

Historical linguistics for high school students

The Ohio experience

Brian D Joseph¹, Shuan O Karim² & Clint K Awai-Jennings¹

¹ The Ohio State University | ² Julius-Maximilians-Universität Würzburg

The Linguistic Society of America's "Linguistics in the School Curriculum Committee (LiSC)" has inspired the content in recent years of two outreach projects in Central Ohio: the already-existing Summer Linguistics Institute for Youth Scholars (SLIYS) at Ohio State University and a pilot program at Metro Early College High School (MECHS). We provide a brief history of these programs and the ways in which historical linguistics has been embedded in them, starting from the directive from the LSA and continuing on to the development of these programs and their execution. In doing so, we reflect on the unique considerations one needs to take, and the creative thinking involved, when implementing a High School ((HS) linguistics program, and we discuss our successes and our failures, as well as the future of these programs. Some practical pointers about incorporating historical linguistic material into the classroom are included as well.

Keywords: historical linguistics, summer program, SLIYS, Metro Early College High School

1. Introduction

We chronicle here two outreach programs developed by the Department of Linguistics at The Ohio State University — the Summer Linguistic Institute for Youth Scholars (SLIYS) and a linguistics pilot program at Metro Early College High School (MECHS)¹ — both of which are designed to bring linguistics to high school students. In that way, both programs are consistent with a long-standing initiative of the Linguistic Society of America (LSA) that has been aimed at

1. Throughout this article, for the sake of stylistic variety, we refer to the school interchangeably as "Metro", the "Metro School", and "MECHS".

introducing linguistic content into high school curricula. While we see the infusion of any linguistic content at the high school level as a laudable goal, we focus especially here on the role that historical linguistics has played in these programs.

SLIYS is a highly successful program that aimed originally at high school students from all over Ohio with an interest in linguistics. Since its inception in 2009, it has become a successful outreach program within that initial limited geographic scope. However, it was subsequently broadened by the COVID-19 pandemic, as the program was forced to go online, and that move opened participation to a broader audience, geographically speaking; in recent years, students from literally all across the globe have taken part in SLIYS. The MECHS program, by contrast, brought linguistics directly into the high school curriculum, and despite some hurdles that will inform future directions, it provided opportunities to the students. Nonetheless, broad decisions need to be made about the place of linguistics in secondary education: why we implement these programs may prove to be a more challenging question than how.

This contribution is structured as follows: in Section 2, we introduce the LSA Linguistics in the High School Initiative, its history, and its impetus. In Section 3, we introduce the SLIYS program and how it has developed. In Section 4, we discuss the Metro experience, including the special conditions at MECHS which made it possible. Finally, in Section 5, we discuss the future of linguistics for Central Ohio high school students at MECHS as well as some of our reflections on our successes and failures. Moreover, to the extent possible, we pay attention to the ways in which historical linguistics has played — or could play — a role in bringing linguistics to secondary education, thus touching on the “why”-question alluded to above.

2. The LSA high school linguistics initiative

Although the SLIYS and MECHS programs can stand on their own as attempts to extend linguistics into secondary education, they also fit into a broader context in the field of linguistics at large. In 1992, some 15 years before any planning for SLIYS began, the Linguistic Society of America (LSA), recognizing the importance of getting the word out about linguistics to a wider audience, established a standing committee, known then as the Language in the School Curriculum Committee, and later, after 2021, as the Linguistics in the School Curriculum Committee. Its charge was to explore and pursue “ways in which the linguistics community can advance K-12 curriculum and instruction about language and linguistics”. An offshoot of that effort was the formation in 2016 of an ad hoc committee of the LSA, the AP Linguistics Committee, under the leadership of Richard

Larson of Stony Brook University, Kristin Denham of Western Washington University, and Anne Lobeck, also of Western Washington University, for the express purpose of developing “an Advanced Placement Linguistics course and examination for US high schools” (Larson, Denham, and Lobeck 2019: e381). That proved to be a rather daunting task, given the rather strict requirements for national approval of an Advanced Placement course, so the committee moved in the direction of aiming at a larger, but more attainable goal, the High School Linguistics Initiative, seeking “simply to seed AP Linguistics ‘precursor’ courses in US high schools” (*ibid.*: e389). While SLIYS has its own “origin story” (see Section 3), the MECHS program grew out of the LSA initiative, inspired by a September 14, 2018, presentation to the OSU Department of Linguistics by Richard Larson on the AP Linguistics Committee (see Joseph, Dickerson, and Paxton 2021 for details).

3. Summer Linguistic Institute for Youth Scholars

3.1 Program overview

The Summer Linguistic Institute for Youth Scholars (SLIYS) is a summer linguistics program developed and hosted by the Department of Linguistics of The Ohio State University in Columbus, Ohio. The program is staffed by graduate students from the Linguistics Department for high school and pre-college students who in the pre-COVID instantiations of the program came to campus for a week-long exposure to instruction in linguistics. Students come from all over the United States, most of them staying in the dormitories on campus, though there are options to commute. Staying on campus would give the students some of the “college experience”. Some students studied languages and linguistics and may have been part of high school linguistics clubs. However, many other students never studied linguistics at all before the program.

