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A large, dark bronze statue of a bulldog, the mascot of Idaho State University, standing on a grassy area with trees in the background. The statue is shown in profile, facing right, with its mouth open as if roaring.

Leverage the LMS to Report Assessment

Assessment Institute | October 31, 2023



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Introductions



Sacha Johnson



Michael Spall

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Competencies

- Describe the level of understanding or proficiency of a learner in certain subject-related skills (Moodle, 2023)
- Competencies can be demonstrated through knowledge, values, and skills (Drisko, 2014)
- Mirror program / accreditation standards
- Tied to assessments

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Background

- Instructional Technology Resource Center
- Library badges → beyond
- Competency reports lacking
- LMS administrators to the rescue!

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Our Process

- Identify departments and key players
- Explain benefits for using competency frameworks
- Meet regularly until the framework is developed and implemented
- Solicit feedback

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Strengths

- Alignment awareness
- Expanded data collection
- Centralized data
- Progress tracking
- Open source

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Reporting Options

- Improved with Configurable Reports Plugin
- Control access
- Organize data
 - Grouped by student
 - Grouped by competency
 - Grouped by course

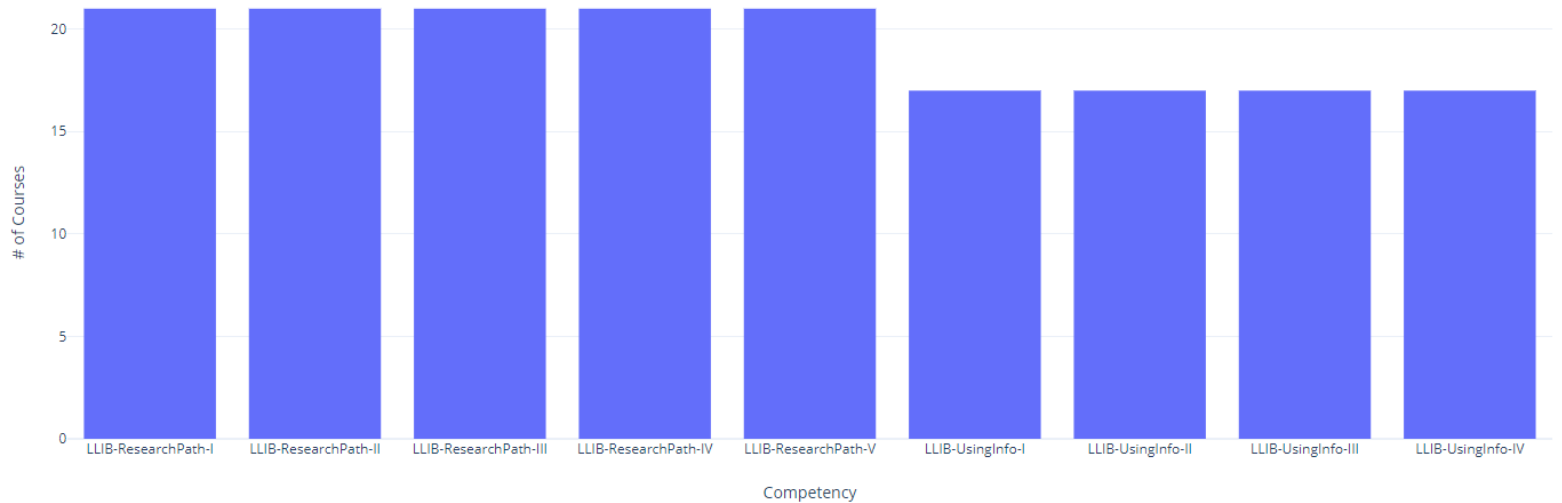
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Example Graph 1

