



Gatekeeper Courses by Program: Ensuring Success and Equity for All

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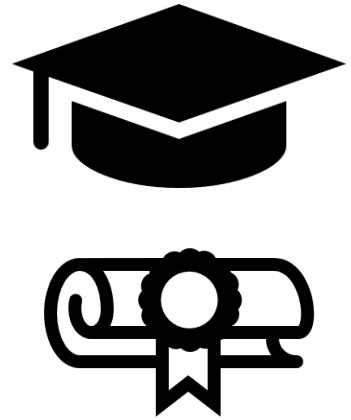
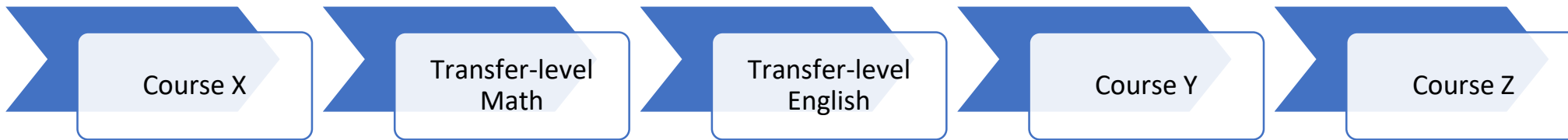
Poll

What is your role at your institution?



Completion of Program of Study

Degree / Transfer Students



Completion of Program of Study

Degree / Transfer Students



Historically: many students could not complete their program of study because they could not get through **transfer-level math** and/or **English** (inequitable placement practices, remediation, etc)

Overall Throughput Rates

Students

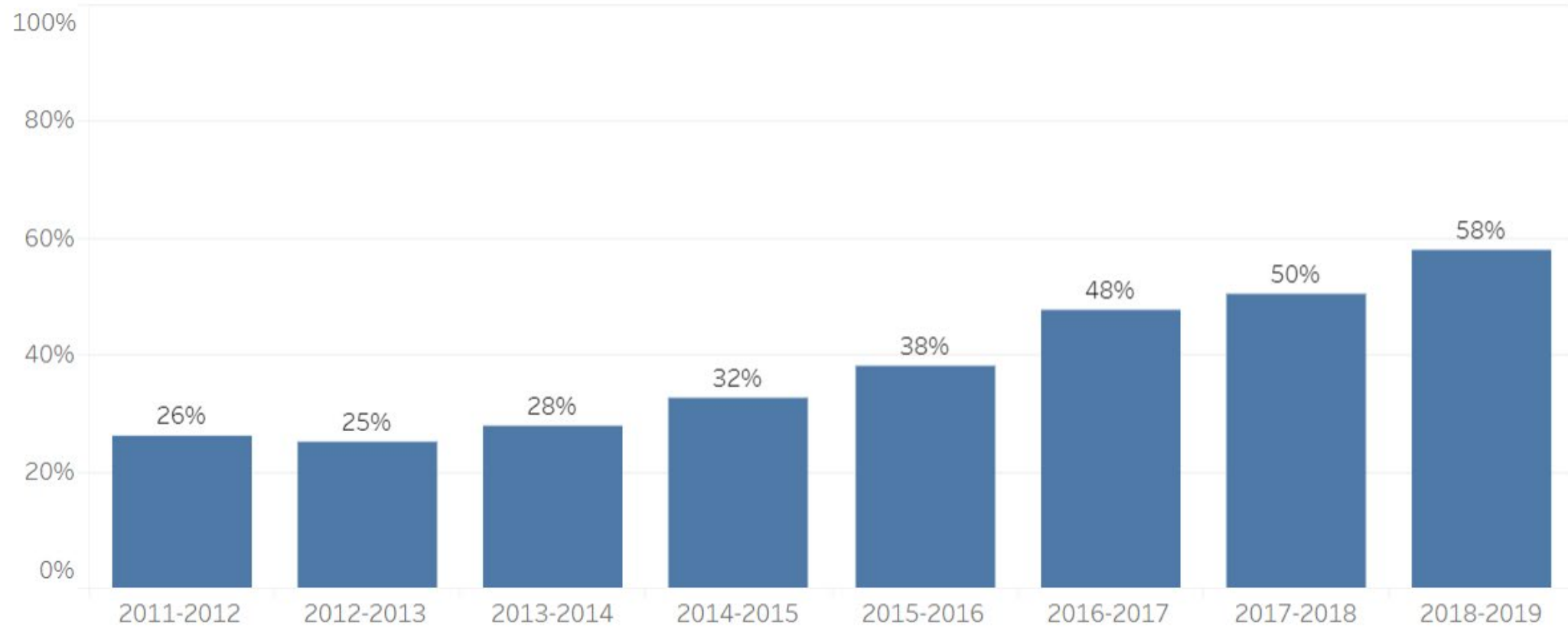
All Matriculants

Subject

Eng

Time Window

1-year from 1st Term



Changes: Acceleration, Placement Practices, and AB 705



Goal

Replicate gains of AB 705 for courses in other departments.