The program began in 2009, with a week-long program. Over the years the program has increased to two and then three weeks, with more advanced topics being covered in the later weeks. Table 1 shows the attendance for in-person, demonstrating the increase of students as well as the increase of weeks of the program. It should be noted that some students take multiple weeks, so some of the numbers of the numbers for weeks 2 and 3 include week 1 students. Even with the exclusion of carryover students, the program grew exponentially by 2019, as indicated in Table 1; more recently (see below), the program has been extended even further and structured into two two-week sessions.

Table 1. SLIYS 2009–2019 (in-person)

Year	Week 1	Week 2	Week 3	Year total
2009	18			18
2010	30			30
2011	14			14
2012	14	15		29
2013	17	18		35
2014	19	15		34
2015	36	28		64
2016	30	28	30	88
2017	29	36	17	82
2018	36	35	30	101
2019	36	35	34	105

The program provides instruction on the basics about linguistics and language learning. The first week begins with the core linguistic topics – phonetics, phonology, morphology, syntax, and semantics, as well as additional lessons on pragmatics and sociolinguistics. The material covered varies slightly year to year depending upon the strengths and interests of the instructors; however the core material found in an introductory linguistics course is always covered. The overall goals have always been for the students to:

- Become familiar with how languages are similar and different in terms of their basic elements including sounds, words, and sentence structure
- Learn how to avoid typical mistakes that language learners make
- Learn interesting facts about languages, such as the ways culture and language interact in politeness and greetings
- Get helpful strategies for learning a language, including memory tips, brain training, and using a bilingual dictionary

The second week of the program offers more advanced classes with specialized topics, such as deixis, language acquisition, contact languages, and computational linguistics, and this is where historical linguistics has generally been covered.

The schedule is structured so that students spend most of their mornings in lectures with instructors and the afternoons having hands-on activities that give them a chance to apply what they have learned. Each week, a guest speaker meets with the students to share additional information about other topics and educational experiences. These guests include faculty, students, among them

undergraduates and SLIYS alumni, and linguists with some celebrity, such as Walt Wolfram (a pioneer in the study of African American English and American English dialects) or Marc Okrand (the inventor of Klingon). In a recent SLIYS, in the summer of 2023, there were 14 guest speakers over the four week-long sessions. These guest speakers enhance the linguistic experience outside of the classroom.

The final component of the program is language elicitation. Students are put into groups, each working with a different language consultant so as to give them a chance to apply and test the linguistic concepts they have been learning about. The ultimate goal of the exercise is for students to create a grammar sketch of a language they are unfamiliar with. They do this by eliciting words, looking for minimal pairs, asking questions regarding word order and phrase structure, and the like. Each language group then presents their work to visiting parents and their instructors at the end of the week. In recent years, students have worked with speakers of Albanian, Greek, Hawai'i Creole English, Hebrew, Hungarian, Japanese, Lithuanian, Mandarin, Turkish, and Spanish.

The full linguistic experience extends even to various non-classroom activities. For instance, students visit the Buckeye Language Network's active linguistics research lab located at the Center of Science and Industry (COSI) in downtown Columbus. Social events have included activities for learning the IPA and scavenger hunts around campus with clues written in different writing systems needing deciphering.

Like the rest of the world, during the COVID-induced pandemic of 2020 and beyond, SLIYS had to adjust and so it switched to virtual classrooms. While this was necessary due to health concerns, this also allowed for a broader reach. After switching to online delivery, the program came to be open to international students and students who would have been unable to travel to Columbus. Classes and activities were still held synchronously, meaning that students in China were twelve hours ahead! Even with this stipulation, many international students have attended the program, from China, Japan, Turkey, Indonesia, and Greece.

Because the logistics were different virtually, using this medium also allowed for the creation of a June two-week session and a July two-week session. The second week of each session continued to cover advanced topics, with the core topics of the first week being a prerequisite. Table 2 lists the number of students attending over the first four years of virtual SLIYS, again with attendance increasing. The program has stayed virtual for now, allowing for more students to have access to the program.

Table 2. SLIYS 2020–2023 (virtual)

Year	SLIYS I (June)	SLIYS II (June)	SLIYS I (July)	SLIYS II (July)	Year total
2020	38	29	38	26	131
2021	47	37	47	31	162
2022	45	22	47	36	150
2023	45	27	48	26	146

Starting in 2021, the program for the second week was modified to consist of a series of workshops, each taught 2–3 times during the week. The workshops were organized like a linguistics conference, allowing students to choose which topics and specialties they would like to learn about. This new, modified format turned out to be very successful and is something that the young scholars look forward to each summer. Additionally, this format provided an opportunity to incorporate historical linguistics into the program more systematically.

