

High School Linguistics: Information for Administrators and Teachers

AP Linguistics Committee of the Linguistic Society of America



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This document compiled on behalf of the Linguistic Society of America High School Linguistics Initiative by Kristin Denham (Western Washington University), Anne Lobeck (Western Washington University), Richard Larson (Stony Brook University) and David Lightfoot (Georgetown University). This document may be copied and edited to fit the needs of different school districts.

1. What Is Linguistics and Why Do People Study It?

Linguistics is the scientific study of language. Linguists study language just like other scientists study other natural phenomena, such as photosynthesis, the solar system, DNA, or climate change. The study of linguistics thus ranges from the anatomical/physiological properties of the brain to the functional role of language in society. Although language has been an object of investigation since ancient times, Linguistics as we know it today is a relatively new field of study, and a highly relevant topic of study in secondary education.

Core questions guiding linguistics research include:

- How are languages structured in terms of sounds (phonetics, phonology) words, (morphology), expressions (syntax) and meaning (semantics)?
- How is language is acquired, produced and processed by the brain
- How does language function in society?
- How do languages change over time?
- How did language evolve during human prehistory and in history?

In addition to its fascination as a type of science, these questions are also receiving increasingly intense practical attention in our modern technological, multicultural society. The explosive growth of the internet and consequent accumulation of vast, publicly accessible domains of information in textual and spoken form have made the processing of linguistic information a paramount interest for science, industry, government and education, as well as everyday life. The area that applies the results of linguistics research to processing of speech and linguistic information theoretically and develops its practical applications is **computational linguistics**.

Our increasingly deep understanding of how language is structured and how it is acquired, stored and processed in the brain is also having profound impact on the study of what happens when “things go wrong” - when genetic, developmental and pathological and traumatic factors intervene and interfere with knowledge of language. The linguistic consequences and effects of congenital birth defects, of ASD, of dementia, of trauma (aphasias) and of normal aging are all part of the study of speech and language disorders, which fall within the ever-expanding domain of **clinical linguistics**.

The diversity of biological species also has important potential practical value. The destruction of the biosphere by human activity and climate change has produced a race by scientists to record the fullest spectrum of plant and animal life and to preserve its diversity for future generations wherever possible. Linguistic diversity presents a remarkably similar picture, with its rich storehouse of alternative ways of conceiving and relating to the world. The economic, climatic and developmental forces destroying the biosphere are also rapidly destroying the "linguosphere," with languages going extinct in record numbers and at an increasing rate, and with a counterpart loss in human cultural diversity. As a result, linguistic scientists are at work across the globe seeking to record, preserve and sometimes even to resurrect dying languages. This work falls within the exciting and expanding domain of **endangered language linguistics**.

These are just several potent illustrations, among many, of the ways in which the study of linguistics intersects our modern lives.

2. Why Teach Linguistics in High School?

As a subject matter, Linguistics has many attractions for high schools and high school students.

Linguistics offers a highly effective medium for science education (STEM)!

Unlike many other phenomena of scientific interest, language is accessible in depth without the aid of complex technical apparatus or calculus-level mathematics. The basic data of linguistics - the movements of articulators, the pronunciation of forms, the acceptability and meanings of words, phrases and sentences, the felicity and “import” of expressions in a given context, the links between how we speak, where we come from and what communities we belong to (or are perceived to belong to) - can be accessed freely by any competent speaker or signer of a human language. As a result it becomes possible to proceed rather swiftly from data collection to the central intellectual processes of science: hypothesis generation, pursuit of evidence for or against a given hypothesis, the development of abstract models of speaker knowledge, etc.

Linguistics offers profound tools to navigate a multicultural, multilingual world!

Linguistics offers a natural medium for exploring sociocultural issues involved with regional, ethnic, racial, and economic diversity, as well as the skills and knowledge needed to be members of our increasingly multicultural and multilingual world. Attitudes towards certain groups of people often correlate with attitudes towards the languages and dialects they speak. Knowledge of dialect and language variation and the societally-determined attitudes associated with them are important for students in many different fields.