ACCT 204	ANTH 9	BIO 11	CHI 180	COMM 100	DMA 120	DNCE 33	DNCE 71	ENGR 54	ESL 363	GEOG 102	HD 231	HUM 3	IMA 96	KNES 3 A	LGL 206 B	MATH 3 AH	MUS 20	PHIL 11	PSYC 2	SOC 19	TA 17 A	WR 14
ACCT 205	ART 186	BIO 12	CHI 2	COMM 106 A	DMA 140	DNCE 34	DNCE 73	ENGR 7	ESL 364	GEOG 110	HD 232	HUM 4	IMA 98	KNES 3 B	LGL 208	MATH 3 B	MUS 20 H	PHIL 2	PSYC 20	SOC 2	TA 17 B	WR 181
ACCT 206	ART 191	BIO 12 D	CHI 3	COMM 106 B	DMA 160	DNCE 35	DNCE 75	ENGR 70	ESL 370	GEOG 12	HD 250	HUM 50	IMA 99	KNES 3 C	LGL 209	MATH 3 BH	MUS 21	PHIL 3	PSYC 3	SOC 20	TA 18	WR 182
ACCT 207	ART 40	BIO 121	CIM 103	COMM 106 C	DMA 175	DNCE 36	DNCE 77	ENGR 80	ESL 372	GEOG 2	HD 251	HUM 70	JA 1	KNES 32	LGL 213	MATH 30	MUS 255	PHIL 5	PSYC 3 H	SOC 3	TA 18 A	WR 2
ACCT 209	ART 41	BIO 14	CIM 106	COMM 2	DMA 191	DNCE 37	DNCE 78	ENGR 83	ESL 373	GEOG 20	HD 253	HUM 71	JA 1 H	KNES 4	LGL 215	MATH 31	MUS 256	PHOT 1	PSYC 3 L	SOC 30	TA 18 B	WR 2 H
ACCT 212 .3	ART 50	BIO 15	CIM 107	COMM 3	DMA 51	DNCE 38	DNCE 85	ENGR 91	ESL 374	GEOG 3	HD 265	HUM 71 H	JA 10	KNES 5	LGL 220	MATH 310	MUS 27	PHOT 51	PSYC 30	SPAN 1	TA 19	WR 201
ACCT 215	ART 51	BIO 16	CIM 108	COMM 30	DMA 52	DNCE 39	DNCE 86	ENGR 117	ESL 382	GEOG 3 H	HD 266	HUM 72	JA 180	KNES 6	LGL 221	MATH 350 A	MUS 28	PHOT 52	PSYC 32	SPAN 1 H	TA 19 A	WR 280
ACCT 220	ART 52	BIO 167	CIM 110	COMM 35	DMA 55	DNCE 40	DNCE 87	ENGR 160	ESL 383	GEOG 38	HD 267	HUM 72 H	JA 2	KNES 61	LIB 10	MATH 350 B	MUS 3	PHYS 167	PSYC 33	SPAN 10	TA 19 B	WR 301
ACCT 275	ART 53	BIO 19	CIM 112 .1	COMM 5	DMA 60	DNCE 41	DNCE 88	ENGR 200	ESL 384	GEOL 1	HD 268	HUM 73	JA 21	KNES 62	LIB 11	MATH 350 C	MUS 39	PHYS 2 A	PSYC 37	SPAN 11	TA 2	WR 302
AJ 102	ART 80	BIO 19 H	CIM 112 .2	COMM 9	DMA 65	DNCE 42	DNCE 93	ENGR 201	ESL 385	GEOL 165	HD 269	HUM 74	JA 23	KNES 63	LIB 111	MATH 350 D	MUS 4	PHYS 2 B	PSYC 37 H	SPAN 180	TA 20	WR 380
AJ 103	ART 81	BIO 2	CIM 115	COUN 1	DMA 70	DNCE 45	DNCE 94	ENGR 202	ESL 388	GEOL 169	HD 270	HUM 91	JA 3	KNES 64	LIB 112	MATH 350 E	MUS 40	PHYS 20	PSYC 5	SPAN 2	TA 21	WR 399
AJ 105	ART 82	BIO 200	CIM 117	COUN 1 H	DMA 80	DNCE 46	DNCE 95	ENGR 211	ESL 392	GEOL 170	HD 271	IA 1	JA 4	KNES 7	LIT 1	MATH 350 F	MUS 42	PHYS 4 A	PSYC 5 H	SPAN 3	TA 22	
AJ 106	ART 85	BIO 3	CIM 141	COUN 10	DMP 200	DNCE 47	DNCE 96	ENGR 212	ESL 393	GEOL 181	HD 4	IA 1 A	JRNL 40	KNES 71	LIT 20	MATH 350 G	MUS 44	PHYS 4 B	PSYC 6	SPAN 4	TA 241 A	
AJ 107	ART 86	BIO 30	CIM 143	COUN 100 A	DMP 210	DNCE 48	DR 101	ENGR 221	ESL 394	GEOL 186	HD 65	IA 10	JRNL 41	KNES 72	LIT 21	MATH 350 H	MUS 46	PHYS 4 C	PSYC 60	SRM 168	TA 25 H	
AJ 111	ART 88	BIO 4	CIM 144	COUN 100 B	DMP 220	DNCE 50	DR 203	ENGR 222	ESL 395	GEOL 2	HD 7	IA 12	KNEA 1	KNES 73	LIT 22	MATH 351	MUS 5	PS 1	PSYC 7	SRM 180	TA 26 H	
AJ 112	ARTH 1	BIO 43	CIM 145	COUN 102	DMP 221	DNCE 51	DR 50	ENGR 223	ESL 398	GEOL 22	HIST 1	IA 121	KNES 100	KNES 74	LIT 23	MATH 353	MUS 50	PS 1 H	PSYC 9	SRM 185	TA 27	
AJ 119	ARTH 110	BIO 44	CIM 160	COUN 103	DMP 222	DNCE 52	DR 52	ENGR 224	ESS 310	GEOL 23	HIST 1 H	IA 13	KNES 101	KNES 76	LIT 24	MATH 4 A	MUS 51	PS 12	RD 171	SRM 190	TA 3	
AJ 13	ARTH 115	BIO 5	CIM 161	COUN 120	DMP 230	DNCE 53	ECON 1	ENGR 241	ESS 345	GEOL 3	HIST 10	IA 15	KNES 102	KNES 77	LIT 30	MATH 8	MUS 52	PS 12 H	RD 370	SRM 195	TA 30	
AJ 150	ARTH 120	BIO 55	CIM 168	COUN 150	DMP 240	DNCE 54	ECON 1 H	ENGR 242	ET 102	GLBL 1	HIST 11	IA 18	KNES 103	KNES 78	LIT 31	MGT 1	MUS 53	PS 14	RD 371	TA 1	TA 35	
AJ 161	ARTH 125	BIO 71	CIM 170	COUN 2	DMP 241	DNCE 55	ECON 10	ENV 1	ET 104	GLBL 2	HIST 2	IA 19	KNES 104	KNES 79	LIT 32	MGT 10	MUS 54	PS 14 H	RD 372	TA 10	TA 4	
AJ 168	ARTH 130	BIO 72	CIM 181	COUN 4	DMP 260	DNCE 57	ECON 10 H	ENV 6	ET 105	GS 10	HIST 20	IA 2	KNES 105	KNES 81	LIT 33	MGT 10 H	MUS 55	PS 167	RD 74	TA 12	TA 40	
AJ 19	ARTH 20	BIO 80	CIM 182	COUN 6	DNCE 1	DNCE 58	ECON 13	ERTH 20	ET 107	GS 20	HIST 21	IA 20	KNES 106	KNES 82	LIT 40	MGT 104	MUS 56	PS 17	RE 168	TA 141 A	TA 40 C	
AJ 2	ARTH 22	BIO 81	CIM 201 A	COUN 6 H	DNCE 12	DNCE 6	ECON 167	ESL 201	ET 116	HD 101	HIST 24	IA 3	KNES 11	KNES 83	LIT 41	MGT 12 A	MUS 57	PS 21	RE 170	TA 141 B	TA 41	
AJ 250	ARTH 25	BIO 93	CIM 201 B	CS 1	DNCE 13	DNCE 60	ECON 2	ESL 201 L	ET 119	HD 104	HIST 25	IA 4	KNES 12	KNES 84	LIT 43	MGT 12 AH	MUS 59	PS 3	RE 172	TA 141 C	TA 42	
AJ 281	ARTH 26	BIO 93 L	CIM 201 C	CS 1 H	DNCE 16	DNCE 61	ECON 2 H	ESL 301	ET 120	HD 105	HIST 30	IA 6	KNES 13	KNES 85	LIT 46	MGT 120	MUS 6	PS 4	RE 174 A	TA 141 D	TA 44	
AJ 282	ARTH 27	BIO 94	CIM 209	CS 10	DNCE 168	DNCE 62	ECON 20	ESL 301 L	ET 122 A	HD 110	HIST 33	IA 7	KNES 20	KNES 86	LIT 48	MGT 125	MUS 62	PS 41	RE 175	TA 141 E	TA 47	
AJ 283	ARTH 32	BIO 97	CIM 210 .1	CS 131	DNCE 17	DNCE 65	ECON 6	ESL 340 A	ET 92	HD 115	HIST 40	IA 9	KNES 212	KNES 99	LIT 7	MGT 135	MUS 7	PS 5	RE 176 A	TA 142 A	TA 48 A	
AJ 284	ARTH 4	BIO 99	CIM 210 .2	CS 30	DNCE 170	DNCE 65 A	ELEC 200	ESL 340 B	ET 99	HD 120	HIST 41	IMA 135	KNES 213	LET 168	MATH 10	MGT 168	MUS 80	PS 6	RE 190	TA 142 B	TA 48 B	
AJ 4	ASTR 20	BIOT 273	CIM 212 .3	CS 36	DNCE 18	DNCE 65 B	ELEC 200 A	ESL 341 A	FR 1	HD 130	HIST 51 H	IMA 179	KNES 214	LET 205	MATH 105	MGT 203	MUS 81	PSYC 1	RE 195	TA 142 C	TA 48 C	
AJ 5	ASTR 25	BIOT 278	CIM 249	CS 37	DNCE 19	DNCE 65 C	ELEC 201	ESL 341 B	FR 1 H	HD 131	HLTH 1	IMA 189	KNES 215	LET 215	MATH 11	MGT 235	MUS 82	PSYC 1 H	RE 250	TA 143	TA 49	

Are there any gatekeeper courses in your program?

Which courses should the we focus our efforts on?

Definition

A gatekeeper course is one in which many students struggle to complete, and, as a result, prevents them from completing a program of study.