3.2 Historical linguistics component

The new format of the second week of the program gave the students an opportunity to focus on specific subfields that they are interested in. During the first week, students take the classes on the necessary core topics, allowing for an easy transition into introducing historical linguistics, for those students who are so inclined, inasmuch as historical linguistics draws on and interacts with all core areas.

The first historical linguistics course introduces students to the history of historical linguistics, discussing the importance of the Neogrammarians, Grimm's Law, and other key notions that form the backbone of the development of historical linguistics as a field. They are also introduced to the three key mechanisms of language change: sound change, representing the physiological dimension to language; analogy, representing the cognitive dimension to language; and borrowing, representing the social dimension to language, including language contact. And they learn about the various processes that occur within those different dimensions. Students learn to apply all of this in exercises, analyzing language data from a diachronic perspective.

Among the workshops, three historical linguistics workshops have been made available to students — historical phonology, language contact, and language reconstruction, this last introducing the Comparative Method. The first historical linguistics course is a prerequisite for these other units. In each of these, students learn the necessary principles and concepts but also learn how to analyze real data and interpret linguistic material.

The students have generally responded very well to the opportunity to do some actual analysis of real linguistic data. This is most evident in the language reconstruction workshop. In the reconstruction workshop, students learn about the Comparative Method. They learn to reconstruct proto-languages, utilizing the various heuristics they've been taught, e.g. featural composition of sounds to allow for decisions about which proto-phonemes to posit. Initially a reconstruction is done as a class, looking at just two languages with a data set of half a dozen words. Then students are broken up into groups and given a larger reconstruction problem. The data set now includes three languages and a dozen words, increasing the challenge. The data set is of Polynesian languages, due to the relatively small phonetic inventories and the simple consistently CV syllable structure. The Polynesian data is challenging enough and yet do-able enough to really satiate the students' new appetite for reconstruction.²

Students can then reconstruct a language family, followed by discussions about subgrouping and language relatedness. It is extremely fruitful having the students complete the process on their own, as they get to see the "final product", which can then be compared to larger family trees that are already constructed. Even students who are not interested in historical linguistics end up gaining a greater appreciation for language classification, language relatedness, and language change, and for the work of historical linguists to create language family trees, reconstruct proto-languages, and develop other valuable information about the history of individual languages that can be used in the rest of the field.

The students' response to SLIYS in general and to the historical linguistics material has been positive. Some students, for instance, have attended upon recommendation of friends and classmates. One student from Summer 2021 stated that SLIYS "totally exceeded my expectations, and I learned so much from this program". They also said that "having this knowledge will prepare [me] for college really well". Another student from Summer 2021, whose family immigrated from India, said in an e-mail message to instructor Awai-Jennings, "[I] remember how much you loved Sanskrit — it inspired me to pursue further studies of the language". One student from Summer 2023 remarked how grateful they were for the opportunities to work with others who have the same passion for language. They also said, "SLIYS helped me find out that historical linguistics specifically is something I am really interested in. I love learning about how languages evolve in any shape or form throughout history and think the concepts of proto-languages, like

2. We thus suggest to readers that Polynesian as a language group and the data it provides as the basis for Comparative Method and reconstruction exercises are well worth considering when casting about for material to use in their own historical linguistics classrooms.

Proto-Indo-European, are fascinating”. The student went on to request materials to continue his study and recommendations for future schooling.

It is clear from these testimonials, as well as from the increased attendance, that the SLIYS program is a huge success with great potential for further expansion and represents an opportunity to introduce a variety of topics that otherwise would not be accessible to high school students. More specifically, for our purposes here, SLIYS offers direct empirical evidence of the role that historical linguistics can play in fueling high school students’ interest in linguistics.

4. The Metro experience

The Metro Early College High School (MECHS) initiative has entailed the successful completion of four semesters of linguistics coursework integrated into the local curriculum. This was made possible by MECHS’s mission “to create the ideal high school experience.” Unfortunately, various factors led to a decision in 2023 not to continue linguistics classes in the regular school curriculum, although linguistics is still a part of MECHS’s offerings during its January Term (“J-Term”), a three-week interlude between the fall and spring semesters. Details on the J-Term linguistics class are included below in Section 4.6.

Some background on the school itself is useful for understanding how linguistics could fit into this curriculum. Metro Early College High School was established in 2006. It is a partnership between higher education, business, and K-12 education, a product of collaboration between The Ohio State University and Battelle Memorial Institute, a large private research institute located in Columbus, with the goal of creating a “small” STEM school with a “big footprint.” The Metro school is facilitated by the Educational Council, and it is the platform school for The Ohio STEM Learning Network (OSLN).³

4.1 The curriculum

Students at MECHS have a personalized learning plan consisting of Core Preparatory classes and College Access classes. A typical student will spend their first and second years in the Core Prep phase, where they take courses in mathematics, science, social studies, and language arts. Their performance in these courses signifies their ability to meet or exceed Ohio graduation requirements and “to successfully navigate the early college program.” The precise skills that demonstrate a student’s ability to succeed in the early college program continue to be

3. Quoted material about MECHS comes from <https://www.themetroschool.org/>.

refined and developed. Students are additionally required to demonstrate their ability to work individually and collaboratively to find creative solutions to real-world problems in a design challenge competition judged by members of the business and academic community.

