

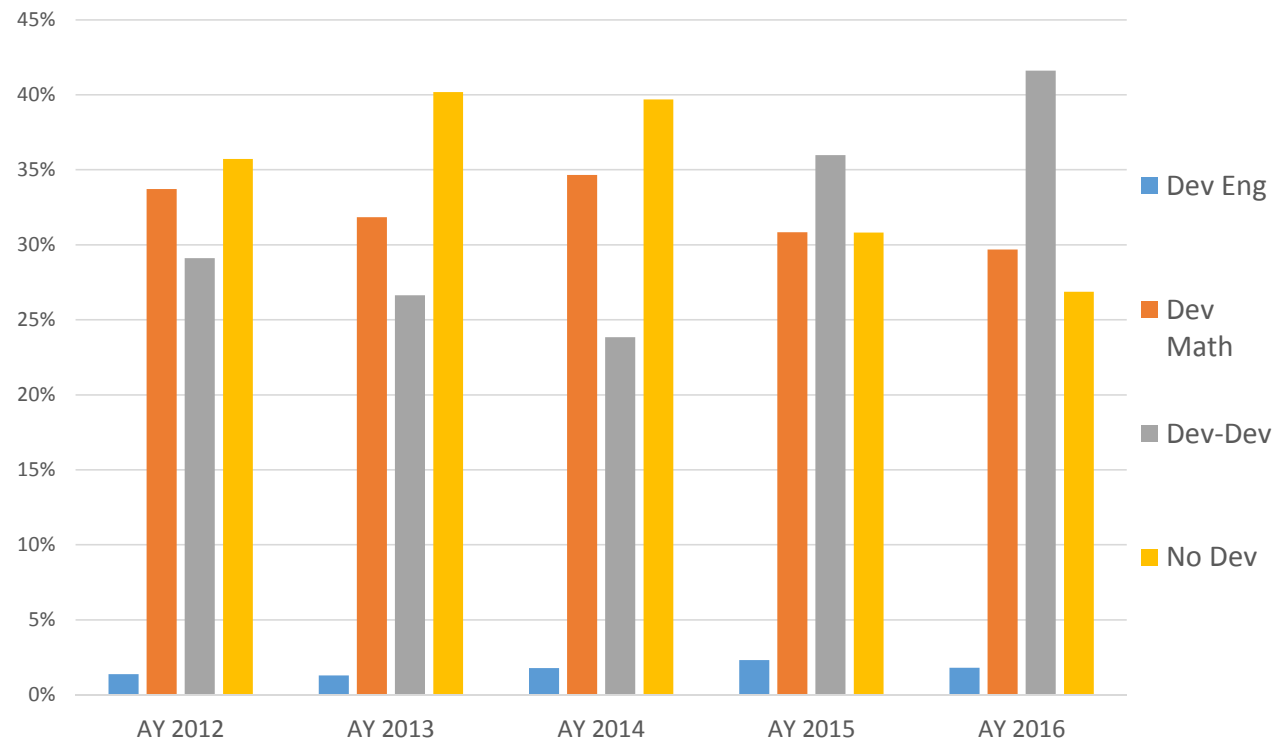
Wildcat Scholars:
Designing a Curriculum to
Support Academically
Underprepared Students

INTRODUCTION

- I wear multiple hats at Weber State
 - I am an *university administrator* who is concerned about student success
 - I am a *psychology researcher* who studies human development
 - I am a *psychology faculty* who teaches in the psychology department
- All these hats have been necessary in addressing WSU's most vulnerable students – those who are fail to persist!
- Today's presentation will address:
 - Identifying WSU's most vulnerable students
 - Exploring why they are vulnerable
 - Creating a program to help them be successful

