

YES, NO,
MAYBE SO.

A Continuum of
Library Options
in Response to the
Question of
Learning Analytics



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Megan Oakleaf | moakleaf@syr.edu | [@oaktreemob](https://twitter.com/oaktreemob)

Library Integration into Institutional Learning Analytics



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Problem/Impetus – Completion & Debt Crises

- More students dropping out before completion
 - 6-year graduation rate mired below 60%
 - Disproportionately impacts students of color
 - Disproportionately impacts students from low-income families
- More students accruing debt (and defaulting)

What happens to a dream deferred?

Does it dry up

red?

Like a raisin in the sun?

Or fester like a sore ~~—~~

~~—~~ And then run?

Does it stink like rotten meat?

Or crust and sugar over —

like syrupy sweet?

???

Consequences & Negative Impacts



- Educational achievement
- Career aspirations
- Financial security
- Socioeconomic mobility
- Knowledge and skill attainment
- Self-actualization
- Feelings of accomplishment
- Community membership

Wolff-Eisenberg, C. (2018). *Amplifying student voices: The community college libraries and academic support for student success project* (report). New York, NY: Ithaca S+R. Retrieved from http://www.sr.ithaca.org/wp-content/uploads/2018/08/SR_Report_Amplifying_Student_Voices_CCLASS_-_08132018.pdf



Quality

Research on Reasons or Remedies for Lack of Retention



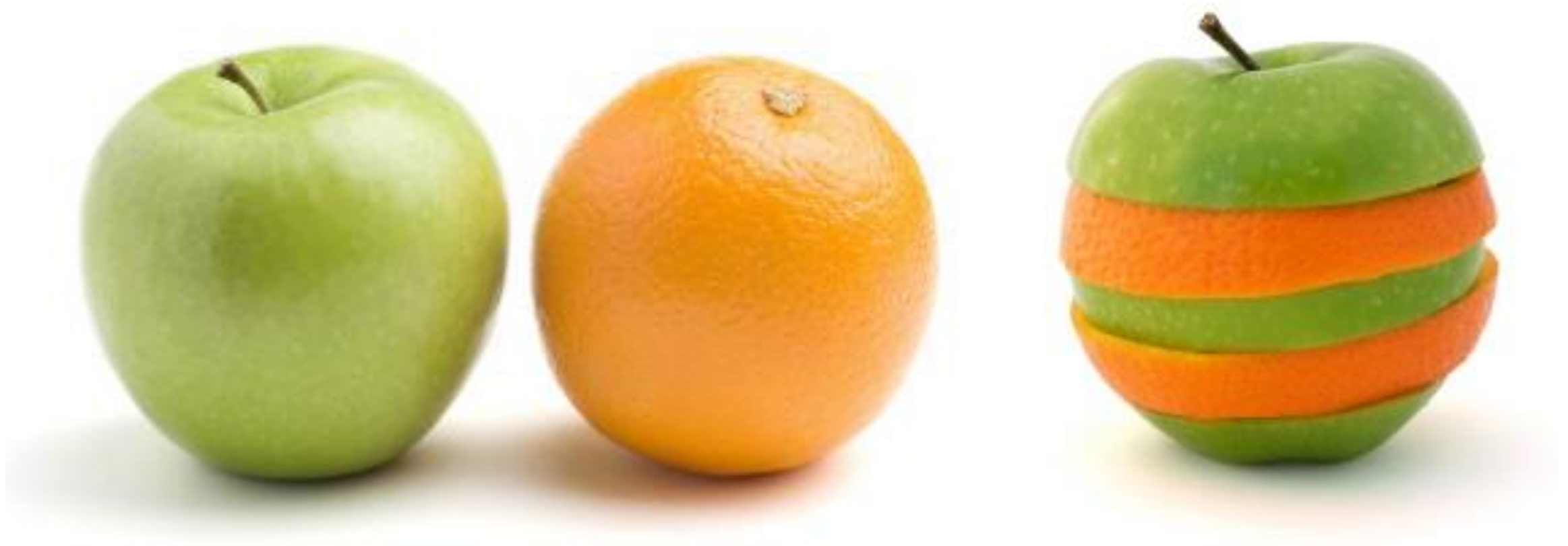
- pre-entry student attributes
- institutional characteristics
- student involvement and engagement (particularly in the first year)
- participation of faculty in student life in and out of the classroom
- cultural, economic, and social forces within and outside of the institution
- issues of equality and the lack thereof
- external events in student lives
- etc.