Perhaps the most beneficial part of the MECHS experience for its students is their ability to take college coursework for dual credit. All MECHS students who follow the curriculum without delay are expected to be taking college courses at either The Ohio State University or Columbus State Community College. “Upon successful demonstration of Mastery [see Section 4.2 on the Mastery system] in the Core Prep Phase, students move into an environment that focuses on learning outside of school walls.” The College Access portion of the MECHS curriculum consists of both the Early College Experiences and an internship. The College Access section of the curriculum differs from Core Prep, which focuses “on practical experiences, skill development, social maturity, critical thinking, and responsibility” by appealing to students’ interests. Rather than guiding students down the path of a particular major or asking them to make decisions with an outsized impact on their future prematurely, MECHS Early College Experiences allow students to explore what college has to offer while building a foundation of success. Essentially, participation in an Early College Experience becomes predictive of future success.

4.2 The Mastery System and the Gateway

The Mastery System essentially is a response to the question of what a student who earned a C in a course actually knows and whether that is enough. It is based on this question: If one class is truly a foundational prerequisite for another, how can a student successfully move on to the next course in a series without mastering the content of the previous class? At MECHS, students must attain a grade of 90% or higher, not just in every class but on all assignments therein.

Teachers design their syllabi with two types of assignments: Foundational and Mastery. Foundational assignments are designed to teach particular learning goals. These assignments are not given for grades. However, the successful completion of Foundational assignments is a prerequisite for participation in Mastery assignments, which are designed to assess a student’s knowledge of key foundational concepts and related skills as well as their ability to apply that knowledge and those skills to curated problems. Mastery assignments are given for grades, and students are required to achieve an A, i.e., 90% or higher, on all such assignments. In the event that students do not achieve this goal, they must either remediate the assignment or retake the class. Teachers may develop alternative remedial assignments

that effectively replace the entire assignment or create a targeted assignment focusing narrowly on the knowledge or skills that the student missed.

In addition to their normal course load, students have an adult Advisor who serves as their advocate and guides their personal development, skill-building, and goal-setting. MECHS students have a strong support system consisting of advisors, counselors, teachers, and others, each providing expertise in different aspects of the Metro experience, e.g., Early College Experiences, STEM, organizational skills, college admissions, etc. This support system helps students transition from Core Prep to College Access to graduation and college admission. For example, in the transition from Core Prep to College Access, students give a Gateway presentation, a milestone signifying their preparedness for the Early College Experience. In a Gateway presentation, students present themselves, their personal developments, their grades, and their accomplishments. They are joined by their advisor, faculty representatives, and advocates of their choosing from the Metro schools as well as the community and their families. The Gateway acts as both a psychological and a practical boundary to college entrance, signifying to students that they are ready and to the school that they are likely to succeed going forward.

4.3 The reduced curriculum

One side effect of the MECHS curriculum is the fact that the school does not offer many courses, especially elective courses. Most American high schools necessarily offer all their coursework in-house. This includes core subjects such as English, social studies (including history and geography), mathematics, and sciences, as well as elective subjects such as physical education, band, orchestra, choir, studio art, theater, and foreign languages. Most schools have some range of foreign languages, with the typical school offering only the three major Western European colonizer languages: Spanish, French, and German.⁴

In contrast to typical American public schools, MECHS seeks for all students who follow the path set out for them to take the greater part of their coursework at the college level in their Junior and Senior years. Some of the highest-performing students will not take any in-house coursework in those years. The result is a reduction of the offerings available at MECHS. They offer the full range of

4. According to the American Council on the Teaching of Foreign Languages (ACTFL)'s February 2011 report "Foreign Language Enrollments in K-12 Public Schools" (<https://web.archive.org/web/20140817144116/http://www.actfl.org/sites/default/files/pdfs/ReportSummary2011.pdf>), accessed 17 October 2024, 72.06% of K-12 students in the US take Spanish, 14.08% take French, and 4.43% take German. The remaining 9.43% study other languages.

English, math, and sciences required by the state of Ohio. However, elective offerings are limited by design. They have an art class, a foreign language class, a wellness class, and a series of computer science and engineering courses in-house. They do not offer sports, music, or theater courses. Moreover, their foreign language offerings are limited (see the following section).

4.4 A STEM solution to foreign language offerings

The foreign language problem at the MECHS is that there is no way to coordinate the group of students that need different levels of a foreign language and maintain multiple offerings. The college-bound majority will take their foreign language courses at the college level. The rest of the students would be at different levels of their high school careers. The result is that students who need to take the first installment of a particular language can usually do so, but the odds of a second level of a language being offered and filled are slim.

