

A Comparative Text Analysis between the NCLB of 2001 and ESSA of 2015

Group D

Presentation Outline



Context of NCLB & ESSA



Theme Changes in the Acts



Media coverage of the
implementation of each act

Context of the Two Acts

- Origin: Elementary and Secondary Education Act of 1965 (ESEA)
- **No Child Left Behind Act of 2001 (NCLB)**
- **Every Student Succeeds Act of 2015 (ESSA)**

Research Questions:

1. What are the thematic topics in the NCLB of 2001 and the ESSA of 2015, and how are they different?
2. How are the topics in the two acts reflected by the media reports?

Methods

Data:

- Two federal educational acts & news coverage

Methods:

- Sentiment analysis and topic modeling in R

Word Frequency

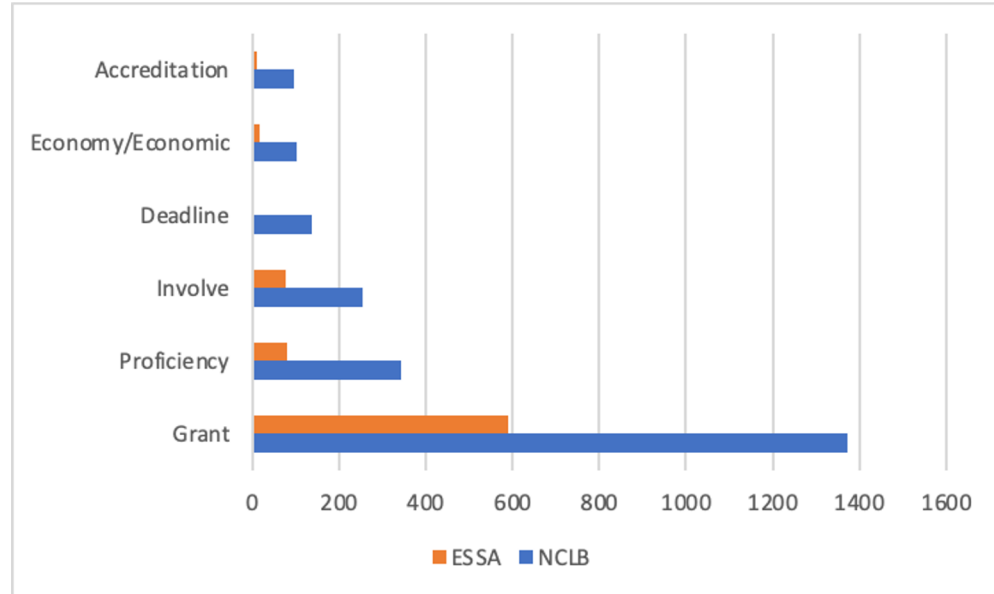
Common keywords:

- Education, school, agency, state, local, student, assess, etc.

Word Frequency

More Frequent in NCLB:

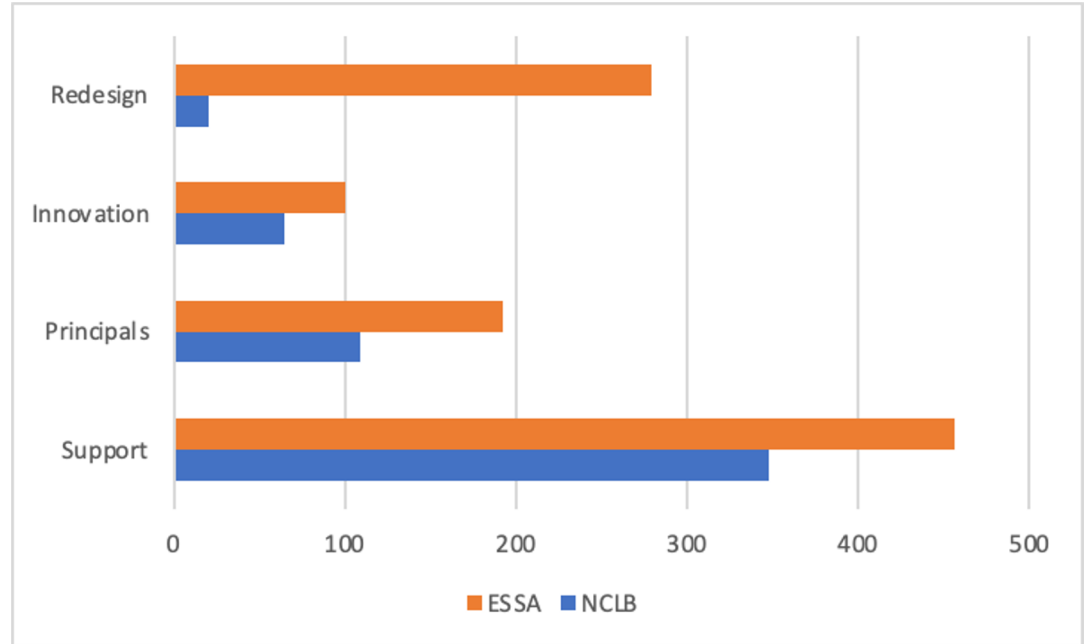
- grant (1374 versus 591)
- proficiency (341 versus 80)
- involve (253 versus 77)
- deadline (135 versus 3)
- economy/economic (103 versus 17)
- accreditation (94 versus 9)



