How L2 learners cope with the constraints & challenges of language acquisition: An explanatory mixed-methods study

Through the linguistics lenses of phonological acquisition, speech presentation & universal grammar (UG)

Mixed-methods Final Project

Mina Ma, May 2023

Research Purpose (problem & gap)

- A societal problem that my study will address

  - 31 percent of the 44.9 million immigrant population might not have a handle on English (Flood et al., 2020) yet have already immigrated to the U.S. (not to mention there are a considerable number of international students and workers across the country).

  - Language is associated with social inequality (Philips, 2004). This language incapability just makes this minoritized population extremely vulnerable and fails to have a voice in the society where they might live the rest of their lives.

- A gap in the literature that my study will fill

  - Out of 30 empirical studies, 28 illustrated the differences, and only 2 books touched upon learning strategies.

  - None of them were written to inform educational language development practices and programs in real life.

Research Purpose (purposes)

- To 1) enrich the literature (by identifying language acquisition differences and providing language learning strategies)

- and 2) inform educational language development practices (helping the minoritized populations and contributing to social equity)

- Two purposes will be achieved in this study by exploring (quan) and understanding (qual) what kind of challenges L2 learners might be facing in terms of different language development components that manifest successful language acquisition

Research Purpose (background info)

- Background information

  - Limitation: ESL (English as a second language) ONLY

  - Argue against the "critical period" hypothesis and believe in **lifelong** experience-based **neuroplasticity**

- Relevant definitions

  - L2, second language; SLA, second language acquisition

  - The Universal Grammar (UG) hypothesis: the idea that human languages, as superficially diverse as they are, share some fundamental similarities, and that these are attributable to innate principles unique to language: that deep down, there is only one human language (Chomsky, 2000)

  - Speech presentation: Speech rate, Prosody, Pitch

Rationale (for research, not MM)

- There is a huge minoritized population who need help with language acquisition across the country. For the purpose of promoting social equity, language is the most important yet seemingly unachievable goal

- The majority of research focuses on telling the differences, instead of presenting the ways to improve and conquer the challenges

- Little research is conducted from an L2 learner's perspective who articulates the possibility of having a successful SLA

Specific Aims

- **AIM1: Investigating the constraints and challenges by comparing the differences between L2 and native speakers** by conducting a quantitative meta-analysis study where I investigate the differences between native and L2 speakers (near-native or non-native) in the context of language development through the lenses of phonological acquisition, universal grammar (UG) & speech presentation by doing a systematic review of existing literature. **QUAN**

- **AIM2: Describing the solutions to the challenges** by having a rigorous focus group study where experienced experts and successful L2 learners have in-depth discussions on SLA challenges (concluded from the quantitative study). **qual**

- **AIM3: Informing educational language development practices** with the findings of this study based on the results of the quantitative strand and qualitative strand.

- MM approach: I use the quantitative strand to define the problems, followed by the qualitative strand to provide (describe) findings of solutions. The rationale for the necessity of having the qualitative study is the urge of contributing to social equity and the obligation of informing educational language development programs.

Research Question

- What are the language development differences between native and L2 speakers (near-native or non-native) regarding the three following aspects: phonological acquisition, speech presentation & universal grammar (UG)?

- How much do the language developments of native and L2 learners differ from each other through the three lenses? How can we define the challenges?

- What kind of solutions the experts can provide to help L2 learners cope with these challenges?

- How can we write Op-ed or consult in language learning schools to inform educational language development programs and contribute to social equity?

Position Statement

- I have a cognitive linguistics learning background

- I'm interested in this specific field because it also helps me with my SLA

- I'm an L2 learner. Immersion, study/work in the U.S.