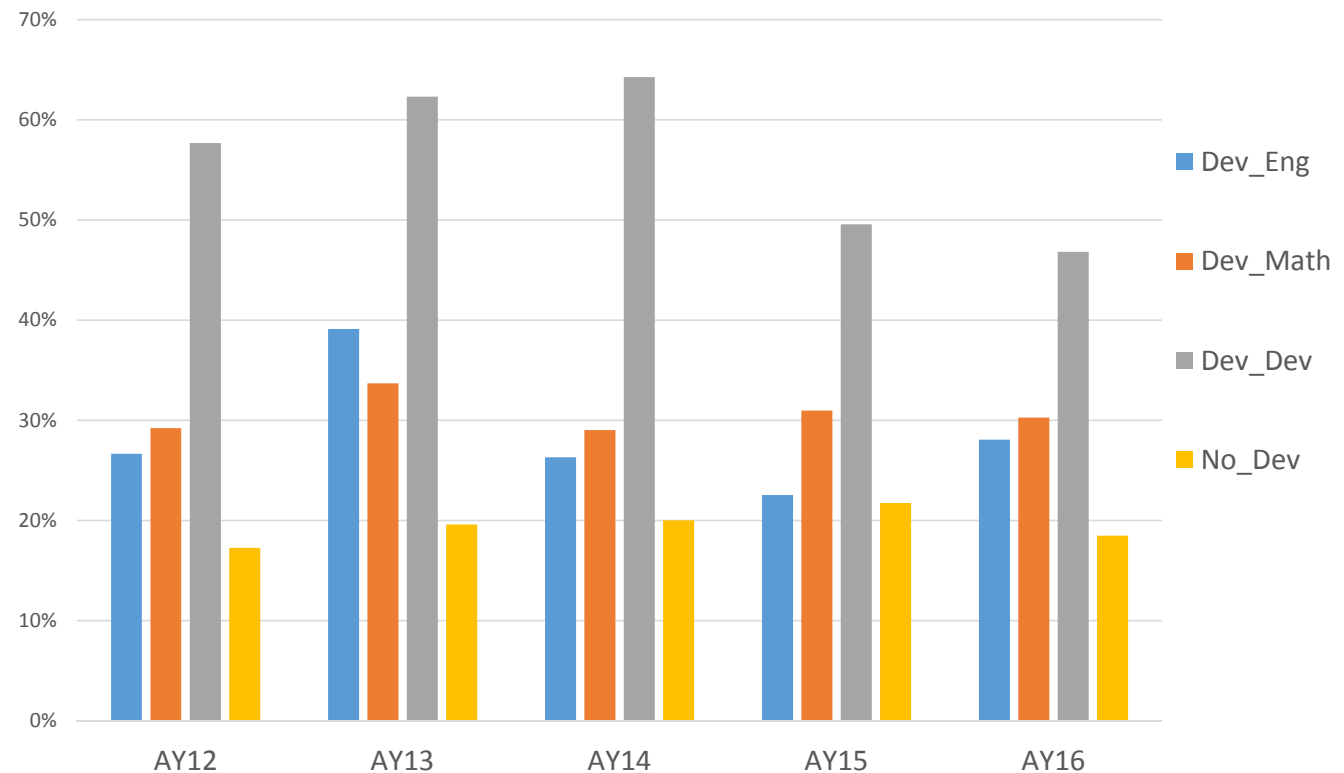
IDENTIFYING WSU'S VULNERABLE STUDENTS

- Vulnerable students are those who...
 - begin struggling in their first semester.
 - are not retained a year later.
 - fail to graduate in six years.
- They come from one of four freshmen groups.