Word Frequency

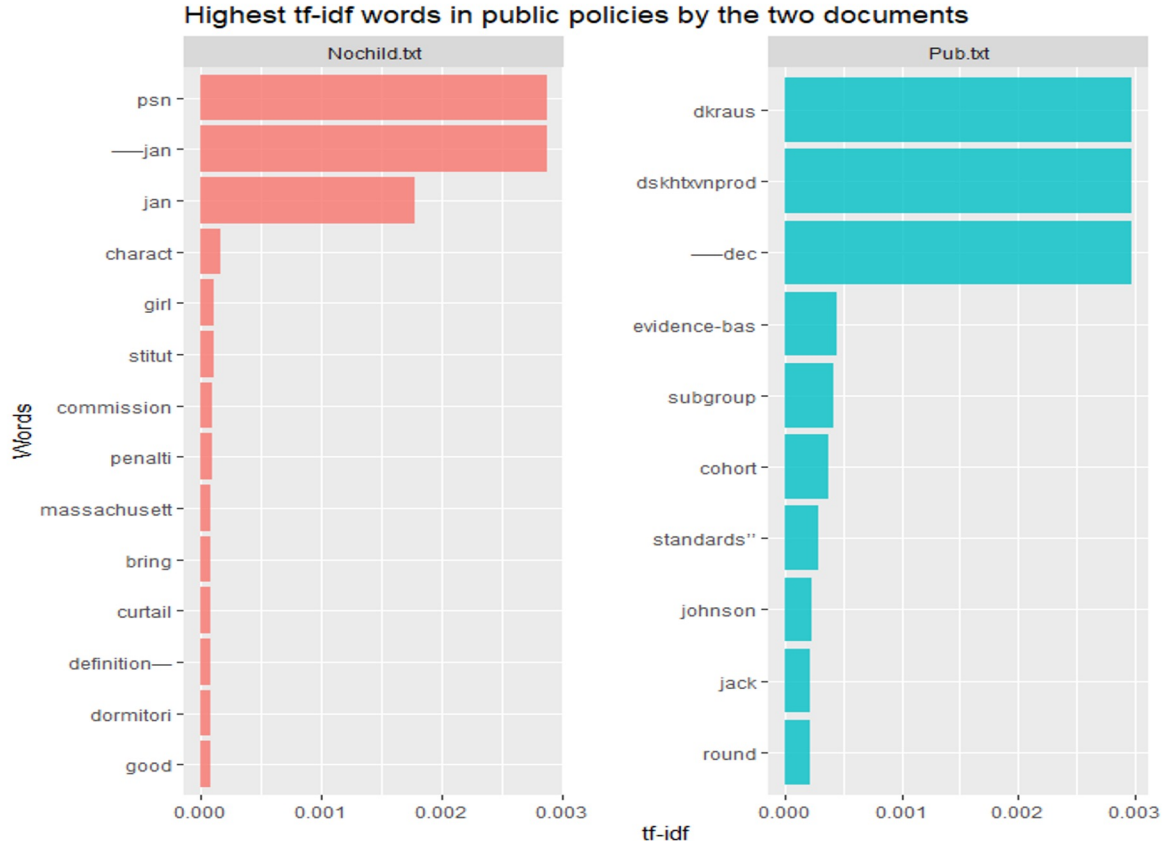
More frequent in ESSA:

- support (456 versus 348)
- principals (192 versus 109)
- innovation (100 versus 65)
- redesign (279 versus 20)