Linguistics offers critical tools and knowledge to students for the study of language! Knowledge of the sounds of languages, how the meaning and structure of words are related, how the grammars of languages may vary, differences in writing systems of the world, and the culture-relativity of language and how cultural differences are encoded by linguistic means, is extremely useful in advance or as a part of the study of any particular language, including English language arts, world languages, English for those for whom English is not the first language. It enables more proficient language-learning.

Linguistics provides an window into social interaction and social relations in society.

Language serves as a proxy for social relations of power and subordination in society, and is a primary mechanism for the implementation of discrimination and social injustice. The study of language in society thus provides as a basis for understanding social inequality and offers a tool for addressing issues of social justice in society manifested in language.

Linguistics offers a pathway into many exciting career choices!

The applications for those who study linguistics are now highly varied. Some of the more traditional paths include careers in education; editing, publishing, and journalism; the tech industry; marketing; language documentation and revitalization; forensic linguistics; polyglot jobs, including translator, interpreter, diplomat, or humanitarian aid worker; and a whole lot more. Computational and clinical linguistics, discussed above, are among the newest, exciting career paths that have opened up to linguists, with speech and language pathology ranked *U.S. News and World Report 100 Best Jobs of 2014* in the top 10 “best jobs”, with a projected job growth rate for audiology at 34% and for speech-language pathology at 19%.

Linguistics offers many opportunities for High School - University collaborations!

The presence of linguistics curriculum in high schools would significantly strengthen relations between high schools and universities. Sciences and humanities with curricular presence in the high schools have university internship and summer residence programs allowing secondary school scholars with strong interest in research to spend time on campus working in laboratories or on other research projects. There are many potential opportunities for collaborations of this kind within linguistics, in areas including language, literature, and culture, psycholinguistics, sociolinguistics, experimental linguistics, field methods, endangered languages, phonetics, corpus linguistics, clinical studies and computational linguistics. The University of Arizona's public outreach efforts provide an excellent model (McKee et al. 2015), as does the North American Computational Linguistics Olympiad (NACLO), which connects high school students to the field of linguistics with an annual competition of linguistic problem-solving held at schools around the country.

High School Linguistics courses can lead to college credit

The number of colleges/universities offering linguistics courses shows a steady rise. Figure-1 from the LSA (2017) shows the growth of BA linguistics degrees since the mid-90s. Rigorous linguistic courses in high school means students are well-prepared to enter what is clearly an expanding area of undergrad interest, and students can earn college credit for their high school work.

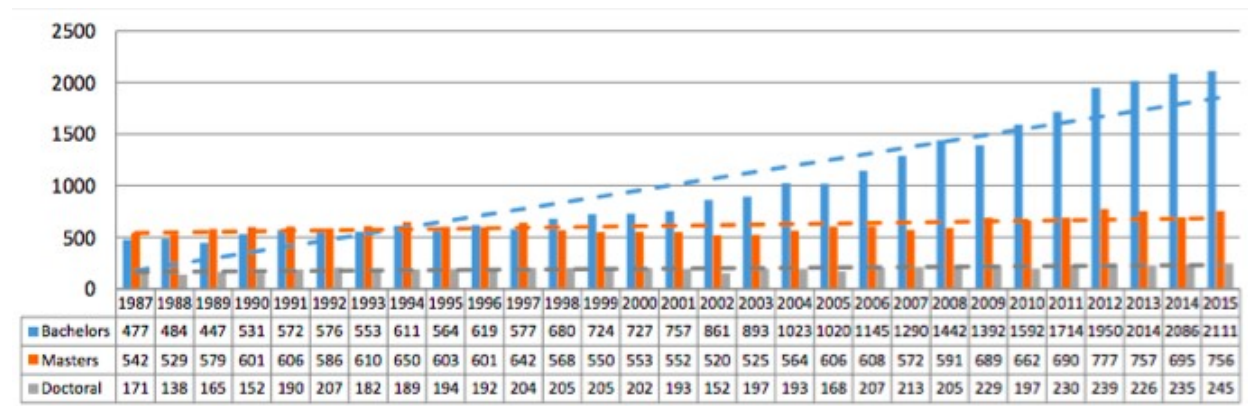


FIGURE 1 - TRENDS IN THE GROWTH OF LINGUISTICS DEGREES

3. How Can I Introduce Linguistics at the High School Level?

The Linguistic Society of America, the professional organization of linguists in America, recommends creation of a basic course introducing students to the scientific study of language and providing them with the opportunity to engage in a deeper study of language structure and use. The course offers a strong focus on the tools of linguistic analysis, which underlie the study of language in all its facets.