Competencies and # of Courses Linked

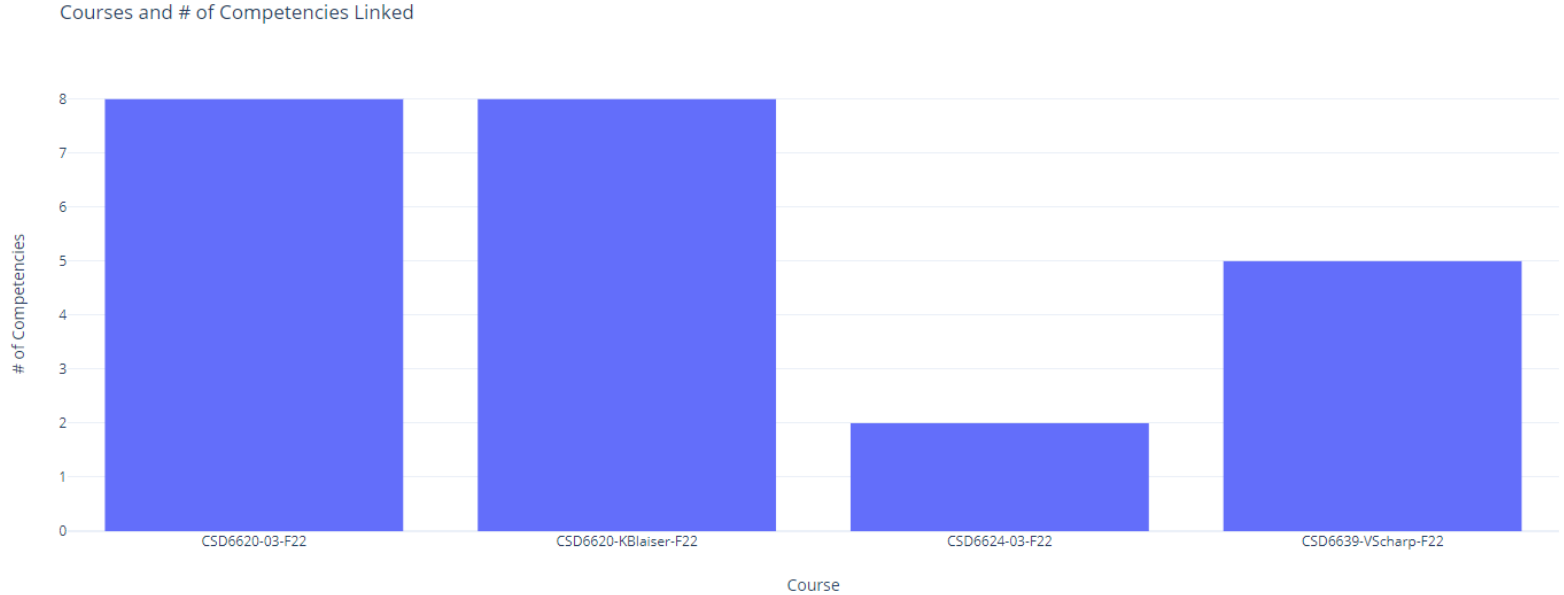


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Example Graph 2



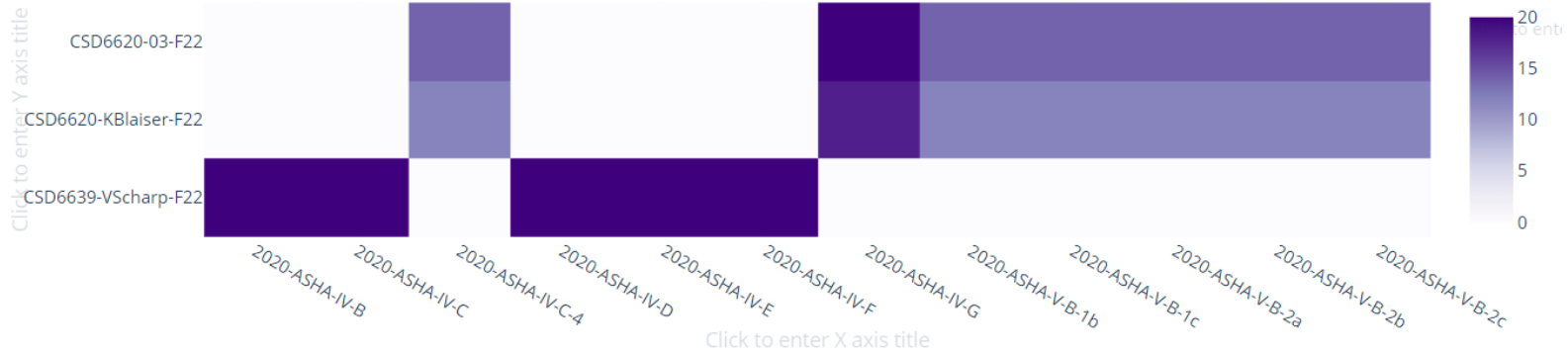
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Example Graph 3

ASHA Competencies by Course and # Proficient





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Interactive Process

- Generating the reports requires input of several stakeholders
- Continued meetings with departments to refine the reports

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Sharing Our Reports

- Share the SQL for generating our reports through GitHub
- Receive feedback from others
- See reports created by others

