

Innovation Research Lab (IRL) Usage & Outcomes Report (FA18-SP19)

Definitions

Course Retention Rate: percentage of students who complete a course with a grade of A, B, C, D, F, P, NP, I or RD (any grade other than a W) divided by total official census enrollments (Retention Counts / Enrollment).

Course Success Rate: percentage of students who complete a course with a passing grade (A, B, C, or P) divided by total official census enrollments (Success Counts / Enrollment).

Enrollment: duplicated count of students; one record for each enrollment at Mesa College. Intersession is excluded.

Headcount: The number of unduplicated students enrolled in a given period of time. Annual headcount excludes summer and intersession.

IRL Usage: *TBD*

IRL Visit: An attendance record generated when a student participates in any of the following activities at the IRL: club meeting, collaborating, counseling, faculty mentoring, internship, peer mentor meeting, research, studying, workshop/lectures. Multiple records may be generated for the same student on a given day if the student visits and swipes student identification card multiple times throughout the day.

Unduplicated IRL Visits: Total of IRL Visits unduplicated by student per day. In other words, a student attending multiple times in one day is only counted once per day.

STEM Course: Course that falls under the following STEM fields: Archeology (ANTH107, ANTH115, and ANTH120), Astronomy (any ASTR course), Biology (any BIOL course), Chemistry (any CHEM course), Computer Information Science (any CISC course), Engineering (any ENGE course), Geology (any GEOL course), Geographic Information Systems (any GISG course), Mathematics (any MATH course), Physical Science (any PHYN course), Physics (any PHYS course), and Psychology (any PSYC course).

Data Notes & Caveats

- The Innovation Research Lab (IRL) first opened in the fall of 2018, moving buildings twice during the 2018/19 academic year. The IRL was closed during the 2019 intersession and summer term.
- The purpose of this report is to shed some light on usage patterns, identify potential improvements in both data tracking and program implementation, and to assist in defining “IRL usage” for APR purposes.
- There are obvious gaps in the tracking of IRL usage. Total usage numbers may not accurately represent actual usage of the IRL.

Tables

I. Headcount and Demographics

IRL User Headcount

	Headcount		
	All Users	Enrolled at Mesa	
		Overall	STEM Course(s)
FA18	84	82	76
SP19	71	69	61
Annual	132	128	116

IRL User Annual Headcount by Ethnicity

	IRL Users		Overall at Mesa
African American	7	5%	7%
American Indian	0	0%	<1%
Asian	15	12%	10%
Filipino	0	0%	5%
Latinx	56	44%	38%
Pacific Islander	2	2%	1%
White	37	29%	31%
Other	7	5%	7%
Unreported	4	3%	2%
Total	128	100%	100%

IRL User Annual Headcount by Gender

	IRL Users		Overall at Mesa
Female	46	36%	55%
Male	82	64%	45%

IRL User Annual Headcount by Financial Aid Status*

	IRL Users		Overall at Mesa
Receiving Financial Aid	81	63%	49%
Not Receiving Financial Aid	47	37%	51%

*For Title III grant reporting purposes, financial aid status is used as a proxy for economically disadvantaged students.

IRL User Annual Headcount by First Generation Status

	IRL Users		Overall at Mesa
First Generation	45	35%	28%
Not First Generation	83	65%	72%
Unreported	0	0%	<1%

II. IRL Visits

Total IRL Visits

	Visits		Unduplicated Visits	
	Count	Average	Count	Average
FA18	266	3.2	221	2.6
SP19	244	3.4	231	3.3
Annual	510	3.9	452	3.4

IRL Visits Date Ranges

	Min	Max
FA18	9/27/2018	12/5/2018
SP19	1/28/2019	5/23/2019

IRL Unduplicated Visits by Month

	Month	Count
FA18	August	0
	September	2
	October	121
	November	62
	December	36
	Total	221
SP19	January	1
	February	0
	March	13
	April	89
	May	128
	Total	231