Course Content

The proposed course aligns with current introductory college level linguistics courses, which explore the following themes:

- Oral/sign (natural) language versus written language
- The sound system of language (phonetics & phonology)
- Word structure and etymology (morphology)
- Sentence structure (syntax)
- Word and sentence meaning (semantics)
- Language change over time (for example, the historical development of English)
- Language variation (variation based on region, ethnicity, gender, age, and other social factors.)
- Language endangerment, death, and revitalization

The course offers the following learning objectives and skills development:

- An understanding of the grammatical components of natural language
- Ability to think critically about language structure and use, and to apply inquiry-based tools to analyze language
- Awareness of the language as a dynamic system that varies over time and space
- Awareness of language variation and diversity in society
- Awareness of social attitudes about language (accent discrimination, linguistic stereotyping and profiling, etc.) and instrumental tools to challenge linguistic injustice. Understanding the reasons for language shift and the role of heritage languages and bilingualism across communities.

(See Appendix for recent survey results on the content of college level introductory linguistics courses in the US, and some standard textbook resources appropriate for such content.)

Teacher Qualifications

Teachers interested in offering a High School introductory linguistics course should have relevant background either in modern linguistics or a related area (e.g., language teaching, ESL, etc.).

Teacher Identification

As described above, Linguistics stands at the intersection of the sciences, social sciences, and the humanities. The pool from which potential High School linguistics course instructors might be drawn is correspondingly broad and inclusive.

Linguistics further opens a fresh empirical domain for scientific exploration in which students are exposed to experimental work without expensive equipment. Science teachers might find linguistics an attractive and engaging addition to their instructional portfolios.

Given the modern perspective on language as a central component of human cognition, teachers offering AP Psychology in a Social Sciences curriculum might well wish to explore offering a linguistics course. The University of Maryland outreach program reported in Lidz and Kronrod (2014) demonstrates the connectivity of Linguistics to AP Psychology and supports the contention that "[contemporary linguistics] offers an incomparable avenue to understand the nature of the human mind." (165).

Language is a core element of human identity and culture that social science teachers might wish to explore and develop. The success of the University of California at Santa Barbara's SKILLS program (<http://www.skills.ucsb.edu>) and North Carolina State University's North Carolina Language and Life Project (<https://languageandlife.org>) demonstrate the strong connectivity of linguistics to social sciences programs that embrace this view.

Many teachers of English or graduates of ESL programs that were offered within a linguistics department will already have had coursework in linguistics and will be well prepared to teach a linguistics course. The successes by Ginsberg, Honda and O'Neil (2011) and Honda, O'Neil and Pippin (2010), O'Neil (2010), Roh (2010) show the centrality of linguistics to English and ELL classrooms.

Many modern and classical language teachers will have had prior coursework in language structure and grammar involving the key concepts and tools of modern linguistic analysis. A recent Latin-Linguistics Workshop at Stony Brook University (<https://www.stonybrook.edu/llw/>) demonstrated strong interest among NY-area Latin teachers is expanding their departments to include linguistics, bridging a classical humanities subject and STEM education.

Finally, computer science teachers with an interest in the computational areas mentioned earlier - searching texts quickly and efficiently for meaningful and relevant associations of data, automatic translation of texts between languages, conversion of spoken text into written text and vice versa, cryptanalysis - might well wish to offer the fundamentals of the science that underlies these applications.

Teacher Training

The High School Linguistics Initiative is planning workshops and other professional development opportunities for interested teachers. There are tentative plans for a summer workshop in 2020 to be held in Bellingham, Washington. Other opportunities are in development elsewhere in the country.