“It is one thing to understand why students leave; it is another to know **what institutions can do to help students stay and succeed**...knowing why students leave does not tell us, at least not directly, why students persist. More importantly it does not tell institutions, at least not directly, what they can do to help students stay and succeed.”

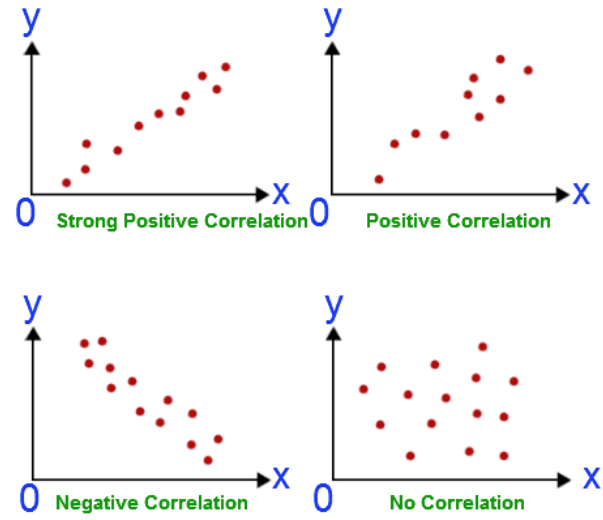
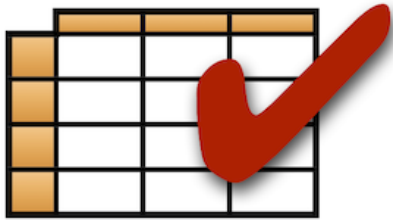
“We need to know more about the nature of [student] **experiences** in [their] institutions, **the ways those experiences influence persistence**, and more importantly **the sorts of...actions that enhance their success** in higher education.”

Learning Analytics





Learning Analytics or “Library Analytics”?