This situation came to a head when MECHS lost its Spanish teacher. The administration decided that the typical foreign-language teaching arrangement was not necessarily viable at MECHS. However, a STEM solution might just be the right option for a STEM school. MECHS partnered with Rosetta Stone to offer unlimited accounts to students enrolled in the Foreign Language class. The idea is that students could pursue any language of their choosing in a self-paced course. After the deal with Rosetta Stone came to fruition, Angy Swain, a teacher at MECHS, began to design Mastery assessments for the various languages. However, it quickly became apparent that designing assessments for languages with systems radically different from the most commonly taught Western European languages was not a task that would be easily accomplished. The result was a limitation of the offerings from Rosetta Stone's full catalog of twenty-five languages to three: Spanish, French, and German. In practice, most students enrolled in the foreign-language course take Spanish, with the occasional French student.

The Rosetta Stone solution teaches a slightly different skill set from what traditional classroom instruction does. As such, members of the MECHS staff started exploring the idea of supplementing their foreign-language program with linguistics, which they conceptualized as a course that would help students learn foreign languages more efficiently. Fortuitously, as described in Joseph, Dickerson, and Paxton 2021, Victora Paxton, a senior Linguistics major at OSU in 2019 who had been working with co-author Joseph on a Columbus version of the High School Linguistics Initiative, reached out to the staff of MECHS and a mutually satisfying agreement was worked out whereby the Department of Linguistics would provide

a teacher with their salary ultimately paid by MECHS.⁵ Thus, Metro Linguistics was born.

4.5 Metro Linguistics (2020–2023)

Co-author Karim was the second official teacher of Linguistics at MECHS. In his interview for the position, he defined linguistics as “the intersection between language and STEM fields.” Obviously, this definition pandered toward the overall aims of MECHS. However, it stands in contrast to the express goals MECHS staff had when they decided to bring linguistics into their curriculum to help students learn foreign languages more efficiently. This is not typically thought of as a goal of most introductory courses in general linguistics, although it may be a side effect of enhanced meta-linguistic knowledge.⁶ As such, no efforts were taken to counter any misapprehensions about the nature of the linguistic sciences. Rather, the decision was made to let the course speak for itself in terms of the reactions of students and the downstream effects on them.

The first Metro Linguistics course was offered in the Spring of 2020. It was taught in collaboration with MECHS teacher Angy Swain by Carly Dickerson, who was then a Ph.D. candidate in Linguistics at OSU and now is Dr. Dickerson at Lehigh University. The course was structured in a hybrid fashion, mixing aspects of the college and high school experiences. At the high school level, at MECHS, courses are taught for an hour and a half per day, five days per week. Each day’s class is light on content, instead balancing the day with a combination of lectures, class participation, coursework, and cooperative projects. At the University level, teachers meet with the students only two days per week, providing content-dense presentations. The onus is on the student to do the required readings and homework assignments, conduct group and individual projects, prepare for presentations, and study for tests. In other words, the high school allows the students to do their home duties at school to fill class time. The first iteration of Metro

5. See Section 4.5 on the first MECHS linguistics instructor and class logistics. The payment details were somewhat more complicated at first (see Joseph, Dickerson, and Paxton 2021).

6. We acknowledge — and could certainly not deny — that linguistics can contribute to enhanced learning of a language other than one’s native language. As it happens, OSU Linguistics does offer a course, Linguistics 2501 (Linguistics for Language Learning), the goal of which is developing linguistic tools that will help students be successful language learners. However, this is a specially designed course with that express goal (and see the Culicover and Hume 2017 textbook), and not a standard run-of-the-mill introduction to general linguistics. We note too that though the stated goals for SLIYS (see Section 3.1 above) include one that focuses on the contribution linguistics can make to helpful strategies for learning a language, that is not the sole or even primary goal of SLIYS.

Linguistics consisted of Dr. Dickerson teaching a university-level class two days per week while Ms. Swain guided students through their assignments, projects, and presentations three days per week. The financing available did not allow for Dr. Dickerson to teach full-time at MECHS (see Joseph, Dickerson, and Paxton 2021 for some details). In order to set Metro Linguistics up for success, students were hand-picked for the class based on interest and ability. This arrangement was, unfortunately, in its infancy when the COVID-19 pandemic sent all the students home for virtual instruction. Although the program continued, it was clear that it would not be possible to evaluate the success of the linguistics program in terms of student performance. Every aspect of that semester was unprecedented.

Due to the uncertainties occasioned by the pandemic, Metro Linguistics was put on hold until the Fall of 2021, when students returned to the classroom full-time. At that point, since Dr. Dickerson completed her Ph.D. in 2021 and left the Columbus area, co-author Karim took over the program. Since no one thought that the two-and-three division of labor between Dr. Dickerson and Ms. Swain was ideal for MECHS students in terms of both continuity and exposure to professional linguists, the course was adapted to the five-day-a-week high school schedule. Unlike the first iteration of Metro Linguistics, students were not hand-selected for the course. Students were placed in the class based first on their desire and then on course availability. If students needed an elective during a particular period and the linguistics course was the only elective offered in that time slot, they would take linguistics. This resulted in about half of the students beginning with no concept of what linguistics is, approximately reflecting the makeup of an introductory course at OSU (and probably many, if not most, universities). Much like such courses at OSU, many students were positively indoctrinated into a love of linguistics that will no doubt be a life-long passion. Others simply made the grade, as is common in any high school, especially as students were unsure what the point was of taking linguistics as an elective. In order to justify the program, it was necessary to better establish exactly how it fits into the MECHS curriculum.