Most common words by weight in the two documents

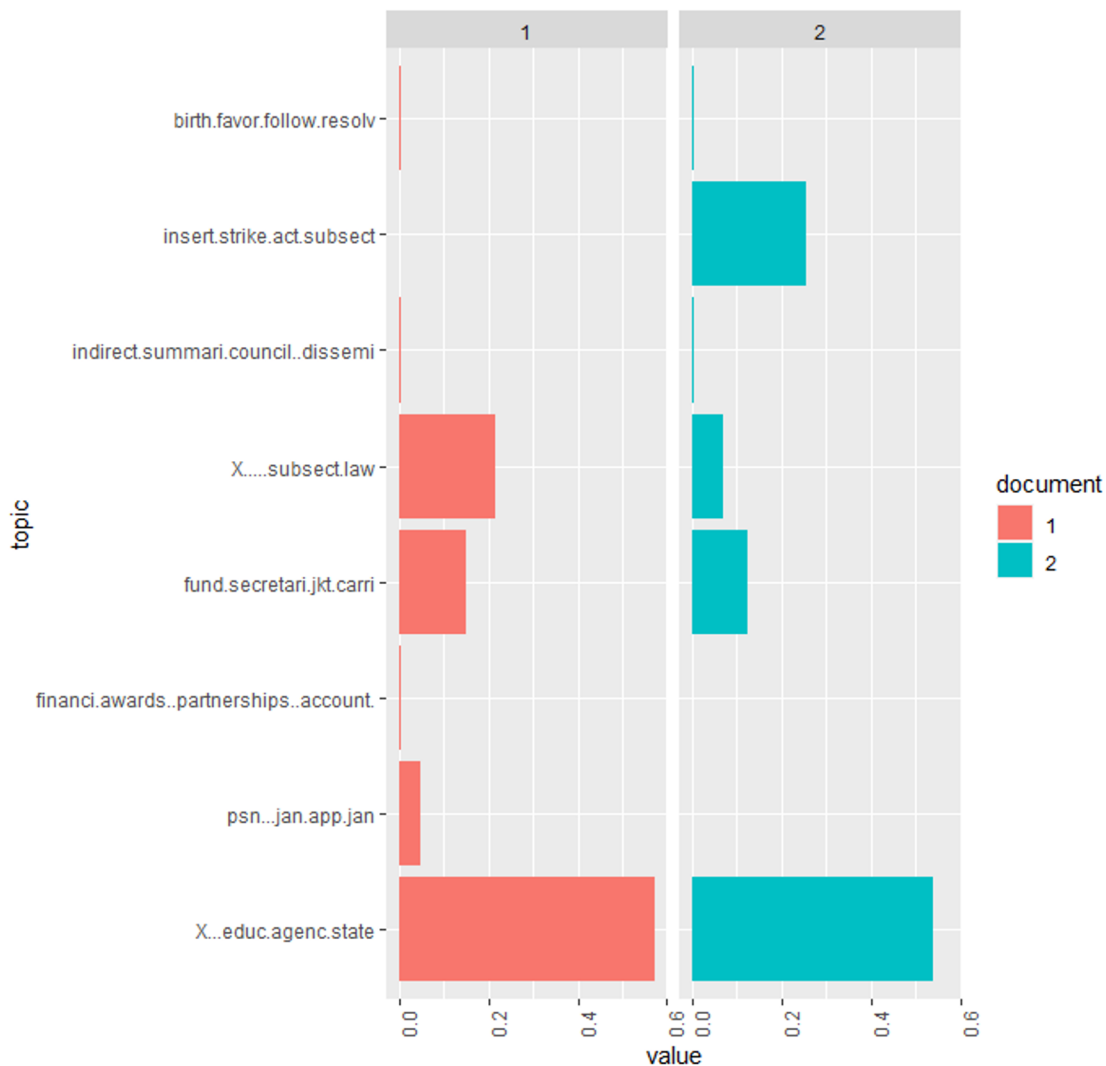
- **Google:** TF-IDF (term frequency-inverse document frequency) is a statistical measure that evaluates how relevant a word is to a document in a collection of documents.
- Interesting to see the focus on “girl” in the No Child Left Behind Act
- While the Every Student Success Act focused on evidence-based/ standards



Topic Modelling (cont.)