Identifying Potential Gatekeeper Courses



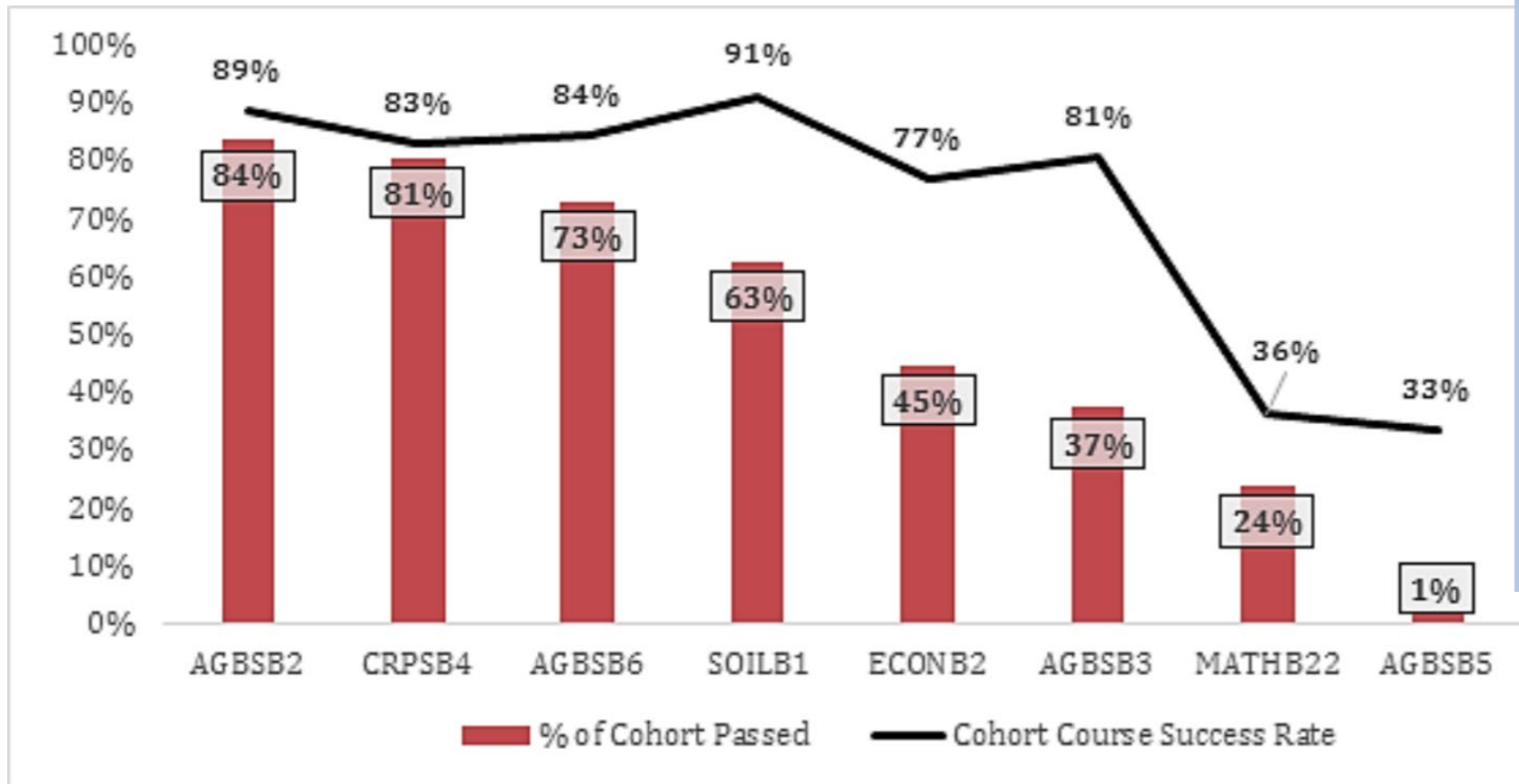
Poll

What metrics or outcomes would you look at to identify potential gatekeeper courses? *(Type in chat)*



Attempt #1: Replicating drop off from Bakersfield

Figure 1. Percentage of cohort successfully completing specific courses required for Agriculture Business AS-T paired with the overall cohort success rate of that course.



Not actionable at IVC:

70% of IVC have transfer goal (academic plans tailored to transfer institution, not local program)

Courses are not sequential

Courses optional within a group

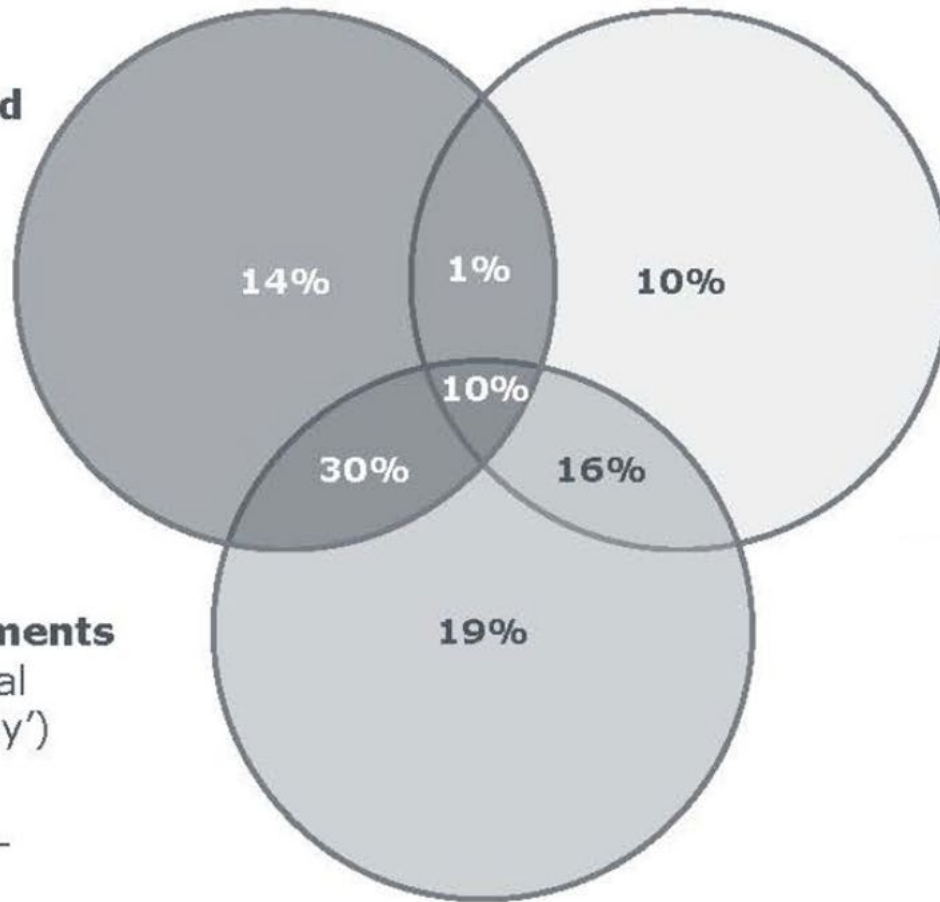
Attempt #2: Bottleneck Courses (EAB)

Access and Demand

- Larger, lower-division courses and/or seeing demand outpace capacity
- Impacted by physical space or pedagogy

Academic Requirements

- Required for general education ('gateway') or major progress
- Lower end of multi-course sequences



Course Outcomes

- High overall or population-specific drop/fail/withdrawal (DFW) rate

Not actionable at IVC:

What *threshold* do we use to for high DFW rate? Waitlist?

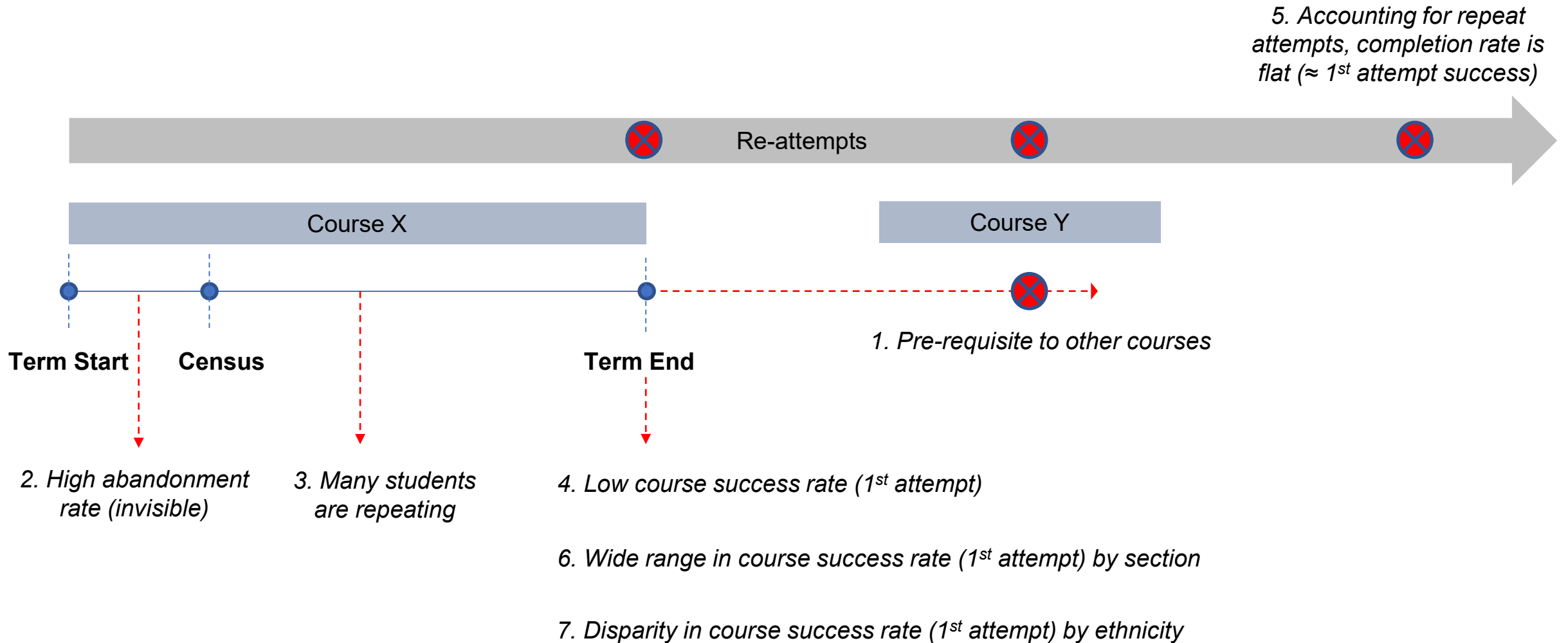
Waitlist and fill rate are dependent on # of sections offered (budget)