The Linguistic Society of America is actively discussing the possibility of a regular course for High School teachers at its bi-annual LSA Summer Institutes.

Stony Brook University is actively discussing development of an on-line course for High School teachers "Teaching Introduction to Linguistics in High School" which would introduce both the subject matter and its pedagogy.

4. How Do I Create and Launch a High School Linguistics Course?

Linguistics is not a subject matter that students are typically aware of at the High School level. Hence introducing a High School Linguistics course “from scratch” generally requires some preparatory work. The main steps are building student interest and finding teacher support, especially in the early years of the course.

Building student interest

Nuclei of student interest often take the form of school clubs. Many school clubs are organized around competitive events, or make the latter part of their activities. Math clubs are involved with Mathlete competitions; science clubs are involved with science fairs or science talent search competitions, like that run by Siemens, Latin clubs are involved with Certamen contests, etc. A counterpart linguistics competition that can be the basis of student interest in Linguistics is the the **North American Computational Linguistics Olympiad (NACLO)**. As NACLO's official website (<http://www.nacloweb.org>) states: “The North American Computational Linguistics Olympiad is a contest in which high school students solve linguistic puzzles. In solving these puzzles, students learn about the diversity and consistency of language, while exercising logic skills. No prior knowledge of linguistics or second languages is necessary. Professionals in linguistics, computational linguistics and language technologies use dozens of languages to create engaging problems that represent cutting edge issues in their fields. The competition has attracted top students to study and work in those same fields. It is truly an opportunity for young people to experience a taste of natural-language processing in the 21st century.” The NACLO exam is offered every January and consists of an open round, and invitational round and a final round. Finalists compete at international venues like Dublin and Beijing. Student reaction to NACLO has been very enthusiastic and participation in NACLO is growing every year. We have found that NACLO can be a very effective nucleus for student and teacher interest in linguistics.

Establishing Teacher Support

Creation of any new course subject involves a learning curve for teachers, which may be steep in the initial offering. High School teachers interested in developing a linguistics course can find support for their efforts both in collaborative relationships with university programs and through professional relationships with the Linguistic Society of America (LSA), the professional organization of linguists in America.

Once a high school has identified a potential Linguistics teacher, there are ample possibilities for partnering with a local college or university linguistics program on course development and support. The AP Linguistics Committee of the LSA (<https://www.linguisticsociety.org/news/2016/09/09/lisa-establishes-committee-ap-linguistics>) can match up your school with local college and university faculty who would be delighted to support your efforts. Support can include advice on curriculum development, sample syllabi, suggestions on equipment, suggestions on in class activities, guest lectures, campus visits to college and university laboratories, referral for student questions and research project suggestions, student internships, etc. Further, teacher instructional workbooks that accompany student materials can provide essential instructional support for instruction.

Partnership efforts are currently underway in various locales. In Fall 2017 Ward Melville High School began a partnership with Stony Brook University Linguistics Department faculty to offer a new course THE SCIENCE OF LANGUAGE in Fall 2018. Stony Brook faculty are collaborating in Summer 2018 to develop the curriculum and plan the class activities.

Finally, high school linguistics teachers can become part of a national effort and conversation. The LSA has recently created a category of membership allowing K-12 teachers to become association members free of charge. This permits them to participate in LSA annual meetings, where developments in introducing linguistics in K-12 are now under active discussion. For example, the 2019 LSA annual meeting in NYC will featured a datablitz session entitled "The Teachers are Here: Promoting Linguistics in High School" organized by seven US high school teachers (Teaira McMurtry, Amy Plackowski, Andrew Bergdahl, Abraham Leach, John Van Way, Victoria Maria, and Suzanne Loosen).

5. What are the Results of Linguistics in High School?

Prior U.S. experiments aimed at introducing linguistics into the high school curriculum have been tested and validated.

The SKILLS program, mentioned earlier and initiated by the University of California Santa Barbara in 2010 “prepares and motivates California’s public school students for higher education by giving them hands-on experience in studying language and culture”. SKILLS curriculum units focus on language in the peer group, language in the family, language in the local community and language in the world. This curriculum has been successfully implemented in one-semester elective social studies classes, in after school programs and in college prep classes in Santa Barbara area high schools.