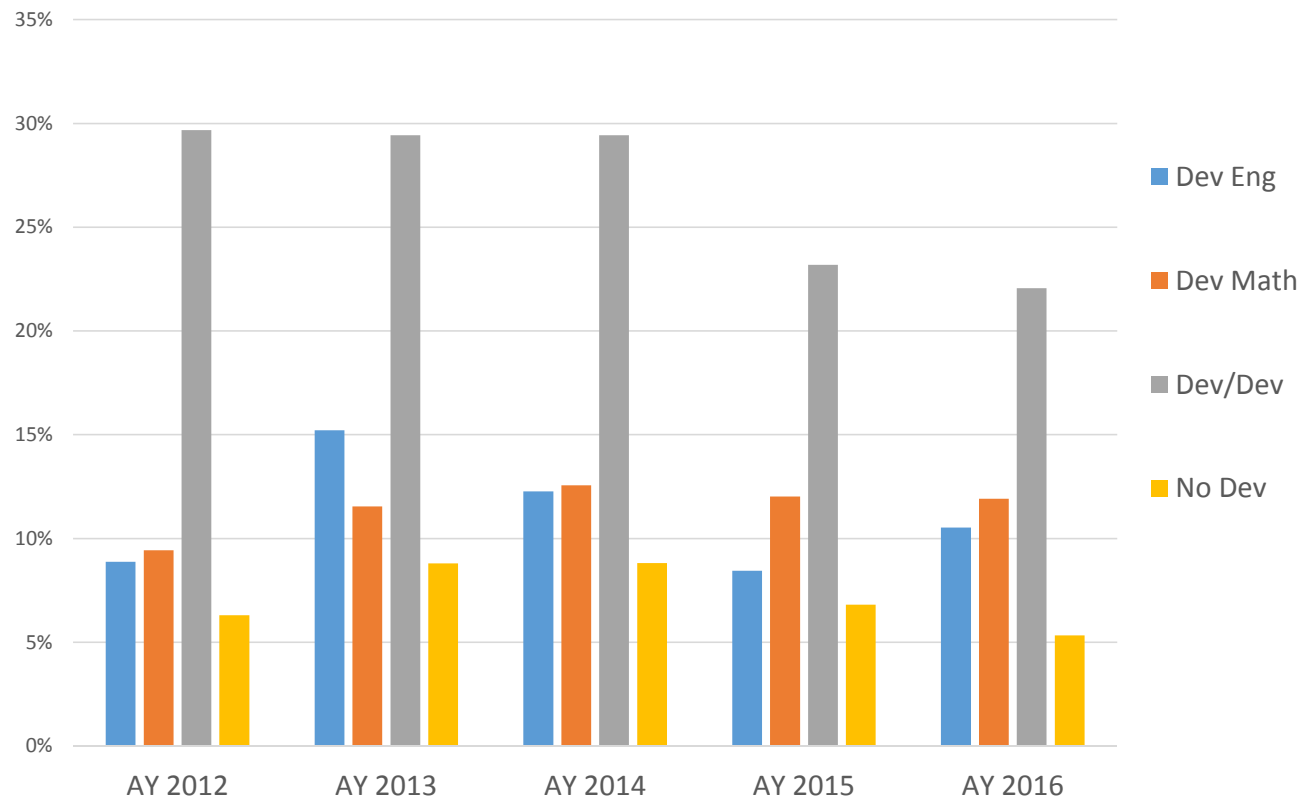
IDENTIFYING WSU'S VULNERABLE STUDENTS

- Percentage of students in each freshmen group who end their first term with an “at-risk” GPA.
 - The WSU “at risk” (GPA lower than 2.2) average for freshman is 40%.