Math, writing, sciences (lower DFW rate), and social sciences (more popular): short list

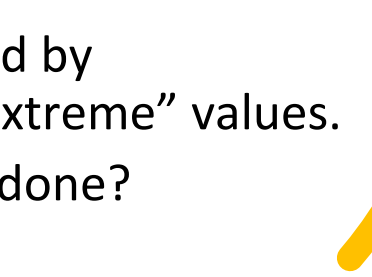


Current Attempt

Brainstorm: How can a course prevent program completion?



How do we identify gatekeeper courses?

- Institutional researchers: expertise in data, but not in curriculum or specific disciplines
 - Rely on discipline expert: department chairs and faculty
 - Data exploration / reflection activity (PD week, department meetings)
 1. Reflection: *a priori* hypotheses on gatekeeper courses within department; reasonable thresholds for metrics of interest.
 2. Review metrics for each course offered by department: **highlight** courses with “extreme” values.
 3. Inquiry: aha’s? Why? What could be done?
 4. Immediate action steps
- 

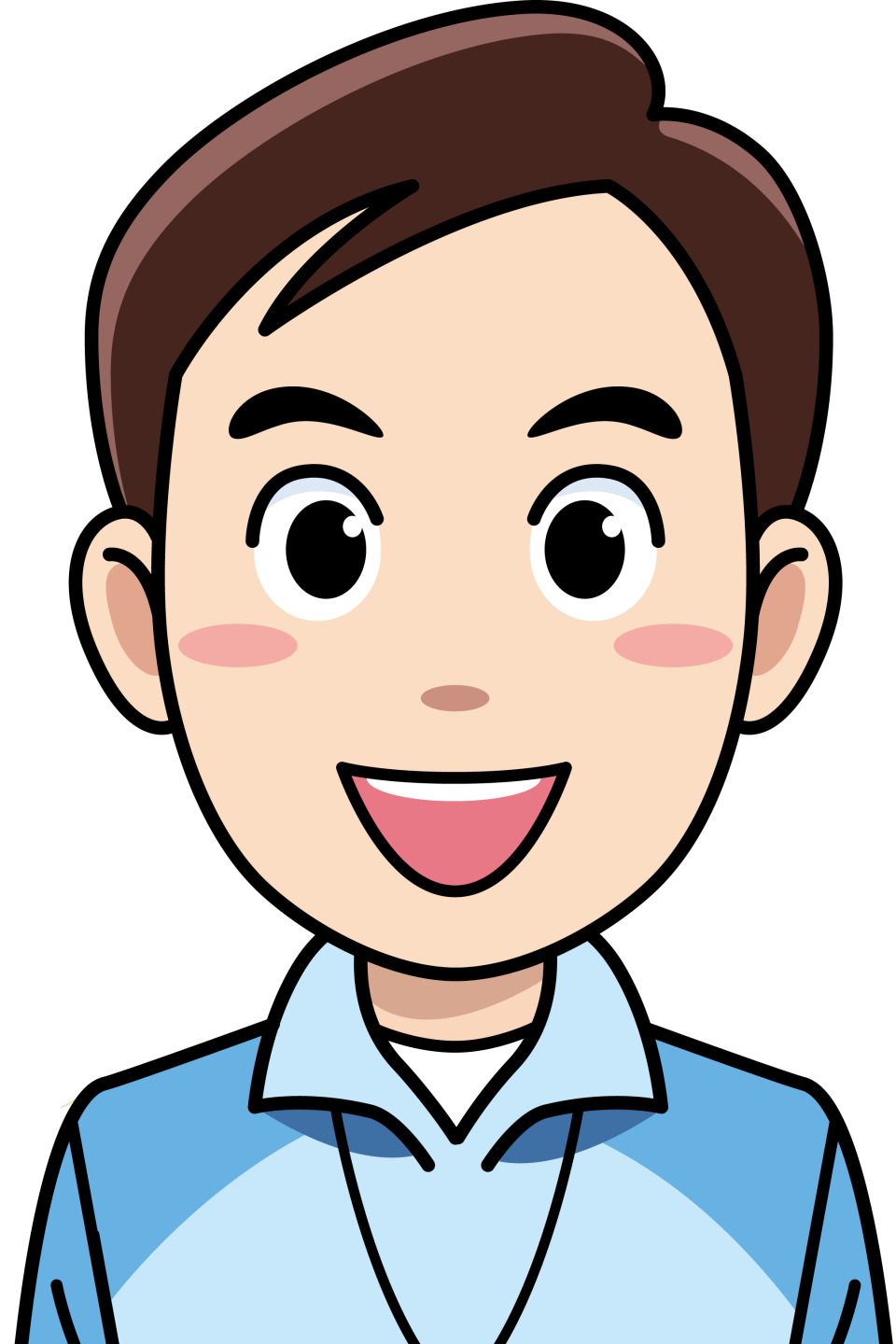


Poll



What abandon rate (0-100%) or above would concern you?

Abandon rate = rate at which students drop a course between the start of class and census, without re-enrolling in a different section of the same course.



Case Study: Psychology Department

- A'p priori hypotheses:
 - PSYC 10 (statistics): required, highly quantitative
 - PSYC 2 (research methods): capstone course
 - Low success rates
- Concern thresholds:
 - Abandon rate: 10%
 - Repeater rate: 35%
 - 1st Attempt Success rate: 70%