The solution of MECHS staff to the linguistics question was naturally to consider linguistics as a part of the foreign language sequence as required by their honors degree route. Students would take two semesters of linguistics coursework and two semesters of a single foreign language instead of three semesters of a single foreign language. This proposal was natural, given the assumption that linguistics would help students learn foreign languages. However, countering that, it was stressed that that is not what linguistics is. If Metro staff wanted to build a linguistics program with multiple classes that counted toward an honors degree, it was argued that could be done. This is how MECHS came to offer not just linguistics but also a dedicated historical linguistics course entitled Language Evolution.

Metro Linguistics was offered four semesters: first in the Spring of 2020, then after a hiatus of a year during the pandemic, again in both semesters of the 2021–2022 academic year, and then in the Fall of 2022. In the last two semesters, the general introduction was offered alongside Language Evolution, taught using Campbell (2013). Students learned about the three mechanisms of language change described in Section 3.2 above (the physiological, the psychological, and the social). Additionally, students learned to do the Comparative Method, culminating in Campbell's (2013) Proto-Quechuan reconstruction problem set. This structure exactly replicated the equivalent undergraduate course at The Ohio State University, Language Evolution and Language Change (Linguistics 3901).

Co-author Karim began each course with a self-introduction involving the reconstruction of his name, demonstrating the difference between *Shuan* [ʃwan] and *Shaun* [ʃan]. The Proto-Indo-European word *peku- 'sacrificial animal' and the root *peH₂- meaning 'protect' traveled through Proto-Iranian *pasu-pā with vowel syncope (and other regular changes) yielding attested forms such as Avestan *fšu-pā*, and then with intervocalic voicing giving Middle Iranian, *šuban spirantization in Kurdish (Northern) giving *šivan*, and a merger of *v and *w in Central Kurdish leading ultimately *şwan* 'shepherd', then used as a name. Despite the superficial similarity, this is completely different from the biblical telephone game that brought Aramaic *Yōhanan* minimally through Latin, French, Irish, and English to give us *Shaun*. Co-author Karim used this simple task as an opportunity to establish the way that historical linguistics can be a gateway into our own histories.⁷

This course was a success in the sense that many of the students became converts to linguistics. One particular gateway into the hearts and minds of students was a peculiar coincidence of the way students are admitted to the Metro Schools. Students from all over Ohio are admitted by a lottery system. In order to be considered, students or their families must, at the very least, know of MECHS's existence. As such, many of the students represent extended family and support networks of the other students. Metro became a safe space for students who are Black, Somali, Muslim, LGBTQIA+, and members of other marginalized groups that are often harassed by students and teachers alike in American public schools.

7. Expanding upon this anecdote, we note that having students look up the etymology of their names (first name and last name) can prove to be a very engaging and meaningful class assignment; we have used it in introductory historical linguistics classes at the university level with some students not long out of high school, so we feel it has potential at the secondary level. Various useful websites students can consult include familysearch.org, Houseofnames.com, <https://www.thebump.com>, <https://www.etymonline.com>, and <https://www.thenamemeaning.com>, as well as Wikipedia and Wiktionary.

In the relatively small Language Evolution classes, there were speakers of Somali, Gulla, Thai, Arabic, Amazight, Zapotec, Tamil, Telugu, Urdu, and Spanish. For many of these students, this class was the first time that they were able to ask questions about their meta-linguistic knowledge. This intrinsic knowledge was put to use in a language description project, created when Metro Linguistics was taught by Carly Dickerson, that allowed the Somali students, especially, to be experts, a role not available to them in other classes. Similar language/culture projects were continued at MECHS under co-author Karim's instructional leadership.

Essentially, every multilingual/multidialectal person is largely aware of the differences between their languages at various levels of structure. Language Evolution was the first time that these students were given the means, the language, so to speak, to express the questions that had been in their heads for most of their lives. Additionally, it was the first time that they were exposed to a language researcher. The students learned for the first time that every question in the world has an answer; for some of those questions, there is no one in the world that knows its answer now, so they could be the first person to answer that question with the tools they gained in the class.

In a certain sense, the successes of the linguistics program came in spite of a systematic mismatch between the students selected for the linguistics program and the program's target audience created by the Early College Experience. If the Early College Experience is utilized correctly, students take the majority of their coursework at the college level, at least in their junior and senior years. This includes their foreign language requirements. Likewise, students who are interested in studying a foreign language have the opportunity to take the Rosetta Stone-centered Foreign Language course. Students who are either uninterested in foreign languages or falling behind on their path to College Access are the ones placed in the linguistics courses, with the exception of a few rare students who already knew what linguistics was.