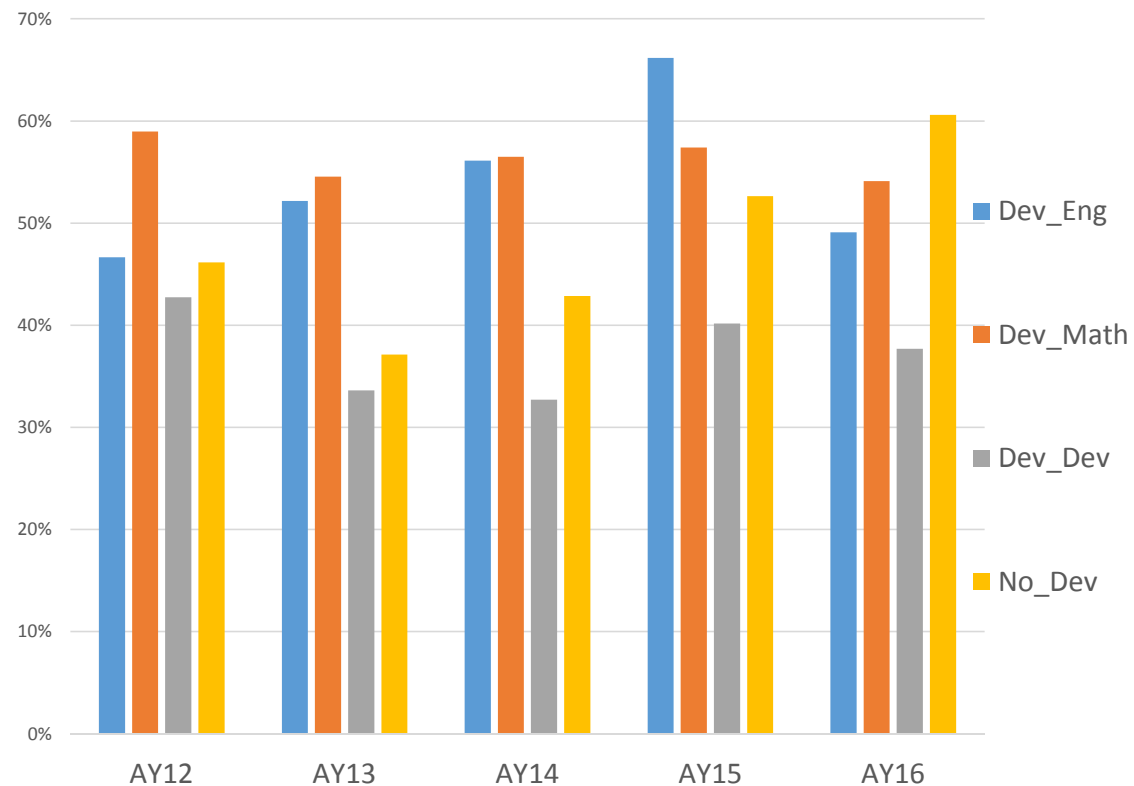
IDENTIFYING WSU'S VULNERABLE STUDENTS

- Percentage of students in each freshmen group who end their first term with a GPA of 0.00.
 - Many reasons for this!
- WSU average is 15%.



IDENTIFYING WSU'S VULNERABLE STUDENTS

- The percentage of students in each freshmen group who persisted the next semester.
 - Some students may have stepped- not dropped-out.
- Only 44% of Dev-Dev students are retained and 17% graduate in 6 years.



IDENTIFYING WSU'S VULNERABLE STUDENTS

- We know a little about the background of Dev-Dev students.
- They are not different in age and sex than other freshmen.
- Low income and ethnic minority students are over-represented.
 - A disproportionately higher percentage of low-income (59%) students are identified as Dev-Dev than others (41%) who enroll at the university.
 - About two-thirds of all ethnic minority freshmen entering Weber State are Dev-Dev, representing one-third of all Dev-Dev students.
- Dev-Dev placement predicts lower retention and graduation rates, independent of these and other demographic variables.

CHALLENGES FACING DEV-DEV STUDENTS

- Dev-Dev students are different than other students.
 - The Dev math and Dev English students seem fine completing developmental class (or classes) and moving on.
- But “double-dosing” Dev-Dev students doesn’t work.
 - They get distracted or discouraged and step out or drop out.
- Need for remediation in both areas may be a symptom of a deeper challenge facing these students in being learners.
 - It is too easy to dismiss these students as “not-college material” when in fact many successfully navigated high-school with respectable GPAs
- Two studies were designed to explore Dev-Dev students.