- After getting to know about social-ethnic socialization, I understood racial categorization is inevitable. SLA research helps minoritized populations communicate

- Wish to start a program to help L2 learners with their SLA or , contributing to social equity

Theoretical framework 1

Quantitative

- An interlanguage perspective is brought up to assess a learner's underlying knowledge of

  - the second-language sound system (interlanguage phonology)

  - grammar (morphology and syntax)

  - vocabulary (lexicon)

  - linguistic norms (interlanguage pragmatics) (Selinker, 1972)

Theoretical framework 2
Qualitative

- Learning styles are habitual patterns of perceiving, processing, or reacting to information

  - Sensory preference

  - Cognitive styles

  - Personality traits

- Learning strategies are the specific actions one takes and/or techniques one uses in order to learn.

  - Deep and surface strategies

  - Taxonomies of learning strategies

  - Comprehension strategies

  - Production strategies

Philosophical Assumption

- **Ontology**: I think the previous critical period hypothesis is flawed and instead of that, I think the evidence of lifelong experience-based neuroplasticity is more convincing to me. My research is conducted based on lifelong neuroplasticity evidence.

- **Epistemology**: since the study begins quantitatively, I may begin from the perspective of postpositivism to select instruments, measure variables, and assess statistical results. When moving to the qualitative phase which values multiple perspectives and in-depth description, there is a shift to using the assumptions of constructivism.

- **Generalizability**: I am not interested in generalizability and due to the nature of non-probability sampling, my qualitative findings can hardly be generalized. However, I believe the findings hold nature of transferability and could be applied to other individuals.

- **Axiology**: I will impose my experience of L2 learning when conducting the study, and I think it will have positive impacts in terms of researching from an L2 learner's perspective

Approach (basic info)

- QUAN -> qual

- QUAN: a meta-analysis study by conducting a systematic review of pre-existing literature regarding the three following aspects: phonological acquisition, universal grammar (UG) & speech presentation

- qual: a focus group study where I recruit experts in the linguistics field and successful L2 learners to gather around and have a discussion on ways to overcome challenges of language learning for L2 learners
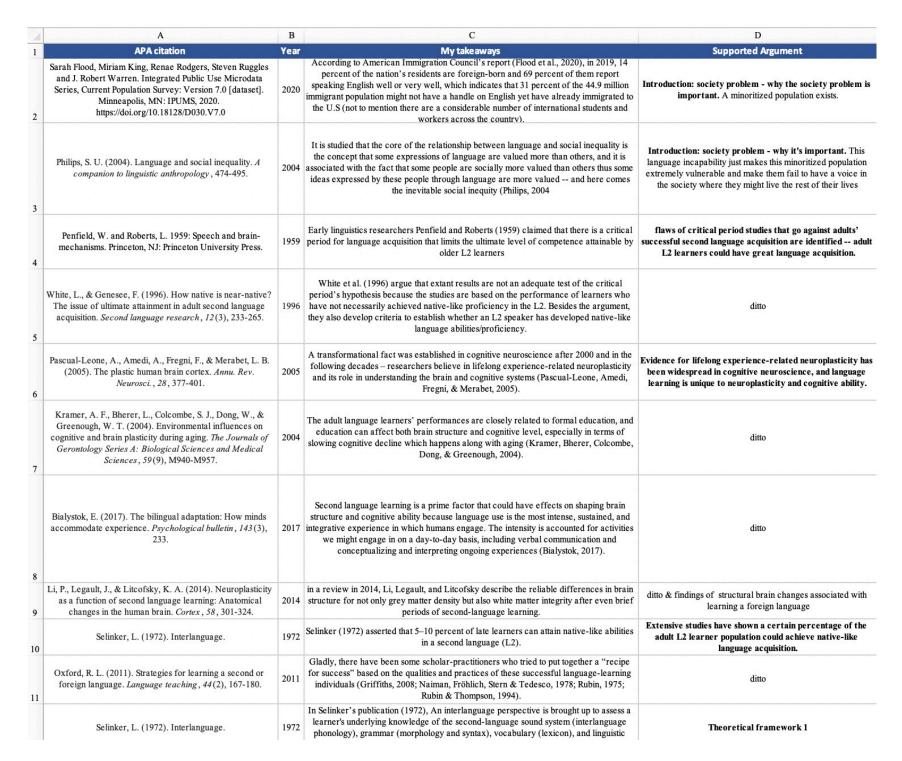
- Expansion