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Continued Development

- Custom reports feature in Moodle
- Export Configurable Reports to other statistical software
 - Pandas/Python
 - R
- Visualization
 - Plotly
 - Dash
 - Jupyter Lab

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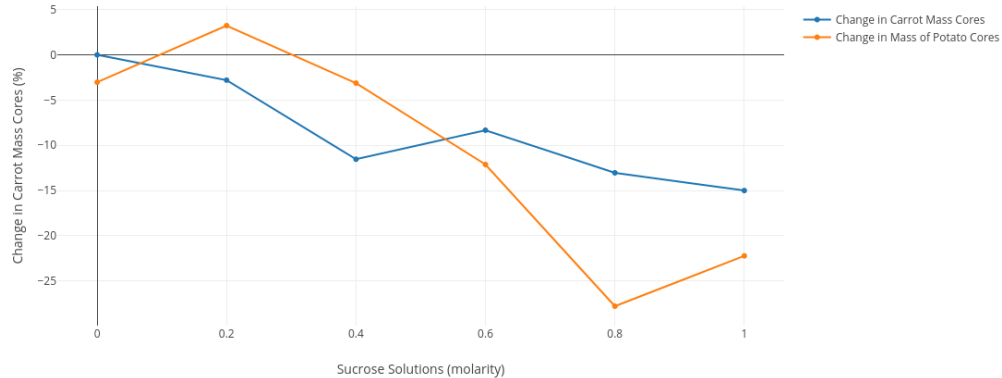
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Plotly

- Chart Studio

	Sucrose Solutions	Change in Carrot Mass Cores	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	0	0																
2	0.2	-2.8																
3	0.4	-11.54																
4	0.6	-8.33																
5	0.8	-13.04																
6	1.0	-15																
7																		

% Change in Mass of Carrot & Potato Cores vs Molarity of Sucrose Solutions



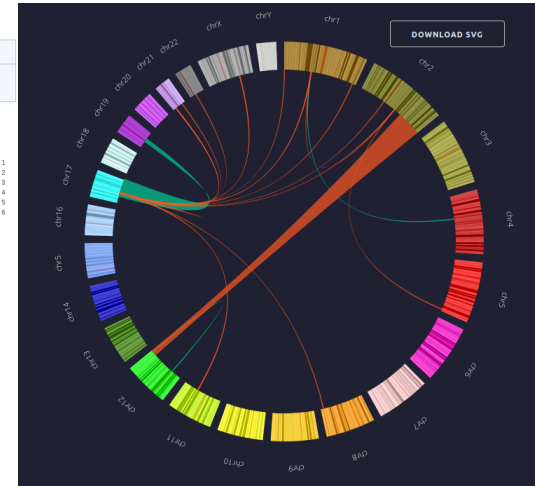
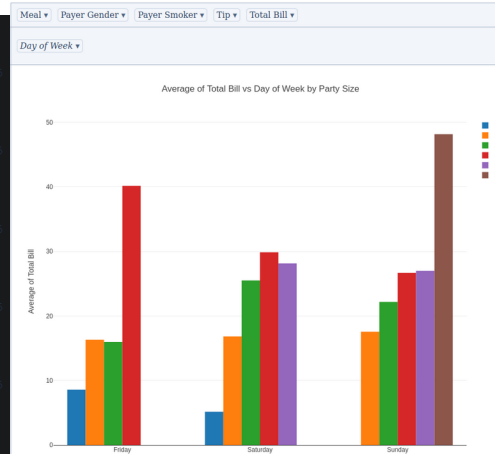
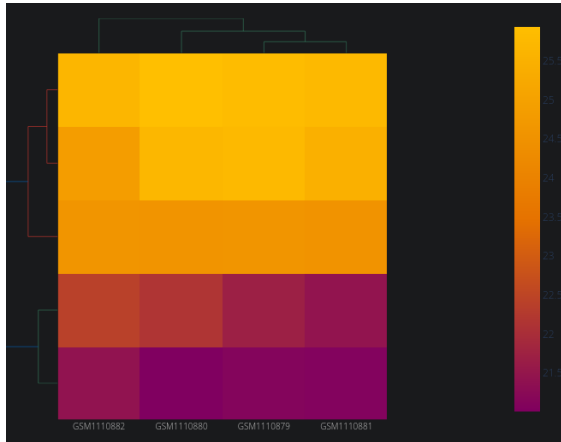
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Dash

- [Dash Enterprise App Gallery](#)