Lidz and Kronrod (2014) describe a program by language scientists at the University of Maryland to introduce linguistics as a component of existing AP Psychology classes in local high schools. This outreach was initiated in 2007 with Northwood High School (Silver Spring, MD), a school with a large minority population (approx. 70%), and was later extended to an area math–science Magnet High School (Montgomery-Blair High School). The program has successfully expanded since inception to include faculty and grad students from a broad range of backgrounds (Biology, Computer Science, Education, Electrical Engineering, Human-Computer Interaction, Human Development, Linguistics, Philosophy, Psychology, and Second Language Acquisition). Reaser and Wolfram (2007) offer curriculum on language diversity via a state-adopted curriculum for social studies courses that show significant change in attitudes about language differences along with the significant gain of knowledge about language patterns.

Loosen (2014) describes creation and delivery of a one-semester introduction to Linguistics course for 10th-12th graders at the Milwaukee School of Languages. Ian Connally teaches a year-long linguistics course at Paschal High School in Fort Worth, Texas, and is partnering with Kristin Denham and Anne Lobeck of Western Washington University to develop courses and workshops to prepare teachers to integrate linguistics into the curriculum. Loosen writes about her experience teaching linguistics in high school in her article “High school linguistics: A secondary school elective course.”

(https://www.linguisticsociety.org/sites/default/files/07e_90.4Loosen.pdf).

Selected comments from students who took Loosen’s linguistics class (pp e270-271):

James W.: “Linguistics is one course like no other I ever had a chance to take. Most courses have a decent amount of information to cover but it does always have its limits; however, linguistics touches everything and is involved in any and every possible topic. As long as information can be said, written, or expressed by a person, it is a linguistics subject.”

Janney D.: “The way babies are born with the ability to just absorb language without needing to be taught is amazing to me. Reading about the stages of language acquisition was fun because I have a lot of little cousins, and when I’m with them now I can notice them going through them. I also tested some of the facts we learned.”

Brad R.: “It was very interesting to learn how society and culture affect language and how people communicate. Depending on your social class or role, your dialect will be different from someone else. It’s also affected by your race or background as well; all people in every part of the world have different dialects and idiolects even if they speak the same language.”

Valentin G.: “Linguistics has made me more interested in learning new languages and has also made it easier than before. Language is so important because it’s like a key to the world. Everybody should know about linguistics, and I for myself, cannot get enough of it.”

Gianna D.: “I believe studying Linguistics is important because unlike the traditional subjects of math or history, it is something completely foreign that most of us lack any knowledge of. It introduces us to a whole new perception of language itself and gives us an appreciation of the complexity that language is. Every day there is something new to learn; the pacing never stops. I remember being fascinated by the amount of linguistic observations that occur overnight or in a discussion, and then being even more fascinated by trying to discover patterns in how and why we do what was observed. That’s one of my favorite parts of linguistics—being able to apply it to real life. ... I think it’s safe to say everyone should study linguistics. It’s a humbling experience because you never realize how ignorant you might’ve been in such a crucial subject.”

As these student reactions illustrate, learning about linguistics opens their eyes to concepts and ideas they are not typically exposed to in other classes, concepts and ideas that apply to daily life in a wide variety of different ways.

6. What is the Future of High School Linguistics?

AP Linguistics

In May 2016, the LSA, began efforts to prepare a proposal to the College Board (CB) for creation of an AP Linguistics course and examination (<https://www.linguisticsociety.org/news/2016/09/09/lisa-establishes-committee-ap-linguistics>). AP Linguistics, as currently envisioned, will parallel an college-level introductory linguistics course in content and will earn college credit at participating institutions. The High School linguistics course described in this document corresponds closely to the eventual AP course envisioned, and would constitute AP Linguistics “pre-cursors”. Hence schools electing to develop a High School linguistics offering will be extremely well-positioned to take advantage of the new AP Linguistics offering in the very first year that it is offered

IB Linguistics

The AP Linguistics Committee has plans to approach the the International Baccalaureate® (IB) about potential development of an IB Linguistics course within its internationally recognized and educationally acclaimed curriculum.

