# The Impact of Language Requirement on Students' Performance, Retention, and Major: PHASE 1

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# **OUR QUESTIONS**

- 1. How do language and culture studies affect students' performance? (HIP Practices)
- 2. How to increase students? interest to continue language studies (e.g., minoring in Spanish)?
- 3. How do study abroad and language learning affect students' career?

### **High-Impact Educational Practices**

	Deep Learning	Gains: General	Gains: Personal	Gains: Practical
First-Year				
Learning Communities	+++	++	++	++
Service Learning	+++	++	+++	+++
Senior				
Study Abroad	++	+	+	++
Student–Faculty Research	+++	++	++	++
Internships	++	++	++	++
Service Learning	+++	++	+++	+++
Senior Culminating Experience	+++	++	++	++

+ p<0.001, ++ p<0.001 & Unst<br/>d B > 0.10, +++ p<0.001 & Unst<br/>d B > 0.30

Figure: Relationships between Selected High-Impact Activities, Deep Learning, and Self-Reported Gains

# Our Data

- 1. Institutional data: Courses, Majors, Student Attributes, Retention
- 2. IPEDS: The Integrated Postsecondary Education Data System
- 3. EMSI: Labor Market Analytics

## **OUR WORKFLOW**

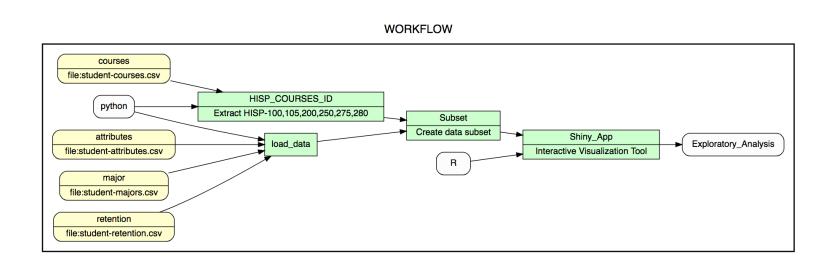
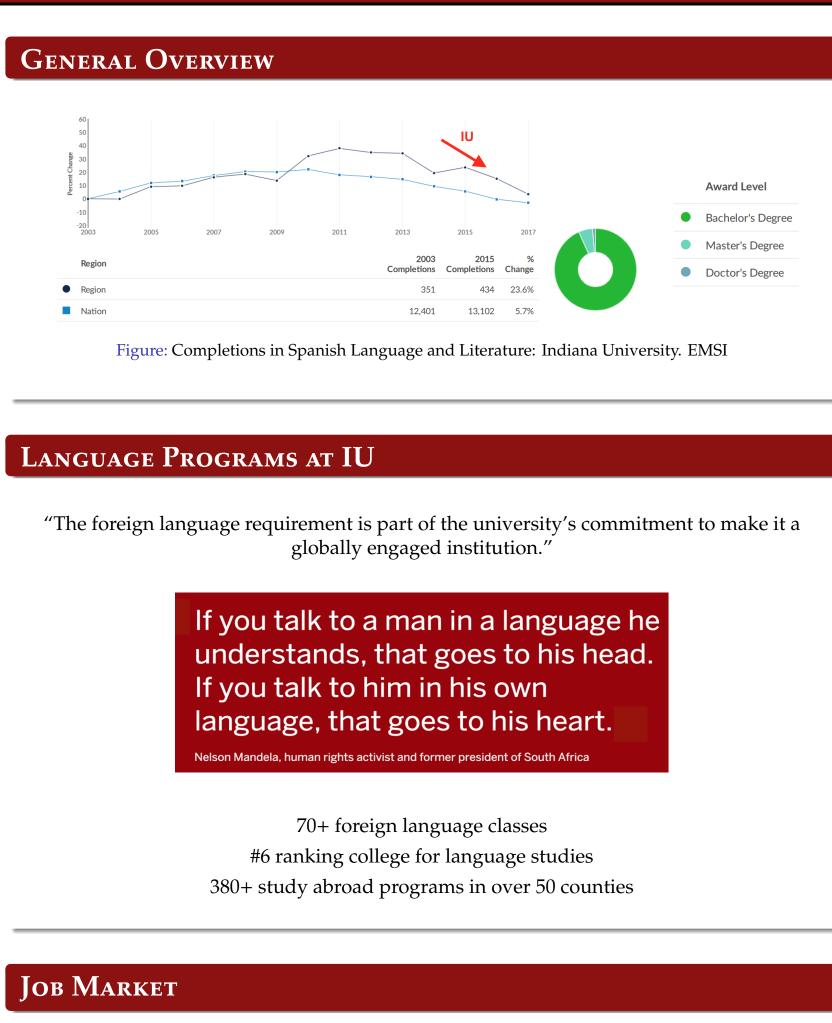
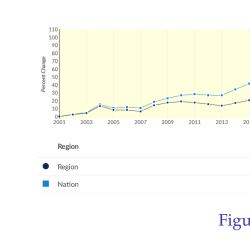


Figure: Data Preprocessing and Tools for Analysis





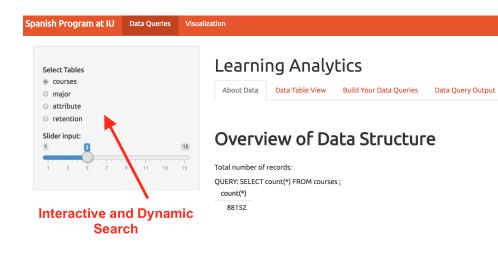
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------Gender Indiana Males Females 2018 Jobs Change Change 3,617 4,732 1,115 30.8% 227,195 359,687 132,492 58.3% Figure: Target Occupations: Interpreters

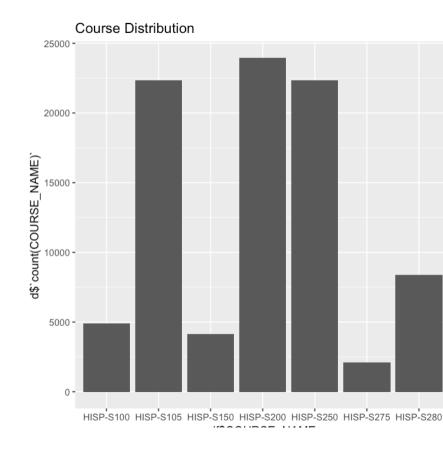
# **INTERACTIVE WEB APPLICATION**

Building a prototype for Interactive Learning Analytics Data Visualization, using the Shiny web framework and R programming language.



### Spanish Program at IU Data Queries Visualization

	COURSE_NAME	count(COURSE_NAME)
Courses	HISP-S100	4889
Majors Retention	HISP-S105	22326
	HISP-S150	4148
	HISP-S200	23938
Attribute	HISP-S250	22356
	HISP-S275	2116
	HISP-S280	8379



### ACKNOWLEDGEMENT

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