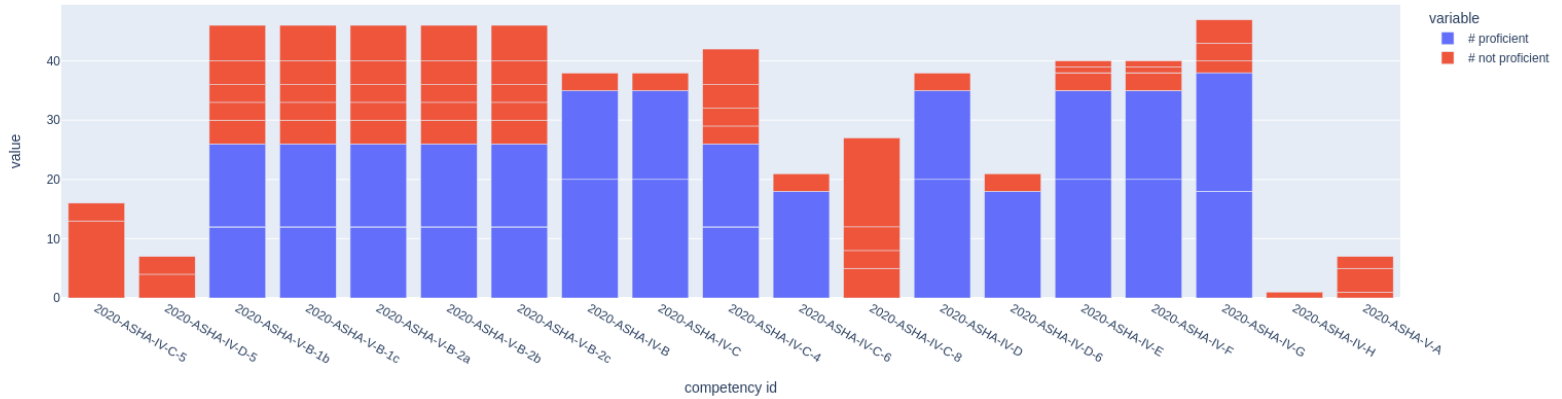


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Dash Example 1



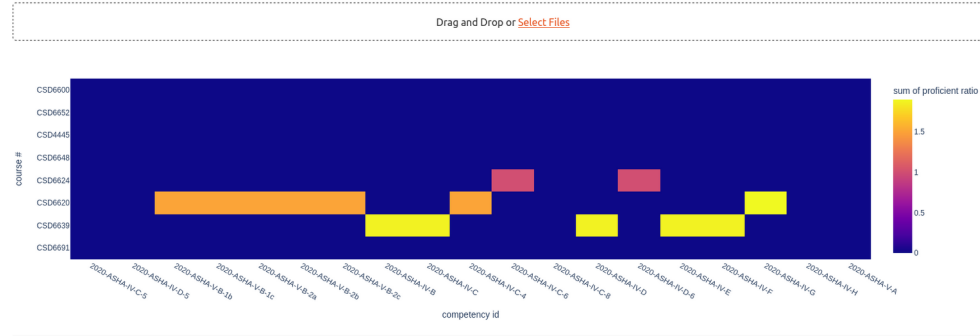
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Dash Example 2

2D Histogram aka Heatmap



report:20230713_1327-comma_separated.csv - modified: 2023-07-13 06:27:16

Choose X axis data:

Choose Y axis data:

Choose Z axis data:

[Create 2D Histogram](#) [Create 2D Histogram with margin plots](#)