CHALLENGES FACING DEV-DEV STUDENTS

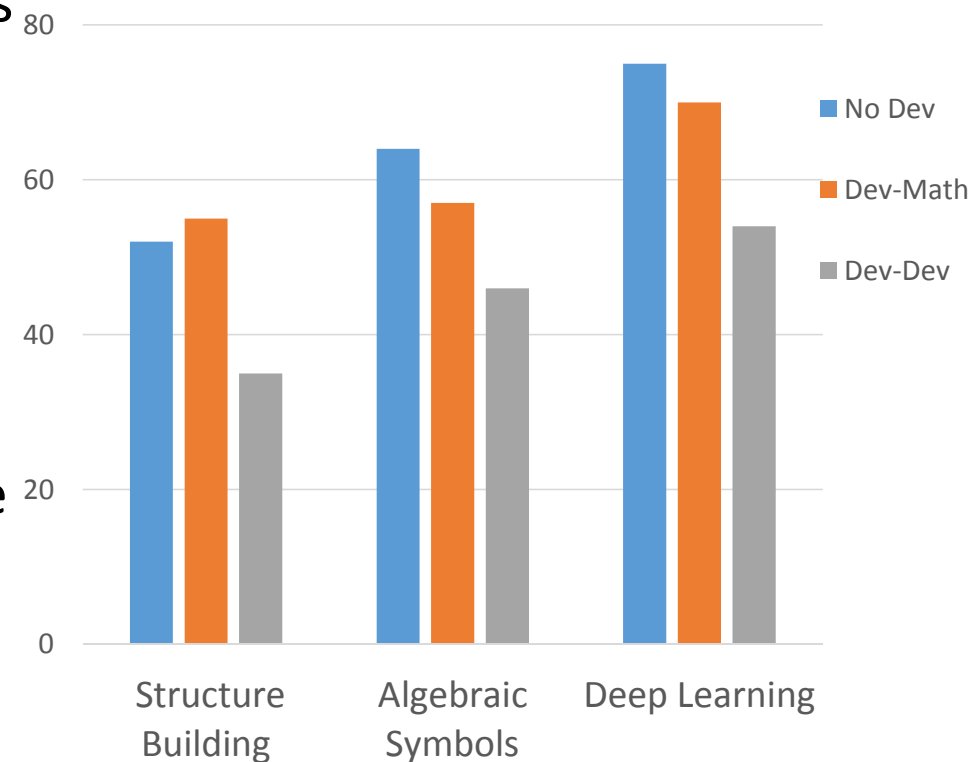
- Need for remediation in both areas may reflect them being *good students* but not *deep learners*
 - Dev-Dev students may have a challenge in moving beyond surface forms to entertain, manipulate, and reason about deeper symbolic meanings.
- Deriving deeper meanings of surface forms is critical as it may underlie cognitive and non-cognitive aspects of student success.
 - Cognitive: Acquiring the intellectual tools and skills to be successful in academic classes
 - Non-cognitive: Recognizing the (conflicting) identity, values, and habits to be successful in college

CHALLENGES FACING DEV-DEV STUDENTS

- We explored Dev-Dev students' struggle with understanding deeper symbolic meaning from surface forms in three key areas:
 - Structure Building: The creation and monitoring of story plot from narrative which is related to college course performance (Arnold, Daniel, Jensen, McDaniel, & Marsh, 2013; Martin, Nguyen, McDaniel, 2014).
 - Algebraic Symbols: Their grasp of the equal (=) and unknown (n) symbols which is related to math performance (Fyfe et al., 2017, Submitted).
 - Deep Learning: Motivation and strategies to derive, integrate, and apply meaning from information which is related to student success (Biggs, Kember, & Leung, 2001; Laird, Seifert, Pascarella, Mayhew, & Blaich, 2014).
- These challenges may reflect students' broader socio-cultural context which may not support an identity as "college ready."

CHALLENGES FACING DEV-DEV STUDENTS

- 116s FTF were recruited in two studies and were given combinations of the three measures.
 - No Dev: ($N = 45$)
 - Dev-Math Alone: ($N = 37$)
 - Dev-Dev: ($N = 34$)
- Performance on each measure was scaled to the percentage of total score
 - Post-hoc tests showed Dev-Dev students scored significantly lower than other groups on each measure.
 - Deep Learning correlated with the other two measures (r 's $.32 - .38$).