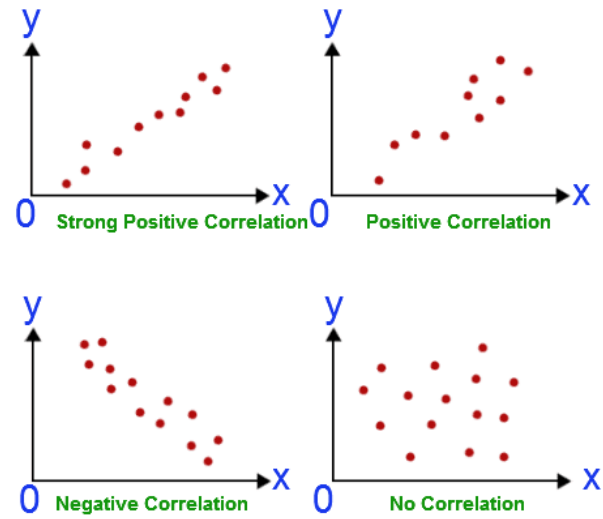


Libraries & Student Learning Assessment Arc



Institutional Focus





THE
TEST

Student Learning Assessment Arc

Take the Survey



Learning Analytics Definitions

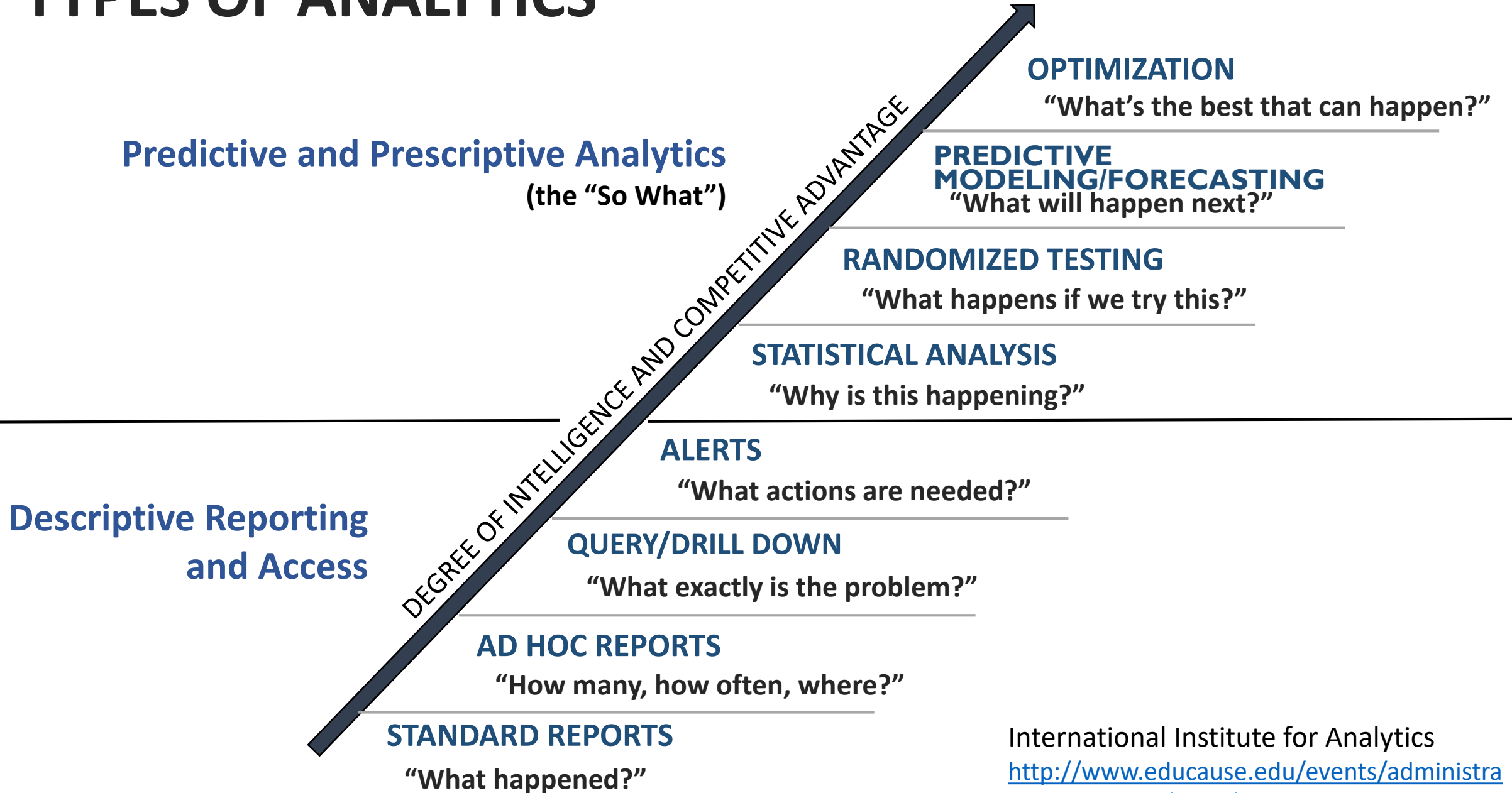
“the measurement, collection, analysis, and reporting of data about learners and their contexts, for the purposes of understanding and optimizing learning and the environments in which it occurs.”

Conole, G., Gasevic, D., Long, P., & Siemens, G. (2011). Message from the LAK 2011 general & program chairs. *Proceedings of the 1st International Conference on Learning Analytics and Knowledge, LAK 2011*. Banff, AB, Canada.

the “collection and analysis of usage data associated with student learning. The purpose of [learning analytics] is to observe and understand learning behaviors in order to enable appropriate interventions.”