framework	competency id	competency name	course #	proficient	# not proficient
CSD / SLP ASHA Framework 2020	2020-ASHA-IV-C-5 ASHA Standard IV-C-5: Hearing Disorders		CSD6691-03-Su22	0	13
CSD / SLP ASHA Framework 2020	2020-ASHA-IV-D-5 ASHA Standard IV-D-5: Hearing		CSD6691-03-Su22	0	4
CSD / SLP ASHA Framework 2020	2020-ASHA-V-B-1b ASHA Standard V-B-1b: Collect & Integrate Case History		CSD6691-03-Su22	0	4
CSD / SLP ASHA Framework 2020	2020-ASHA-V-B-1c ASHA Standard V-B-1c: Select & Administer Evaluation		CSD6691-03-Su22	0	4
CSD / SLP ASHA Framework 2020	2020-ASHA-V-B-2a ASHA Standard V-B-2a: Develop plans		CSD6691-03-Su22	0	4
CSD / SLP ASHA Framework 2020	2020-ASHA-V-B-2b ASHA Standard V-B-2b: Implement Plans		CSD6691-03-Su22	0	4
CSD / SLP ASHA Framework 2020	2020-ASHA-V-B-2c ASHA Standard V-B-2c: Use Appropriate Materials		CSD6691-03-Su22	0	4
CSD / SLP ASHA Framework 2020	2020-ASHA-IV-B ASHA Standard IV-B: Communication & Swallowing		CSD6639-VSsharp-F22	20	3
CSD / SLP ASHA Framework 2020	2020-ASHA-IV-C ASHA Standard IV-C: Disorders and Differences		CSD6639-VSsharp-F22	20	3
CSD / SLP ASHA Framework 2020	2020-ASHA-IV-C-4 ASHA Standard IV-C-4: Receptive and Expressive Language Disorders		CSD6620-KBlaiser-F22	12	3
CSD / SLP ASHA Framework 2020	2020-ASHA-IV-C-6 ASHA Standard IV-C-6: Swallowing Disorders		CSD6624-SSmith-523	0	3
CSD / SLP ASHA Framework 2020	2020-ASHA-IV-C-8 ASHA Standard IV-C-8: Social Aspects of Communication		CSD6620-KBlaiser-F22	0	5

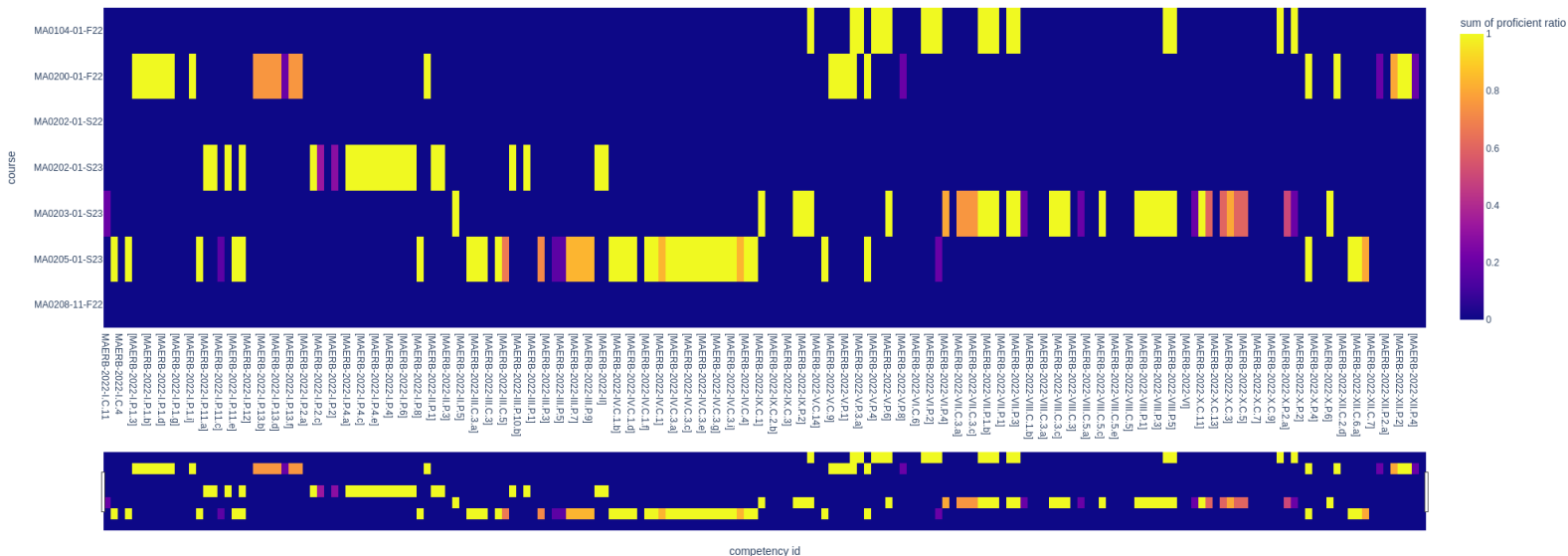
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Jupyter Lab Examples



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Live Examples



Gene Kranz at Mission Control
Credit: NASA

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Conclusions

- Collaboration
- Gradual growth
- Reporting is key

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Questions?



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References

- Drisko, J. W. (2014). Competencies and their assessment. *Journal of Social Work Education*, 50(3), 414-426.
- Moodle. (2023, July 14). *Competency frameworks*. Moodle Docs.
<https://docs.moodle.org/en/Competencies>