Total IRL Visits and Headcount by Reason Code

	FA18			SP19		
	Visits	Unduplicated Visits	Headcount	Visits	Unduplicated Visits	Headcount
CLUB MEETING	22	20	17	14	13	10
COLLABORATING	14	13	10	32	30	14
COUNSELING	1	1	1	3	3	3
FAC MENTORING	2	2	2	8	7	7
INTERNSHIP	12	12	12	1	1	1
PEER MENTOR MTG	1	1	1	0	0	0
RESEARCH	0	0	0	3	3	3
STUDYING	154	118	40	175	166	50
WKSH/LECT	60	54	28	8	8	7
Total	266	221	84	244	231	71

III. Student Outcomes

STEM Course Outcomes by Student IRL-Use Flag

	IRL Use	Headcount	Enrollments	Retention Counts	Retention Rate	Success Counts	Success Rate	Course GPA
FA18	Non-User	11,181	16,604	14,087	85%	11,075	67%	2.51
	IRL User	76	168	157	93%	140	83%	2.89
SP19	Non-User	10699	16,335	13,820	85%	11,024	67%	2.59
	IRL User	61	122	114	93%	105	86%	3.23
Pre-IRL* FA17-P18	Non-User	17,470	34,492	29,529	86%	23,299	68%	2.54
	IRL User	77	267	240	90%	219	82%	3.25

*Pre-IRL outcomes show the outcomes achieved by 2018-19 IRL students in the previous academic year (excluding summer and intersession). Pre-IRL outcomes reflect that 2018-19 IRL students were already outperforming non-users before the IRL was in operation.

Annual STEM Course Outcomes by Student IRL-Use Flag and Ethnicity

	Ethnicity	Headcount	Enrollments	Retention Counts	Retention Rate	Success Counts	Success Rate	Course GPA
Non-User	African American	998	1,810	1,438	79%	977	54%	2.08
	American Indian	48	96	85	89%	71	74%	2.37
	Asian	1779	3,921	3,477	89%	2,955	75%	2.88
	Filipino	757	1,496	1,269	85%	1,011	68%	2.57
	Latinx	6426	12,918	10,775	83%	8,015	62%	2.3
	Pacific Islander	92	164	140	85%	102	62%	2.12
	White	4905	9,937	8,537	86%	7,262	73%	2.83
	Other	1051	2,090	1,759	84%	1,358	65%	2.51
	Unreported	251	507	427	84%	348	69%	2.66
	Total		16,307	32,939	27,907	85%	22,099	67%
IRL User	African American	6	16	14	88%	12	75%	2.31
	Asian	13	25	23	92%	21	84%	3.3
	Latinx	50	123	116	94%	103	84%	2.87
	Pacific Islander	2	9	8	89%	7	78%	2.93
	White	36	86	81	94%	76	88%	3.37
	Other	5	17	16	94%	14	82%	2.69
	Unreported	4	14	13	93%	12	86%	3.26
	Total		116	290	271	93%	245	84%

IV. Enrollments

Annual STEM Course Enrollments among IRL Users (Top 15)

Course	Count	Percent
MATH252	16	6%
CHEM201	14	5%
MATH096	14	5%
MATH151	14	5%
MATH255	13	4%
CHEM201L	11	4%
MATH015B	11	4%
ENGE151	10	3%
MATH254	10	3%
ENGE210	9	3%
MATH104	9	3%
MATH141	9	3%
MATH150	9	3%
PHYS195	9	3%
PHYS196	9	3%

V. Action Items and Further Inquiry

1. Determine if both faculty mentoring and peer mentoring reason codes are necessary. If so, please properly define each to ensure they are being used correctly.
2. Assess what contributed to the decline of workshops/lectures visits during the spring? Were there fewer workshops offered, tracking issues, or other reason(s)?
3. Per SARS Trak records, the number of students visiting the IRL varied widely per month. It is important to document known reasons or seek to identify other potential causes.
4. IRL users have higher success rates in STEM courses than non-users. This was the case as well before the IRL was in operation. What makes these students different?
5. Objective 5.1 entails to “annually increase Research Incubator usage.”
 - a. Should any reason code count towards usage?
Note that any student that qualifies as a user will be included in the cohort for objectives 4 and 5. This should not be a main concern though, since most IRL users have high success rates.
 - b. Should usage be defined by student headcount, number of visits, or number of unduplicated visits?
To stay consistent with other objectives, such as STEM Center usage, my recommendation is to base it on student headcount (STEM Center usage is defined as unduplicated headcount of students who stayed there 30 minutes or more on a given term.