List By

Course Prefix

Selection

PSYC

Abandon Rate >=

10%

Repeater Rate in Class >=

0.35

1st Attempt Success <=

70%

Change in Throughput and 1st Attempt Success <=

2%

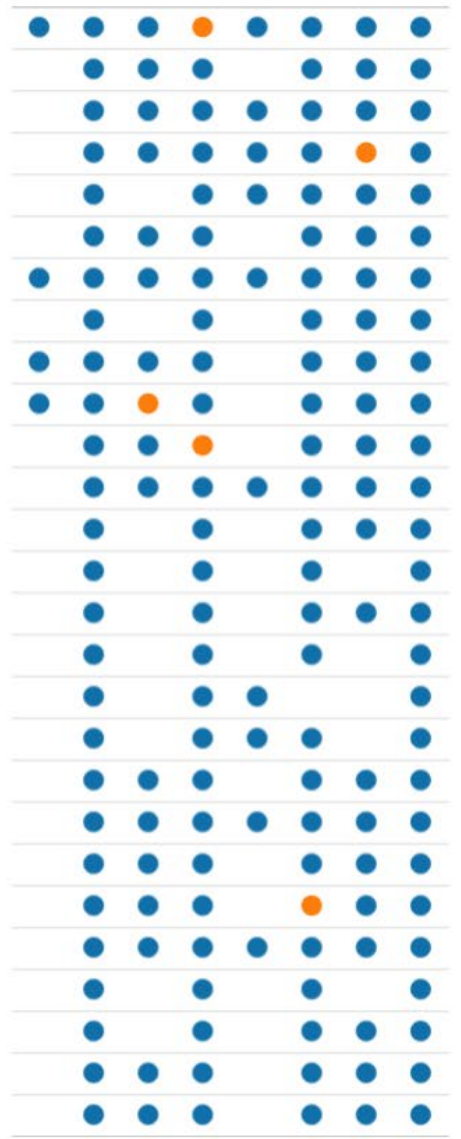
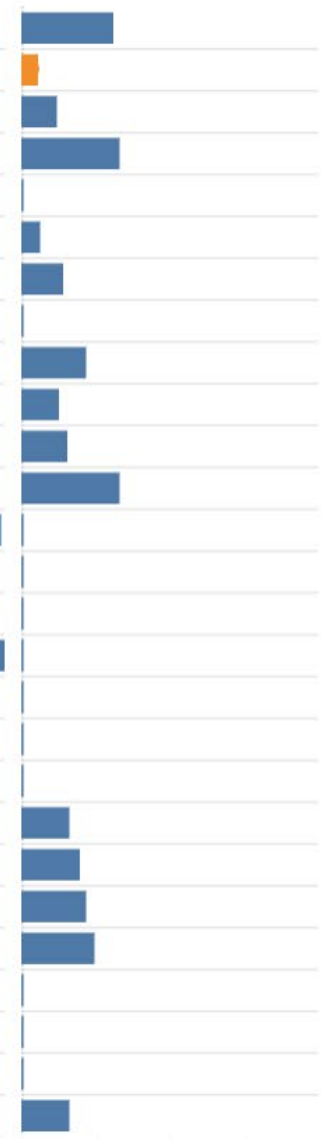
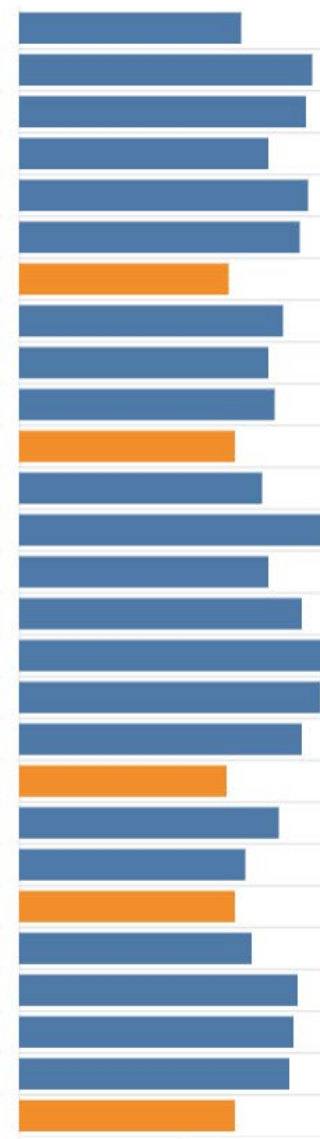
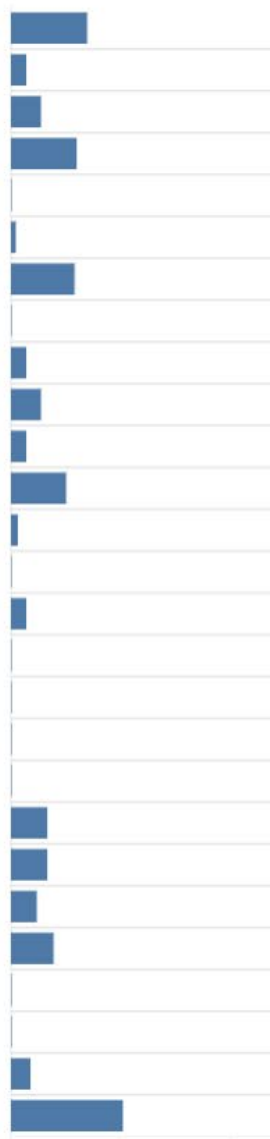
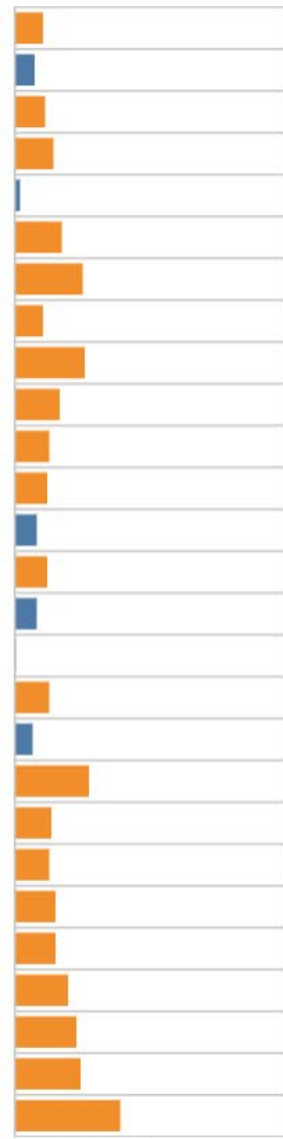
Range in Section 1st Attempt Success Rate >=

20%

American I
Black o
His
Native Haw
Two
Unrep

Prereq to:

PSYC 1	PSYC 2, PSYC 3, PS..
PSYC 1 H	PSYC 2, PSYC 3, PS..
PSYC 2	
PSYC 3	
PSYC 3 H	
PSYC 3 L	
PSYC 5	
PSYC 5 H	
PSYC 6	
PSYC 7	
PSYC 9	
PSYC 10	PSYC 2
PSYC 10 H	PSYC 2
PSYC 11	
PSYC 13 H	
PSYC 15	
PSYC 15 A	
PSYC 15 B	
PSYC 20	
PSYC 30	
PSYC 32	
PSYC 33	
PSYC 37	
PSYC 37 H	
PSYC 60	
PSYC 106	
PSYC 160	



List By
 Course Prefix ▾
 Selection
 PSYC ▾

Abandon Rate >=

Repeater Rate in Class >=

1st Attempt Success <=

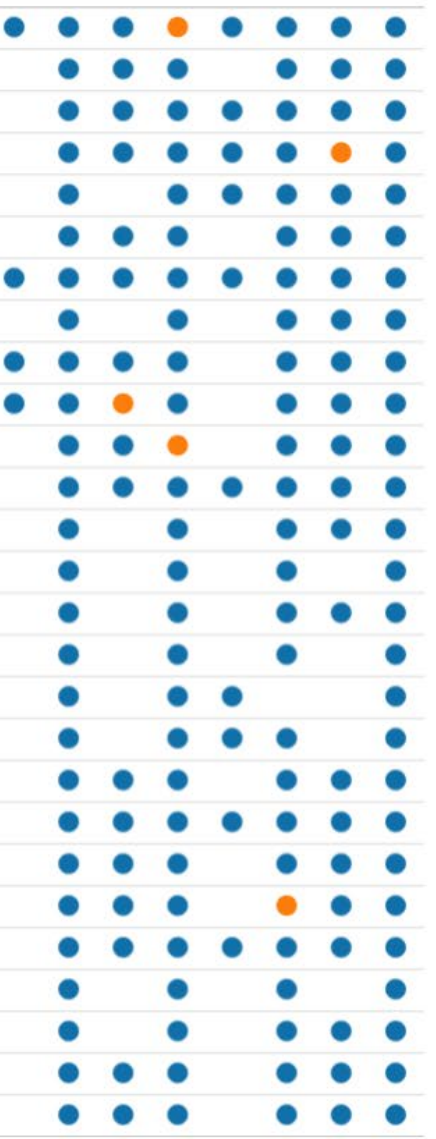
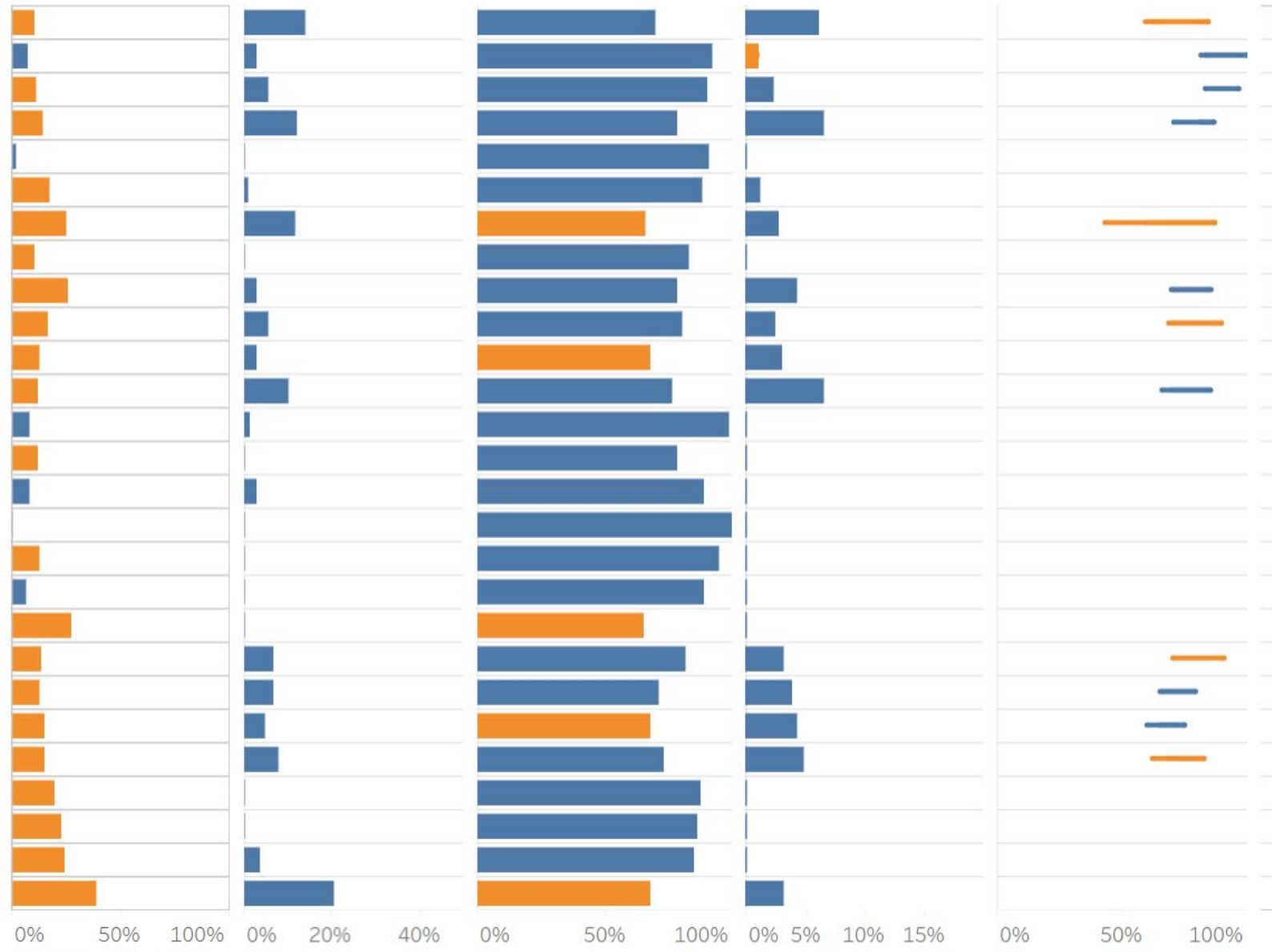
Change in Throughput and 1st Attempt Success <=