Identical distribution:
Topic 1, 6 and 8

Different distribution:
Topic 2, 3, 4, 5, and 7



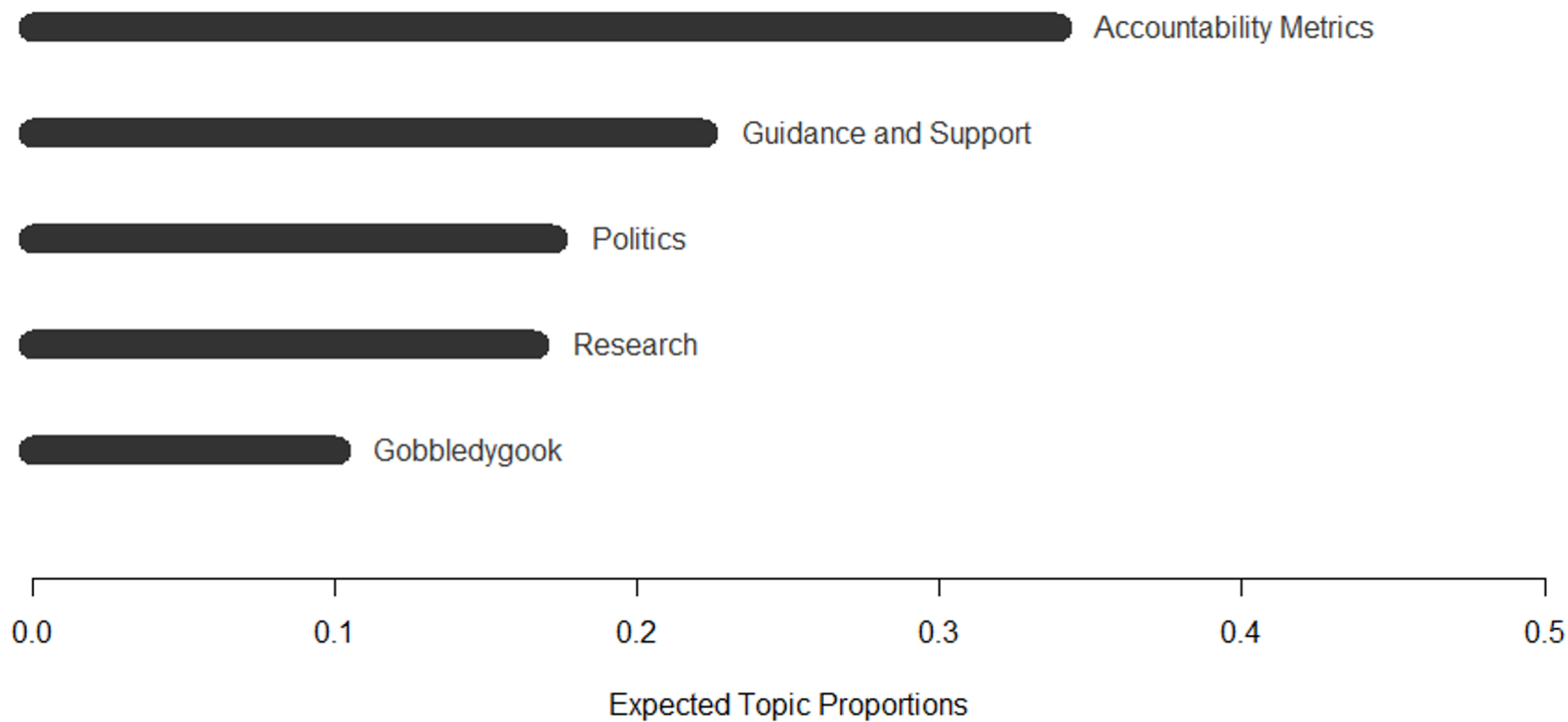
Topic Modelling for the two policies

	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7	Topic 8
[1,]	"'"	"psn"	"financi"	"fund"	"'"	"indirect"	"insert"	"birth"
[2,]	"educ"	"--jan"	"awards--"	"secretari"	"--"	"summari"	"strike"	"favor"
[3,]	"agenc"	"app"	"partnerships--"	"jkt"	"subsect"	"council'"	"act"	"follow"
[4,]	"state"	"jan"	"account--"	"carri"	"law"	"dissemi"	"subsect"	"resolv"
[5,]	"school"	"board"	"faculti"	"serv"	"secretari"	"drug-fre"	"'"	"withdraw"
[6,]	"section"	"deadlin"	"reallot"	"author"	"program"	"food"	"--"	"low-incom"
[7,]	"local"	"bureau-fund"	"show"	"assess"	"develop"	"attract"	"section"	"burden"
[8,]	"program"	"left"	"allocation--"	"indian"	"subpart"	"categori"	"mar"	"complianc"
[9,]	"student"	"govern"	"apply'"	"inform"	"children"	"entir"	"paragraph"	"defens"
[10,]	"public"	"scientif"	"area'"	"number"	"teacher"	"forc"	"secondari"	"face"