Background Literature
Not including meta-analysis systematic review articles

KEYWORDS	LIMITS	#articles	Purpose
Adult 2nd language acquisition (& neuroplasticity)	Lit review & empirical study	10	To provide a wholistic background & examination of research on adult SLA
Cognitive linguistics: language development components; learning strategies	Theoretical frameworks	13	My theoretical frameworks for two strands come from here
Mixed-methods design	Others	1	Have a conceptual framework for my MM design

Literature Review Table

Not including meta-analysis systematic review articles

APA citation	Year	My takeaways	Supported Argument
Name of the article	Year	What I want to cite in the article as evidence to support my own arguments	My argument that being supported by the article

A screenshot of the table on the left

Total #article: 24

I will attach the lit table to Brightspace website along with my slides

Approach and Methods

Overview

- QUAN -> qual

- QUAN: a meta-analysis study by conducting a systematic review of pre-existing literature regarding the three following aspects: phonological acquisition, universal grammar (UG) & speech presentation

- qual: a focus group study where I recruit experts in the linguistics field and successful L2 learners to have discussions on solutions to overcome challenges of language learning for L2 learners

- Expansion: different strands answer different research questions

MM rationale & notation

- A meta-analysis of quantitative data on differences in multiple language development components cannot be achieved through a qualitative approach

- A qualitative approach is needed to *describe* the findings of solutions

- A mixed-methods approach is needed: to solve the problem and achieve our research purpose, we not only need to explore and identify those challenges but also need to address the problem, help the minoritized population in real life practices, and eventually contribute to social equity.

- QUAN -> qual, explanatory, expansion

MM Design Diagram

Quantitative Study Phase—Meta-analysis
What are those challenges?

1. **Quantitative data collection:** literature screening process: I will use an electronic database to select the articles for the review. MLA International Bibliography (MLAIB) will be the primary source to identify relevant studies

2. **Quantitative data analysis:** data standardization & descriptive statistics: After the relevant studies are selected, the data will be extracted and standardized for the current study to analyze. The quantitative data analysis software will be used to assist with the data standardization process. After the relevant studies are selected, the data related to phonological acquisition, universal grammar, and speech presentation will be extracted and standardized for the current study to analyze. The quantitative data analysis software will be used to assist with the data standardization process.

3. **Qualitative findings:** preparation of codes & themes for qualitative study

Qualitative Study Phase—Focus Group Study
How do we cope with the challenges?

1. **Qualitative data collection:** Purposive sampling & snowball sampling will be used in the sampling process to recruit experts and successful L2 representatives. The potential participants are contacted either through Annual Second Language Research Forum (SLRF) or Graduate School Seminar. People who respond to our request and agree to participate in focus group study will be recruited.

2. **Qualitative data analysis:** Purposive sampling & snowball sampling will be used in the sampling process to recruit experts and successful L2 representatives. The potential participants are contacted either through Annual Second Language Research Forum (SLRF) or Graduate School Seminar. People who respond to our request and agree to participate in focus group study will be recruited.

3. **Qualitative findings:** The 4th research question will be answered by writing Op-eds and/or working as a consultant in language learning schools across the country.

Quantitative Phase - Data collection

- **Literature screening process**

  - Electronic database MLA International Bibliography (MLAIB) will be used as the primary source to identify relevant studies

  - A preliminary screening will be conducted to remove exact duplicates and include only relevant articles with online access to full texts.

  - Articles will be excluded based on certain creteria

  - Two rounds of screening

Quantitative Phase - Data collection

How exactly did I conduct this literature search?