Range in Section 1st Attempt Success Rate >=

American I
 Black o
 His
 Native Haw
 Two
 Unrep

Prereq to:

PSYC 1	PSYC 2, PSYC 3, PS..
PSYC 1 H	PSYC 2, PSYC 3, PS..
PSYC 2	
PSYC 3	
PSYC 3 H	
PSYC 3 L	
PSYC 5	
PSYC 5 H	
PSYC 6	
PSYC 7	
PSYC 9	
PSYC 10	PSYC 2
PSYC 10 H	PSYC 2
PSYC 11	
PSYC 13 H	
PSYC 15	
PSYC 15 A	
PSYC 15 B	
PSYC 20	
PSYC 30	
PSYC 32	
PSYC 33	
PSYC 37	
PSYC 37 H	
PSYC 60	
PSYC 106	
PSYC 160	



Abandon Rate Repeater Rate In Class Success Rate 1st Attempt Change in Throughput Section Range

List By

Course Prefix

Selection

PSYC

Abandon Rate >=

10%

Repeater Rate in Class >=

0.35

1st Attempt Success <=

70%

Change in Throughput and 1st Attempt Success <=

2%

Range in Section 1st Attempt Success Rate >=

20%

American I
Black o
His
Native Haw
Two
Unrep

Prereq to:

PSYC 1	PSYC 2, PSYC 3, PS..
PSYC 1 H	PSYC 2, PSYC 3, PS..
PSYC 2	
PSYC 3	
PSYC 3 H	
PSYC 3 L	
PSYC 5	
PSYC 5 H	
PSYC 6	
PSYC 7	
PSYC 9	
PSYC 10	PSYC 2
PSYC 10 H	PSYC 2
PSYC 11	
PSYC 13 H	
PSYC 15	
PSYC 15 A	
PSYC 15 B	
PSYC 20	
PSYC 30	
PSYC 32	
PSYC 33	
PSYC 37	
PSYC 37 H	
PSYC 60	
PSYC 106	
PSYC 160	

1

2

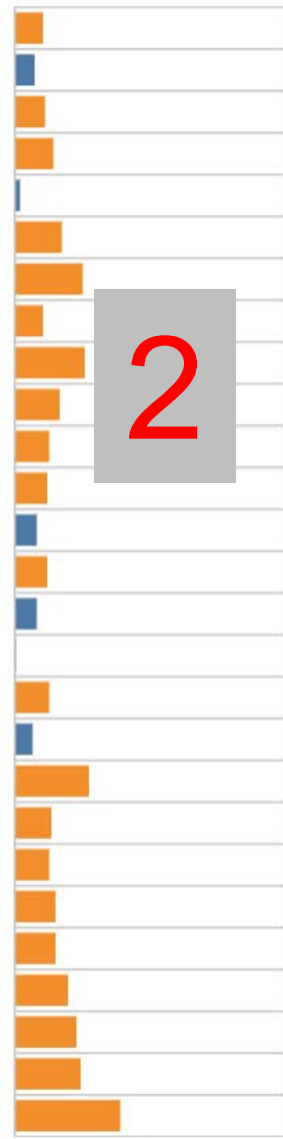
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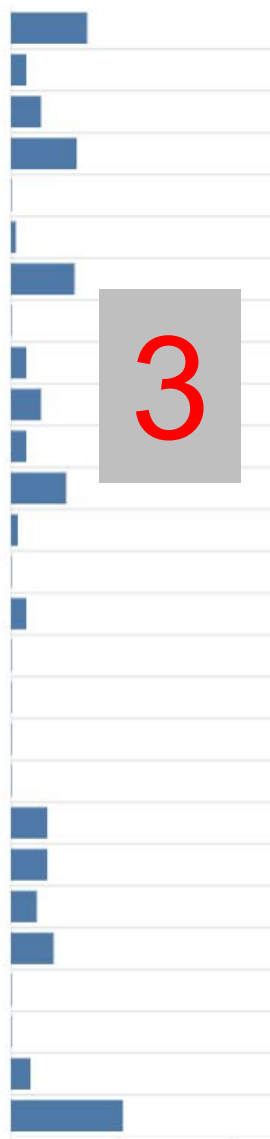
6