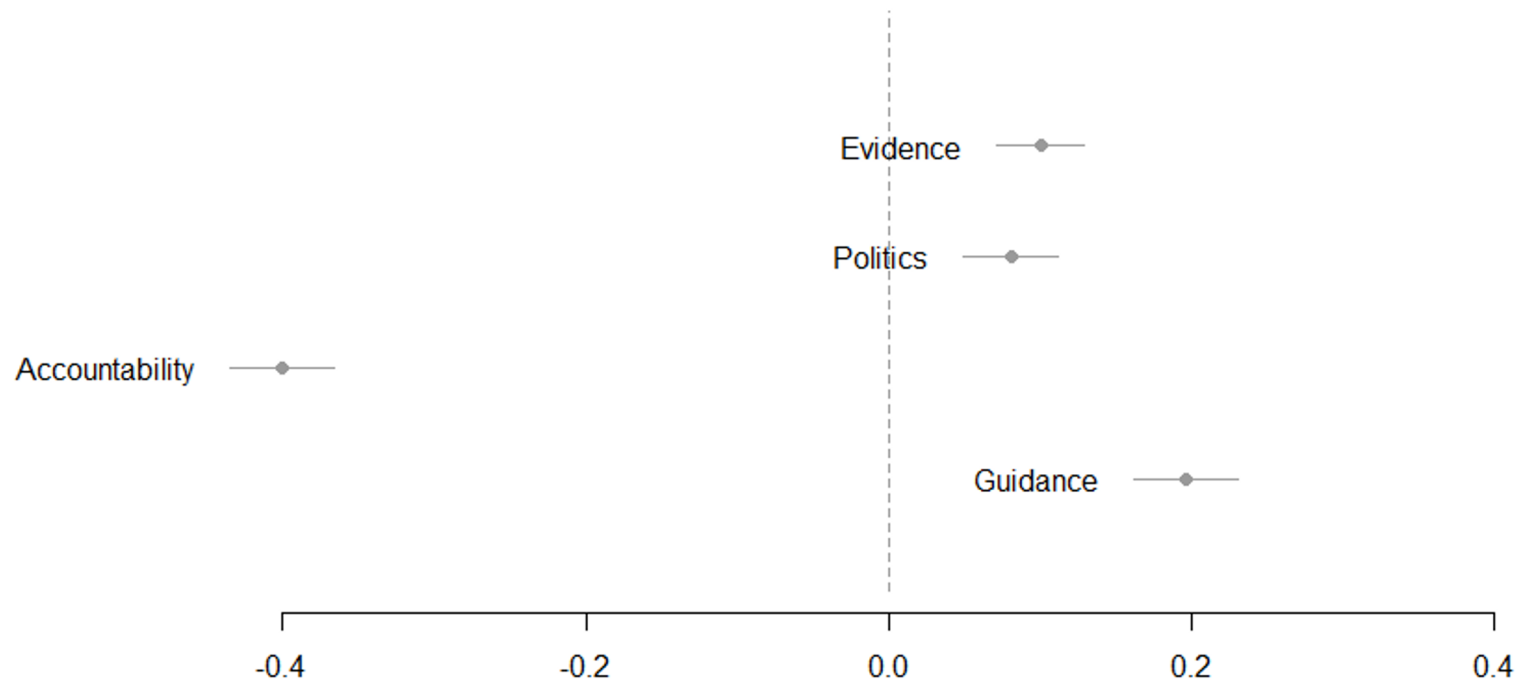
Topic Modeling of Media Coverage

Topic	FREX Words (selected)	Top Words (selected)
RESEARCH	research, science, data, studies, learner, classroom, skill	school, student, teacher, program
GOBBLEDYGOOK	search, narrow, web, site	news, usa
POLITICS	campaign, trump, elect, vote, budget, union, republican, democrat, clinton	state, us, year, teacher
ACCOUNTABILITY METRICS	fail, score, test, exam, low performing, grade, must, transfer, parent, option	school, test, student, district, federal, standard
GUIDANCE & SUPPORT	flexible, account, department, guidance, advisor, state, waiver, ensure	federal, system, education, district, plan, standard

Topic distribution



Relative topic distribution in news coverage of ESSA compared to NCLB



Conclusions and Implications

1. Consistent requirements about high-stakes testing
2. More emphasis on local initiatives and innovations
3. Call for more equitable education with students of diverse backgrounds