Search terms	#ariticle
Language acquisition (AB) AND English (TX) AND Phonological (TX)	66
Language acquisition (AB) AND English (TX) AND Phonological (TX) AND Adult (TX)	12
Language acquisition (AB) AND English (TX) AND Universal Grammar (TX)	31
Language acquisition (AB) AND English (TX) AND Universal Grammar (TX) AND Adult (TX)	10
Language acquisition (AB) AND English (TX) AND Speech (AB)	93
Language acquisition (AB) AND English (TX) AND Speech (AB) AND Adult (TX)	18

Blue rows are the final results. Way fewer than I expected but I will be honest here

Quantitative Phase - Data Analysis

RQ: what are the main challenges?

- **descriptive statistics** (measures of frequency) will be performed on the first categories of data to provide an overview of the publications. The last category of data will be synthesized using theoretical thematic analysis

- Primary Search Term

    - English language acquisition

- Secondary Search Term

    - Components (a), (b), (c)

- Tertiary Search Terms

    - Adults (18 years old or older)

- Number of Search Results

    - (a), (b), (c), Subtotal

- (a) phonological acquisition

- (b) universal grammar (UG)

- (c) speech presentation

Qualitative Phase - Focus Group Study

What kind of solutions can be provided to help L2 learners cope with these challenges?

- Sampling
    - Purposive sampling & snowball sampling will be used in the sampling process to recruit experts and successful L2 representatives
    - The potential participants are contacted either through Annual Second Language Research Forum (SLRF) or Graduate School Seminar
    - People who respond to our request and agree to participate in focus group study will be recruited.
- Focus group structure
    - There will be 0~2 experts in each group, and the sizes of the groups might range from 2 to 12 individuals, not including the investigators
- Focus group content
    - Semi-structured focus groups will be operated where the topics will go around challenges concluded from quantitative phase and/or personal experiences.
- Analytic plan
    - After each session, RA or other staff members in attendance at the current focus group discuss and summarize the content and key findings of the group, according to the semi-structured protocol
    - All new themes will be identified and categorized to the protocol and other additional information might be taken into consideration as well

Potential data sources table

Potential Sources	Advantages	Limitations
MLA International Bibliography (MLAIB)	1. Inclusive, can provide data I need 2. Cognitive linguistics field 3. No additional funding is needed	1. Sometimes might not have full text
Annual Second Language Research Forum (SLRF)	1. Access to researchers in second language acquisition (SLA) from all over the world 2. Can find established scholars and graduate students	1. Need funding for incentives 2. Challenges when reaching out 3. They are not very 'affordable'
Graduate School Seminar	1. Access to successful L2 learners (speakers) 2. Have their background info and a long time observing their SLA	1. Biased sample 2. Might need funding

Sampling

qual

- Focus group recruitment

  - Include experts, recruit successful L2 learners

- Recruitment techniques & sources

  - Purposive sampling & Snowball sampling

  - From Annual Second Language Research Forum (SLRF)

  - Graduate School Seminar

- Limitation

  - Purposive sampling and snowball sampling are both non-probability sampling techniques, this means representativeness of my sample is not guaranteed. However, my study is meaningful because it provides insights to successful language learning, and in that way it can still enlighten language learners

  - Sampling bias: when using snowball sampling technique, initial subjects tend to nominate people that they know well

Summary

- The societal problem needs to be addressed

  - Around 15 million immgrant population might not have a handle on English, and social inequality is associated with language incapability

- The overarching purpose of this study

  - To have more research on helping L2 learners' language acquisition and to inform real life educational language practices (to help those who are struggling with their language acquisition)

- Approach & Rationale

  - QUAN -> qual, expansion

  - A mixed-methods approach is needed: to solve the problem and achieve our research purpose, we not only need to explore and identify those challenges but also need to address the problem, help the minoritized population in real life practices, and eventually contribute to social equity

- Data sources

  - MLAIB Database for quantitative study

  - Annual Second Language Research Forum (SLRF) for recruiting linguistics experts, Graduate Seminar for recruiting representatives

The End :)