7



0% 50% 100%

Abandon Rate



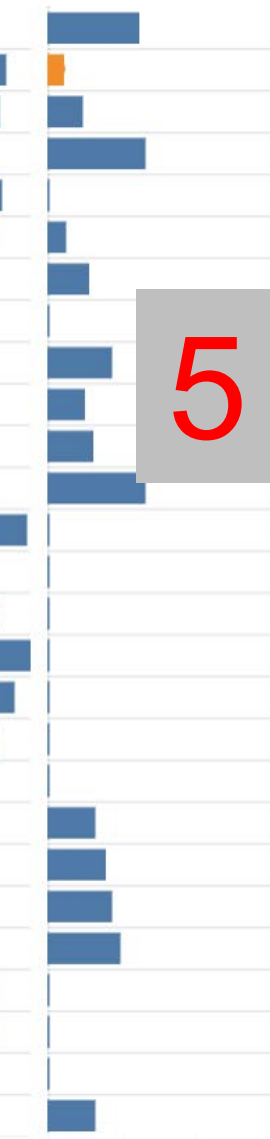
0% 20% 40%

Repeater Rate In Class



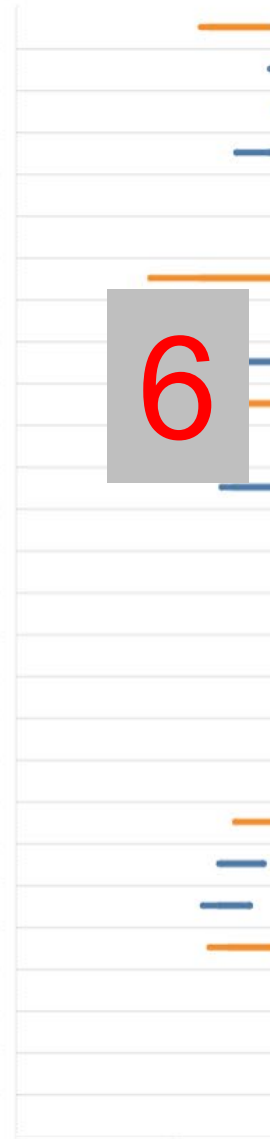
0% 50% 100%

Success Rate 1st Attempt



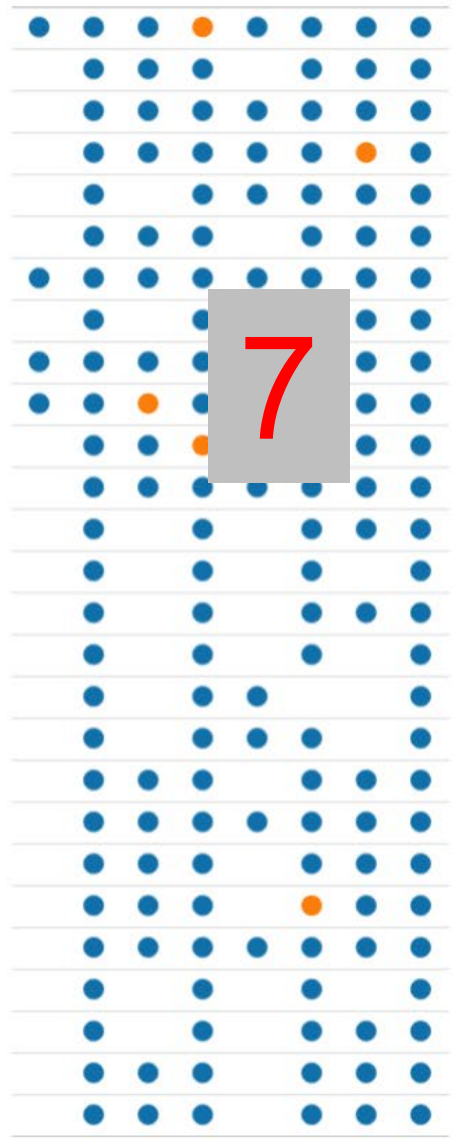
0% 5% 10% 15%

Change in Throughput



0% 50% 100%

Section Range

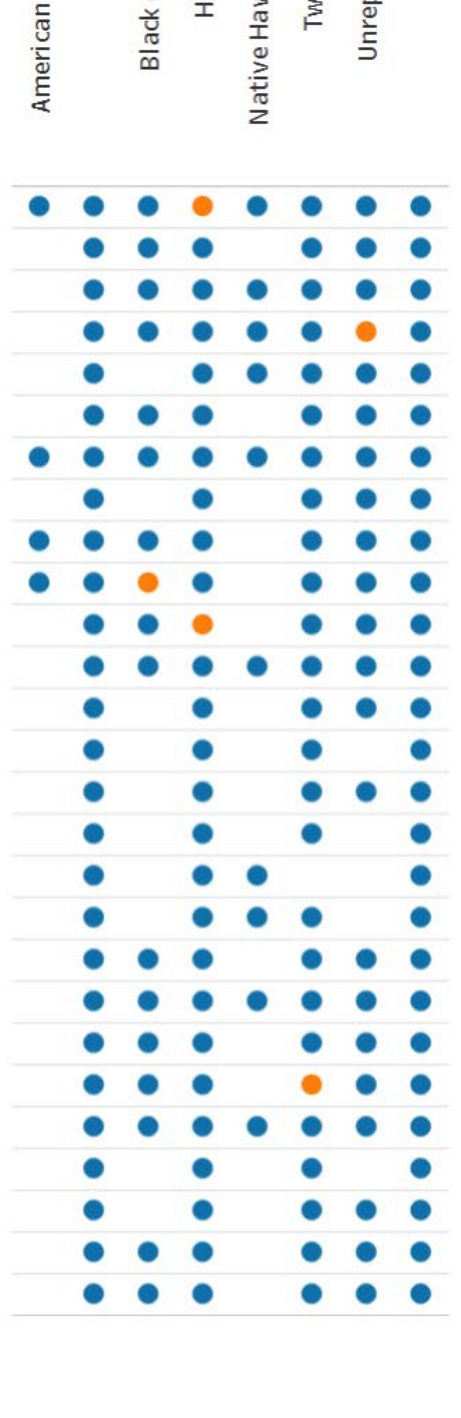
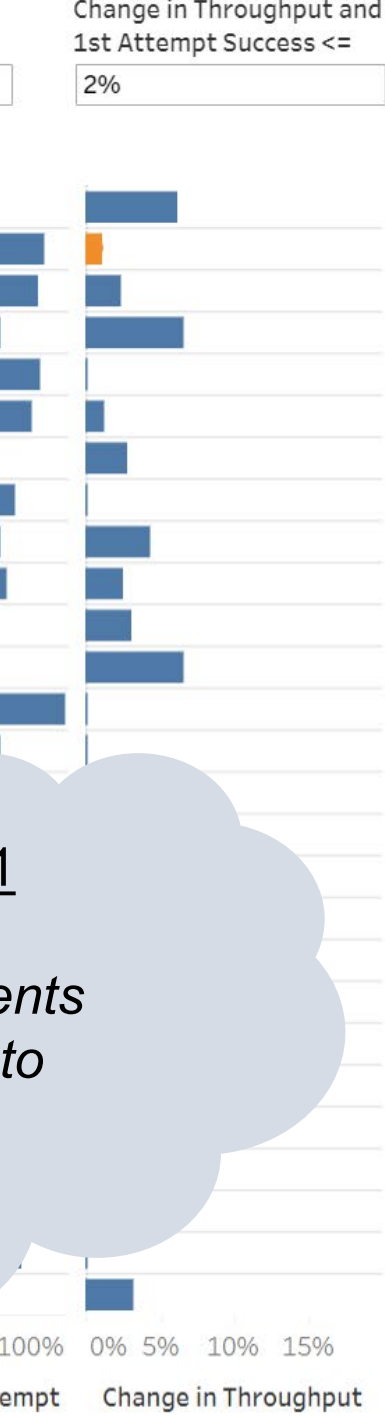
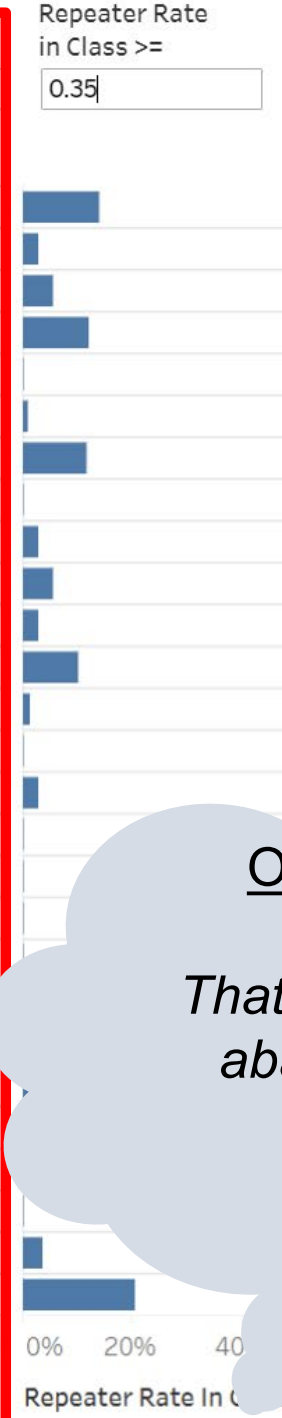


0% 50% 100%

List By: Course Prefix Selection: PSYC

Prereq to:

Course	Prerequisites
PSYC 1	PSYC 2, PSYC 3, PS..
PSYC 1 H	PSYC 2, PSYC 3, PS..
PSYC 2	
PSYC 3	
PSYC 3 H	
PSYC 3 L	
PSYC 5	
PSYC 5 H	
PSYC 6	
PSYC 7	
PSYC 9	
PSYC 10	PSYC 2
PSYC 10 H	PSYC 2
PSYC 11	
PSYC 13 H	
PSYC 15	
PSYC 15 A	
PSYC 15 B	
PSYC 20	
PSYC 30	
PSYC 32	
PSYC 33	
PSYC 37	
PSYC 37 H	
PSYC 60	
PSYC 106	
PSYC 160	



Observation 1

That many students abandon prior to census?!?!