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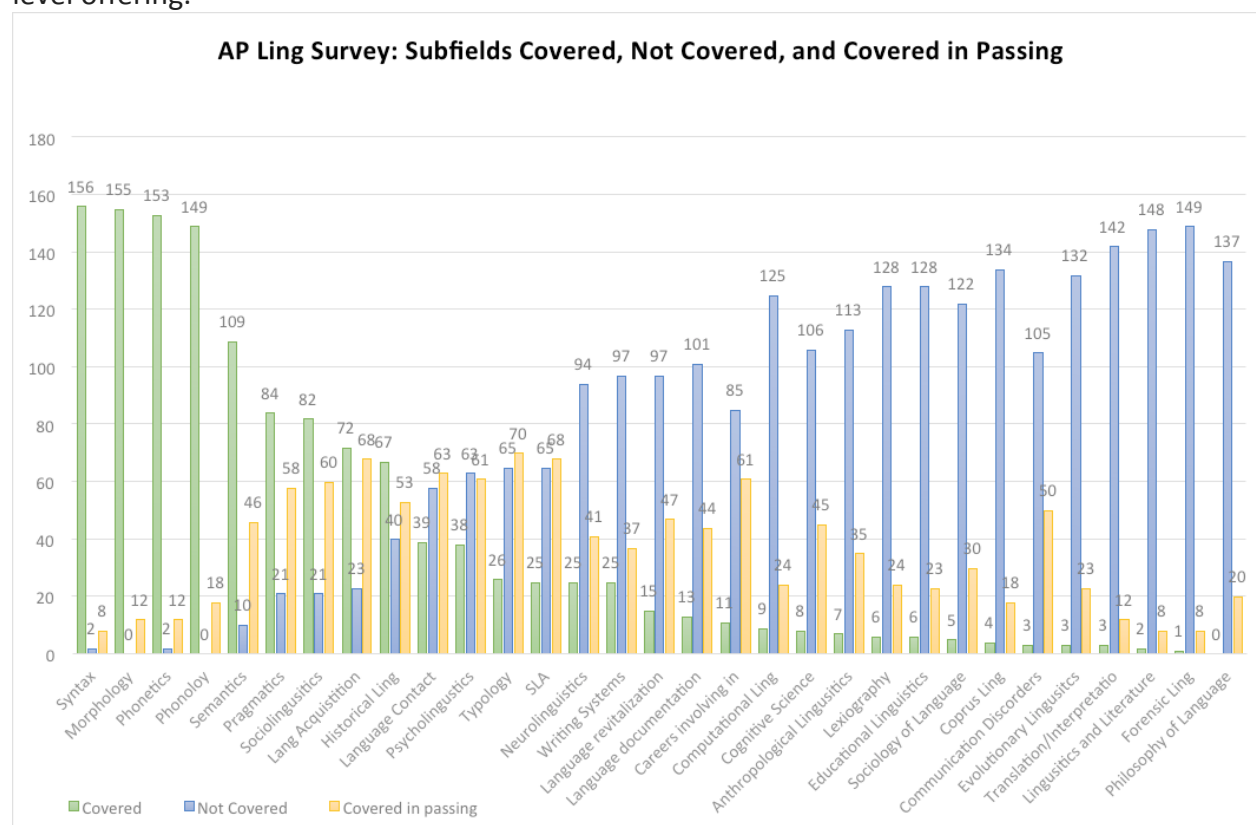
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9. Appendix: College Intro Linguistics Course Content and Resources

In Spring 2018, the *Linguistics in Higher Education Committee* (LiHEC) of the LSA conducted a survey of introductory linguistics course content at US universities and colleges. The following graph plots the frequency of areas covered, not covered and covered in passing. This data provides useful guidelines for a High School level intro course that would approximate a college level offering.



Textbooks:

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- <http://highschoollinguistics.blogspot.com/>