THE WILDCAT SCHOLARS PROGRAM

- We designed an experience which supported and empowered these students as deep learners.
 - Enrolled in a Gen Ed First Year Seminar course – *Cultivating your Future*
 - Course emphasized engaging, reflecting, self-regulating, planning, and leading
 - Write papers, blog experiences/reflections, perform service, work on ALEKS
- Students who had been accepted but not enrolled for fall 2016 in late August were invited to participate
 - 12 Experimental students (Wildcat Scholars, WS) accepted
 - 16 Control Student (CS) matched on background variables with Wildcat scholars.
- <https://vimeo.com/219766624>

THE WILDCAT SCHOLARS PROGRAM

- Compared to matched control students, “Wildcat Scholars” had:
 - higher math placement in spring than fall (66% vs. 6%)
 - higher first semester GPAs (2.63 vs. 1.84)
 - higher fall to spring persistence (100% vs 61%)
 - higher first-year cumulative GPA (2.47 vs. 1.97)
 - higher fall-to-fall retention rate (75% vs. 61%).
 - more full-time fall 2017 enrollment (67% vs. 44%)
- We are tried the program again this year!

THE WILDCAT SCHOLARS PROGRAM

- The Wildcat 2.0 program expanded the scope but not the size of the program
 - Access and Diversity helped identify 14 Dev-Dev students
 - ACT English and Reading scores between 16-14 (ENG 955 placement)
 - High School GPA above 3.0
 - Ethnic minority
 - Curriculum
 - Fall Freshman Seminar: Cultivating Your Future
 - Fall FYE: Foundations of College Success
 - Fall Co-requisite Comp: ENG 1010 and 1000 classes
 - Spring Freshman Research: Adulting 101
 - Spring Comp: ENG 2010

THE WILDCAT SCHOLARS PROGRAM

- The performance of Wildcat 2.0 group compared to three control groups
 - Accepted but not enrolled (August) Dev-Dev students w/ features of WS
 - Others students touched by D&O but not WS but w/ features of WS
 - Dev-Dev students who enrolled w/ features of WS

Background of Students

	n	Enrolled	% Females	Age	% Minority
Wildcat Scholars	14	14	36	18	86
Accepted not enrolled	20	3	55	18	90
WSU outreach	9	9	44	18	89
Enrolled with no outreach	41	41	41	18	98

THE WILDCAT SCHOLARS PROGRAM

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Fall Classes of Enrolled Students

	% in Comp	% in Math	GPA
Wildcat Scholars	100	ALEKS	2.75
Accepted not enrolled	33	33	1.82
WSU outreach	56	33	1.38
Enrolled with no outreach	49	44	1.37

THE WILDCAT SCHOLARS PROGRAM

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Spring Classes of Enrolled Students

	% Enrolled	Comp Placement	% Comp Higher	Math Placement	% Math Higher
Wildcat Scholars	64	4.0	100	1.8	56
Accepted not enrolled	33	1.0	0	1.0	0
WSU outreach	56	1.8	0	1.6	20
Enrolled w/o outreach	54	1.7	23	1.4	23

THE WILDCAT SCHOLARS PROGRAM

- No assumption that Dev-Dev students are deficient in symbolic understanding skills, although they are not practiced or valued.
 - Provided 26 Dev-Dev students with an alternative freshman experience to promote cognitive and non-cognitive aspects of student success.
- Compared to control students, the *Wildcat Scholars* had:
 - higher fall semester GPAs (2.69 vs. 1.61).
 - higher fall to spring persistence rates (82% vs 58%).
 - higher math placement among students who enrolled in the spring (61% vs. 14%).
- The WS program does not just support students, it accelerates their preparation.

WHAT I HAVE LEARNED

- Preparing students for college is a holistic endeavor
 - The focus must be on the whole student -- their identity, values, and goals -- not just their academic preparation, non-cognitive strategies, etc.
- Attention must be on students' assets and how they can leverage them in the service of their goals
 - Being ethnic minority, first-generation and low-income comes with values and norms – sharing, interdependence, and sensitivity to justice and fairness – which can be leveraged.
- Help students *navigate* not *acculturate* to higher education
 - They are not helped by inculcating new values into them which may drive them away from their cultural background.