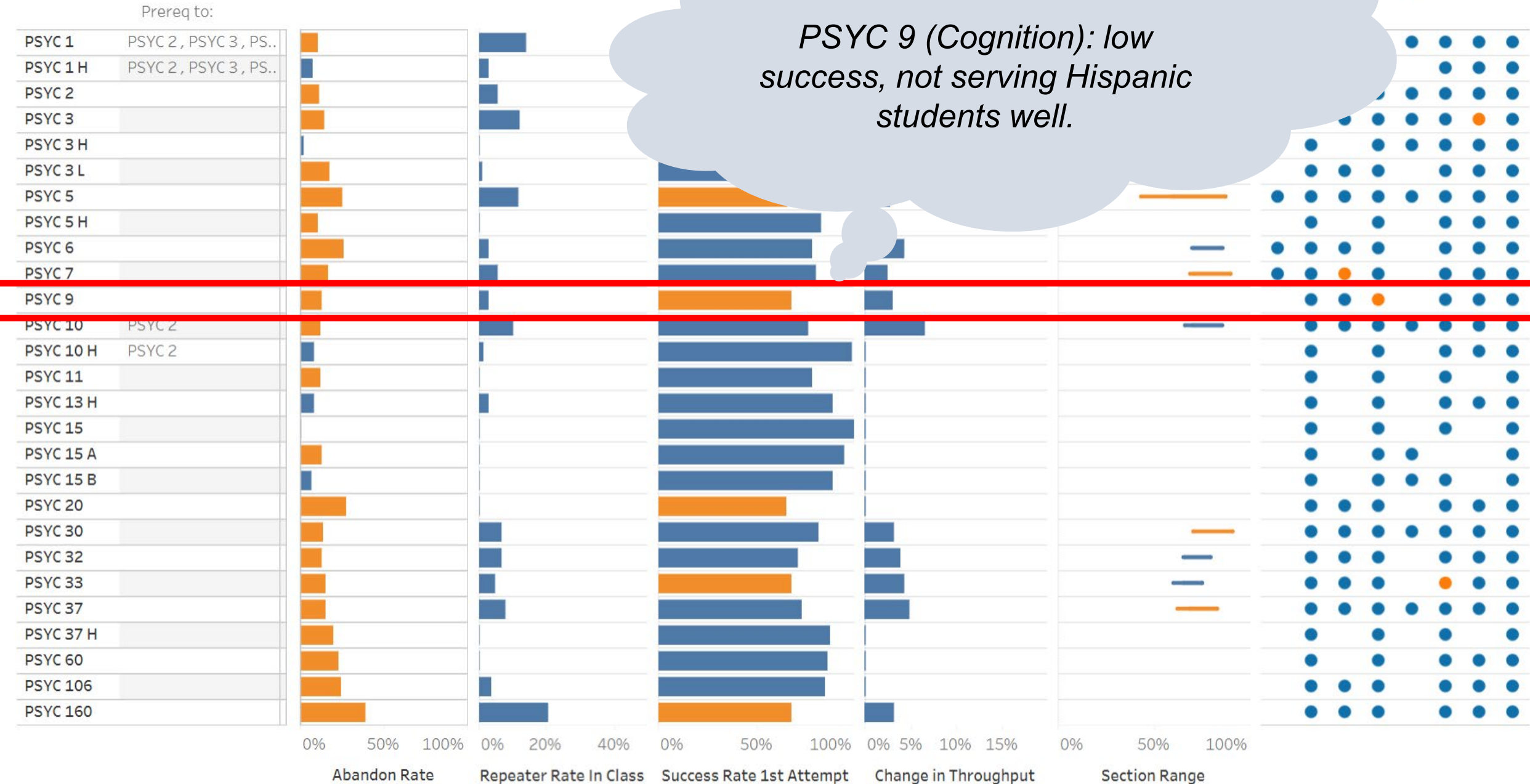
Observation 2

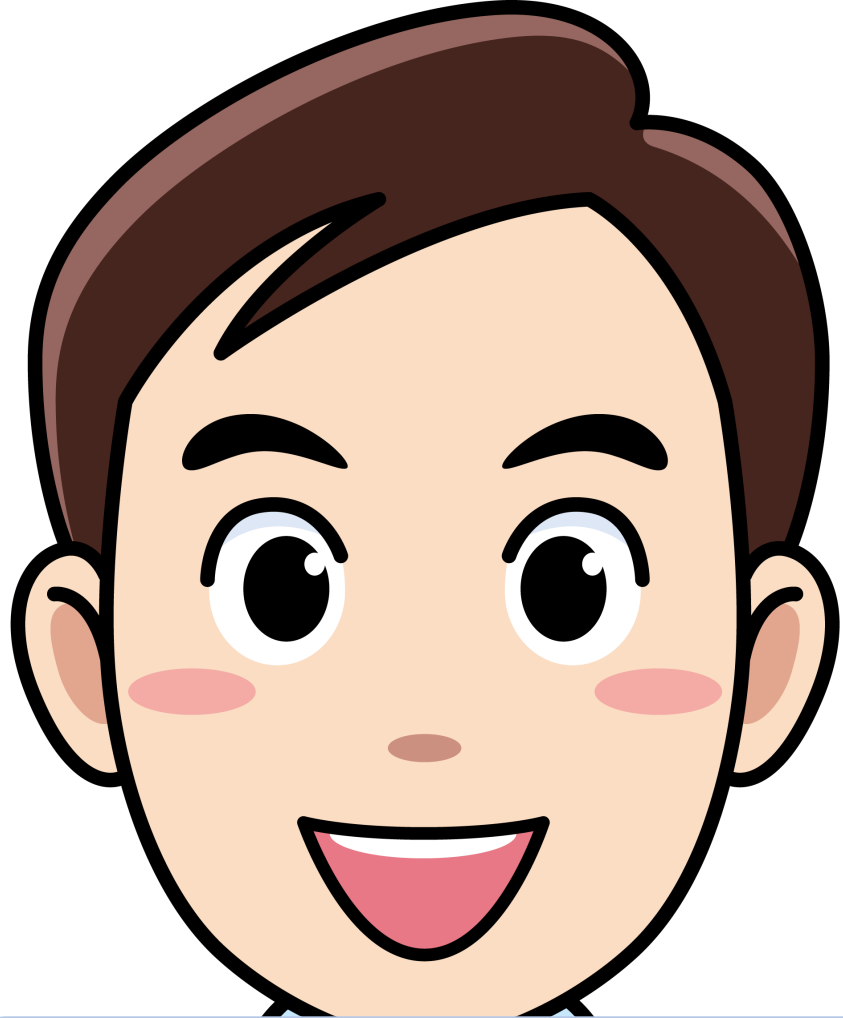
Students are doing very well in PSYC 2 and 10! Not a concern...

List By: Course Prefix Selection: PSYC Abandon Rate >=: 10% Repeater Rate in Class >=: 0.35

Observation 4

PSYC 9 (Cognition): low success, not serving Hispanic students well.





Next Steps

1. Investigate outlier sections for PSYC 5.
2. Bring up findings at department meeting to brainstorm ways to fine-tune courses.

Case Study: Psychology Department

1. That many students abandon prior to census?!?!?
2. Students are doing very well in PSYC 2 and 10! Not a concern...
3. PSYC 5 (Human Sexuality): very popular class, but has high abandonment, low success, and wide range in success.
4. PSYC 9 (Cognition): low success, not serving Hispanic students well.

Now what? (after identification)



CONVERSATION
WITHIN
DEPARTMENT



FOLLOW-UP
DATA
INVESTIGATIONS



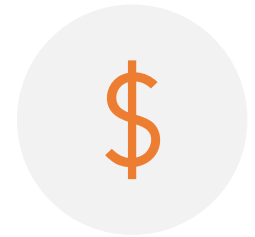
PROFESSIONAL
DEVELOPMENT



COMMUNITIES
OF PRACTICE



SUPPLEMENTAL
INSTRUCTION



RESOURCE
REQUEST

Resources

- Gatekeeper Course Exploration activity:
<https://link.ivc.edu/gatekeeper-activity> (Creative Commons Attribution-ShareAlike 4.0 International Public License)



- Additional details about data and dashboard (for institutional researchers):

CAMP-R meeting hosted at Irvine Valley College
February 26, 2021

Discussion

- What have you done to try to identify gatekeeper courses at your institution?
- Do you have suggestions on how to increase adoption of such a tool?
- After the “identification” step, what do you think might be effective at increasing completions in these gatekeeper courses?





Thank you!

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