Another problem was the structure of primary school in general, which is not a MECHS-specific problem. The typical high school course builds upon knowledge and skills the students have been developing since the beginning of their academic pedagogy. A course like Calculus, for instance, constitutes an intellectual continuation of Geometry, Trigonometry, Algebra, and basic arithmetic that they have been exposed to for at least ten years. In contrast, linguistics in general and historical linguistics in particular call on the students to approach the study of language with an underdeveloped toolkit.

In linguistics, students are asked to draw from intuition and intrinsic knowledge they have gained through their natural development as speakers of various languages. They are asked to explore and cultivate that knowledge in the examination of notions such as linguistic naturalness. They learn to pay attention to

the sandhi phenomenon in their own speech and the differences between their speech patterns and those of their friends, family members, and classmates. As they come to see language variation and change as something that is present all around them, they can apply the knowledge they already possess to the scientific exploration of questions they develop. The newness of this approach is something that is entirely alien to a high school audience. However, the students have expressed that it is empowering to realize the value of their intrinsic knowledge. This was particularly salient with students from indigenous and refugee groups whose linguistic background was often sold to them as being of little value at best and as a hindrance to their success at worst. In reality, these students are linguistic experts in ways that their teachers will never be, and the job of their teachers is to help them realize their expertise. In short, an important factor in the successes of Historical Linguistics at MECHS was the way linguistics can be empowering to marginalized groups of students and MECHS's diverse and talented student body. Nonetheless, the same sorts of approaches as employed at MECHS should have universal applicability and should, we posit, be able to work in venues with less diversity in the student body.

From an observation of students' milestones, from their Gateway to College Access to college application, it became clear that the great freedom the school had to set for its own curriculum did not extend past their walls. For instance, various linguistic courses could be taken for high school credit and be counted for the high school (honors) degree. However, most universities require two semesters of a foreign language for admissions. As linguistics would not count as a foreign language at the university, creating a linguistics-centered, non-college-bound degree plan in an early college program would be paradoxical and have a deleterious effect on student progress. It is now clear that the position of linguistics in the curriculum, such as that found at MECHS, needs to be reevaluated. Linguistics is not a foreign language, and it should not count as one. If students are to take linguistics, it needs to either count toward some already existing requirement or provide a gateway for them to access something not currently available to them. To address this issue, we in OSU Linguistics have suggested two possible, not necessarily exclusive, routes.

1. Linguistics as an alternative science: It is clear that there is a mismatch between the faculty and staff's original assumptions about linguistics, as representing the knowledge that would help one learn a language, and what linguistics actually is, namely the discipline at the intersection of the sciences and language. One possible path forward for linguistics at MECHS and other such schools is to treat linguistics in the curriculum as the science that it is. It is notable that MECHS currently offers Environmental/Earth Science

and Environmental Justice in addition to the traditional sciences of Biology, Physics, and Chemistry. The origins of scientific linguistics in the 19th-century discoveries in historical linguistics (as noted in Section 3.2 above) can perhaps be emphasized in this approach.

2. Linguistics as a gateway to earlier College Access: Given the nature of the reasoning, argumentation, and analytic skills that students in linguistics classes, including historical linguistics, can develop, a linguistics curriculum can be touted as an ideal basis for arming students with the critical-thinking tools that are essential to success in college.

Thus, not only has historical linguistics already been a proven positive at MECHS, but it also can be part of the future of a linguistics curriculum; in that regard, we are encouraged by the success of incorporating material from the history of English into a high school general introductory class on linguistics as described in Loosen 2014.

4.6 Metro Linguistics, 2024–2025

Our enthusiasm and hopes for a full-blown linguistics curriculum were dealt a blow when, as noted in the introduction to Section 4 above, it was decided by the MECHS administration not to offer Linguistics as part of the regular two-semester curriculum, largely for some of the reasons alluded to above having to do with potential problems Metro students might face in leveraging an MECHS linguistics course for college admission and/or college credit. However, the cloud had a silver lining, because two faculty colleagues in the OSU Linguistics Department, Micha Elsner and Dan Parker, saw this as an opportunity to potentially involve Metro students in the an initiative that they themselves had been involved in, namely the North American Computational Linguistics Open Competition, NACLO for short. NACLO is described on its website, naclo.org, as “a contest in which high-school students solve linguistic problems”. Despite the name of the competition, the problems are not computational in nature, but rather cover a wide range of areas within the overall field of Linguistics, including historical linguistics. Although the NACLO website makes it clear that “no prior knowledge of linguistics or second languages is necessary”, Professors Elsner and Parker, in discussing the Metro School situation with co-author Joseph, and realizing that fortuitously the competition is typically in late January and that MECHS had a three-week winter-break session known as “January Term” or “J-Term” for short, came up with the idea of providing Metro students with some background in Linguistics as a credit-bearing J-Term class, by way of encouraging them to take part in the NACLO competition.

