentary: Benefits of multilingualism via neurolinguistics for a new vanguard of teachers

Introduction

The story of multilingualism on the North American continent is the saga of diverse immigrants who transported thousands of evolving languages spawned and nurtured by distinct cultures. Archaeologists estimate the earliest arrival of humans to the Americas from Asia was between 20,000 and 14,000 BP [1]. In the period of 1,000–1,492 CE before European contact, more than 500 identifiable groups with distinct languages and cultures arose in North America. The first European language spoken on the continent with the arrival of Columbus was Spanish. Today multilingualism continues to grow in a paradoxical way. The US Census Bureau reports that those in the United States who spoke a language other than English at home nearly tripled from 23.1 million (about 10%) in 1980 to 67.8 million (nearly 20%) in 2019 (US Census Bureau, n.d.). Correspondingly, those who were monolingual English speakers also rose from 187 million in 1980 to 241 million in 2019 (Center for Equity for Multilingual learners and Loyola Marymount University, 2020). In all, 78% of people living in the United States are monolingual English speakers (Language Use in the United States, 2019). Thus, in absolute numbers, both multilingualism and monolingualism are on the rise in the United States. In pedagogical terms, this becomes problematic considering the most recent developments in neurobiology as it relates to the apotheosis of all learning – the brain. Given the plasticity of the brain, the field of neuroscience has consistently demonstrated that the benefits of multilingualism range from the affective to the cognitive and even the psychomotor domains. Brain-based benefits appear to strengthen the ability to empathize with others, augment networking skills, cause superior reasoning, promote enhanced decision-making skills, enrich memory, better develop executive control systems, improve performance tasks that require high-level thought, speed multitasking and increase sustained attention. The history of the United States, a nation of immigrants, is replete with instances of discrimination due to race, language and culture that range from common prejudice to outright xenophobia. Today, US public schools are increasing segregated by race (Ryan, 2023). Racial isolation of children of color including non-English-speaking students in public schools typically presents these young learners with a monolingual faculty and administration that has traditionally ignored students' funds of linguistic knowledge. Although the sociopolitical demographics of the nation indicate a pluralistic society that declares equality of opportunity, the last great meeting place of the democracy, the public schools are each day more resegregated by race, class and language. A paradox is revealed: a nation that proclaims inclusion but practices exclusion. Such a national contradiction



requires a pedagogical change in basic assumptions to counter traditional beliefs in the superiority of monolingualism with the notion encapsulated in the inarguable statement that the knowledge of two languages is superior to but one. Buttressed by the neuroscience brain-based data on multilingualism, transformational solution sets can be both imagined and implemented. The authors point to innovative programs in the mid 2020s that present a new vanguard of multilingual educators, explicitly prepared to work with a wide variety of students from various language experiences, who can better teach today's and tomorrow's K-12 learners by ensuring social-emotional thriving, meaningful academic achievement and equitable and inclusive learning communities which promote more than a single language (Center for Equity for Multilingual learners and Loyola Marymount University, 2020).

Recruiting multilingual teachers in California – paid student teaching

According to the CDE, multilingual learners are a substantial slice of California public school students: The over one million one-hundred thousand multilingual learners constitute 19.01% of the total enrollment in California public schools. Moreover, a total of 2,310,311 students (multilingual learners and fluent English proficient) speak a home language other than English. This number embodies nearly 40% of the public school enrollment in California [2]. Aware of the enormity of teacher shortages in general and the paucity of multilingual teachers given the immense multilingual student population, California, just since 2016, has dedicated 1.2 billion dollars on programs attempting to address these issues. In lieu of the plunging number of student teachers seeking credentials, and the meager results of multilingual authorization programs, a paradigm shift may be in order.

There is current legislation in California that would pay student teachers at the same daily rate as substitute teachers to complete their 600 h of student teaching [3], for example, in the Los Angeles Unified School District in 2023 that would be \$127.49 a day. Calculated over 600 h (about 6 h a day) over those 100 school days, a student teacher would earn \$12,749. Easing the financial burden of these unpaid internships would seem to do much to relieve the teacher shortage by establishing this California Student Teacher Support Grant Program for these student teachers to complete their required student teaching hours. The authors have seen first-hand over the last 2 decades that student teaching, essentially and unpaid internship, has been a set of multipronged barriers for teacher candidates – especially traditionally underrepresented students [4] who must take time off their regular jobs foregoing those wages, still pay tuition and pay living expenses for their families, all while completing their degree and qualify for a teaching credential. For those that may question the nearly \$13,000 outlay of funds, presently schools are paying underqualified individuals the same amount, allowing them to teach by giving emergency credentials. Assuaging the financial strain just as student teachers are completing the teacher preparation process could prove a boon in producing more qualified teachers in general – and given California's wealth of multilingual students, more qualified multilingual teachers in particular. The idea to “grow your own” teachers from the growing numbers of California's own multilingual adult population might well produce a self-sustaining model to supply the California classroom with a new vanguard of qualified fully credentialed multilingual teachers.

Conclusion

Understanding the multilingual history of the North American continent, the United States in general and California in particular, one can view the absolute population growth of both monolingual and multilingual people too often isolated in the same nation. At the same time, neurolinguistic findings point to an opportunity to bridge a gap where all can grow new neural connections through the learning of another language and simultaneously benefit from

superior reasoning, enhanced decision-making abilities, augmented networking skills and enriched memory. Compensating student teachers at the critical stage of in-school internship appears to be a wise investment for California. Resident multilingual adults, as never before, may have the opportunity to become credentialed multicultural educators teaching all K-12 learners. In turn, this could provide every California student a world-class multilingual education while concurrently improving the apotheosis of all learning, the human brain.

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Notes

1. History in the Making: A History of the People of the United States of America to 1877 is licensed by The University System of Georgia under a Creative Commons Attribution-Share Alike 3.0 Unported License. [History in the Making \(ung.edu\)](#)
2. <https://www.cde.ca.gov/ds/ad/cefelfacts.asp#:~:text=Basic%20Facts%E2%80%9494California%20Language%20Census%3A%20Fall%202022&text=A%20total%20of%202%2C310%2C311%20students,the%20state's%20public%20school%20enrollment>
3. <https://a66.asmdc.org/2023-legislation>
4. <https://www.cde.ca.gov/pd/ee/documents/dtwcouncilreportapril22.pdf>

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- US Census Bureau (n.d.), available at: <https://www.census.gov/acs/www/about/why-we-ask-each-question/language/>