The MECHS administration embraced this idea, and the result is that for the past two J-Terms, in 2024 and 2025, 15 or so Metro students have been provided with an overview of Linguistics and the chance to participate in the NACLO competition.⁸ The classes have been taught by OSU Linguistics faculty and graduate students each taking a day or two of the dozen class sessions in J-Term, and essentially covering a different area within Linguistics in an 80-minute session, complete with some problem solving. Co-author Joseph, for instance, in January 2025, taught his J-term class on viewing sounds as bundles of features, and then used the featural decomposition of sounds as the basis for a problem on describing sound changes and determining their ordering, standard sorts of topics covered in an historical linguistics class. For instance, the sound changes (some of which are attested within the history of Indic in the passage from Old Indic (Sanskrit) to later Indic or in other language groups) by which the sequence *tm* developed into *dm*, *bm*, and *mm*, can be viewed as featural changes (*tm* > *dm* via regressive voicing assimilation, *dm* > *bm* by regressive place assimilation, and *bm* > *mm* by regressive manner assimilation, all freely ordered chronologically based on this data, though the added outcome of *dn* suggests that voicing assimilation could have occurred before manner assimilation.

Plans are already in the works to do the J-Term Linguistics and NACLO class again in January 2026, so that the partnership between OSU Linguistics and MECHS, aided by the connection of OSU Linguistics with NACLO,⁹ has proven to be a fruitful path, if even an alternative one, to bringing linguistics, including historical linguistics, to high school students.

6. Concluding remarks: The future of linguistics for Central Ohio high school students

It was an uphill battle to get linguistics into the curriculum of any Central Ohio high school, as outlined in Joseph, Dickerson, and Paxton (2021) and as suggested above. The question of why Linguistics belongs in the high school curriculum in some form comes front and center in any “sales pitch” to school administrators, and understandably so. Some possible answers are suggested in Section 4.5, depending on the parameters that are relevant for particular students in particular

8. In keeping with school policy, J-Term Linguistics students are not obliged to take part in the extra-curricular competition, but they are encouraged to do so; if they do participate, they can mention it on college applications as an extra-curricular activity they were involved in.

9. For instance, via Linguistics Department facilities being used as a test site and OSU faculty being problem-contributors and competition-graders.

school environments. Part of the problem surely is convincing administrators that linguistics is a unique discipline that bridges the sciences, including the social sciences and the humanities, something for everyone, in a sense, but with an emphasis on linguistics as a science. This is actually a general problem that linguists have faced for at least a century; see Bloomfield (1925), for an early perspective on this question, and Larson (2010, 2022) for more recent considerations. Relevant too is being aware of a popular belief¹⁰ that linguistics is primarily about language-learning and being attuned to ways of confronting that belief without ignoring the reality that language-learning is one aspect of undertakings within the overall field of linguistics.

Nonetheless, the empirical evidence of SLIYS and of the still-nascent linguistics program at MECHS, even in its present J-Term instantiation, shows that linguistics can be a success at the high school level, and moreover that historical linguistics can be robust part of that success and even an entry point into linguistics in general; discovering curious facts about the etymology of words and the allure of reconstructing aspects of history and even prehistory via the Comparative Method, much as a crime scene investigators reconstruct crime scenes, show historical linguistics to be a kind of knowledge and reasoning that can capture the popular imagination and more specifically the imagination of impressionable young minds.¹¹

Moreover, once historical linguistics has baited the hook, as it were, students and instructors have material to build on to further their exploration of language. In particular, the relationship between variation and change brings sociolinguistics into view, and dialect differences offer a natural segue into natural explanations of the processes of language change. In fact, once historical material enters the scene, it soon can become clear that any synchronic fact about a language has an historical explanation as to how it came to be the way it is, and that can grab students' attention. And that, after all, is at least half the battle in education, at any level but especially in secondary education.

10. This belief is no doubt abetted by the use of the term *linguist* to refer, especially in the United States in official, e.g. governmental or military, contexts, to a person skilled in translating, interpreting, and using a language other than English.

11. Unfortunately, there has been no formal assessment of the success of Linguistics at the Metro school, but the positive reception that the J-Term Linguistics/NACLO proposal received is an informal indication that the administration is still welcoming of Linguistics in some form in the school's overall offering to students.

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Address for correspondence

Brian D Joseph
Dept. of Linguistics
The Ohio State University
100 Oxley Hall
1712 Neil Avenue
Columbus OH 43210
USA
joseph.1@osu.edu

Co-author information

Shuan O Karim
Julius-Maximilians-Universität Würzburg
Institut für Altertumswissenschaften
shuan.karim@uni-wuerzburg.de

Clint K Awai-Jennings
The Ohio State University
Dept. of Linguistics
awai-jennings.1@osu.edu

Publication history

Date received: 23 February 2025
Date accepted: 17 March 2025
Published online: 18 April 2025

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1st proofs

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