EDUCAUSE Learning Initiative. (2011, April). *Learning analytics: The coming third wave* (brief). Louisville, CO: EDUCAUSE. Retrieved from <https://library.educause.edu/~media/files/library/2011/4/elib1101-pdf.pdf>

TYPES OF ANALYTICS





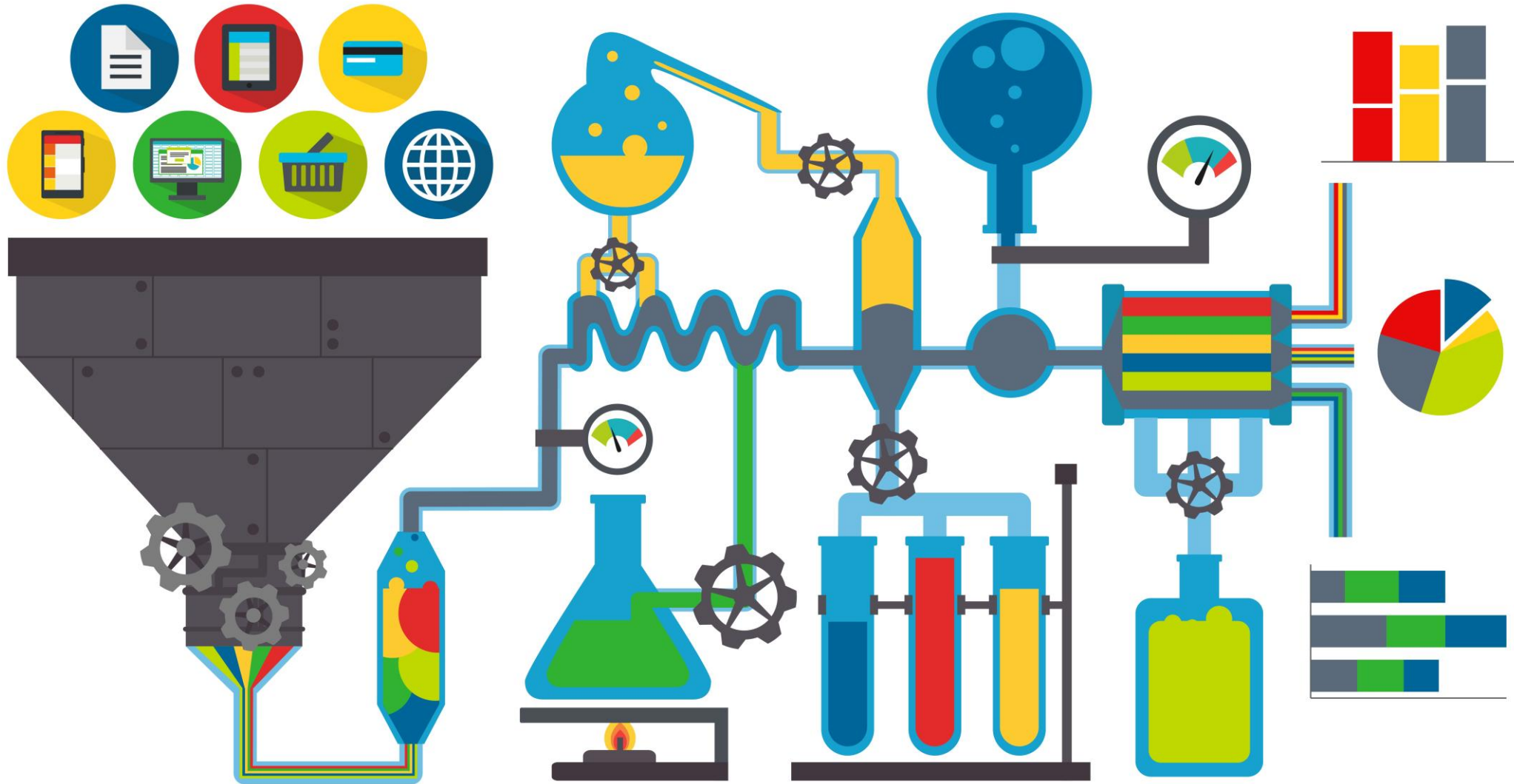
Why Learner Analytics Matter in Higher Education

https://www.youtube.com/watch?v=_bewbrPKTwo

Actions/Interventions



Where does the data come from?



Pedagogical Purpose





Organizational Culture



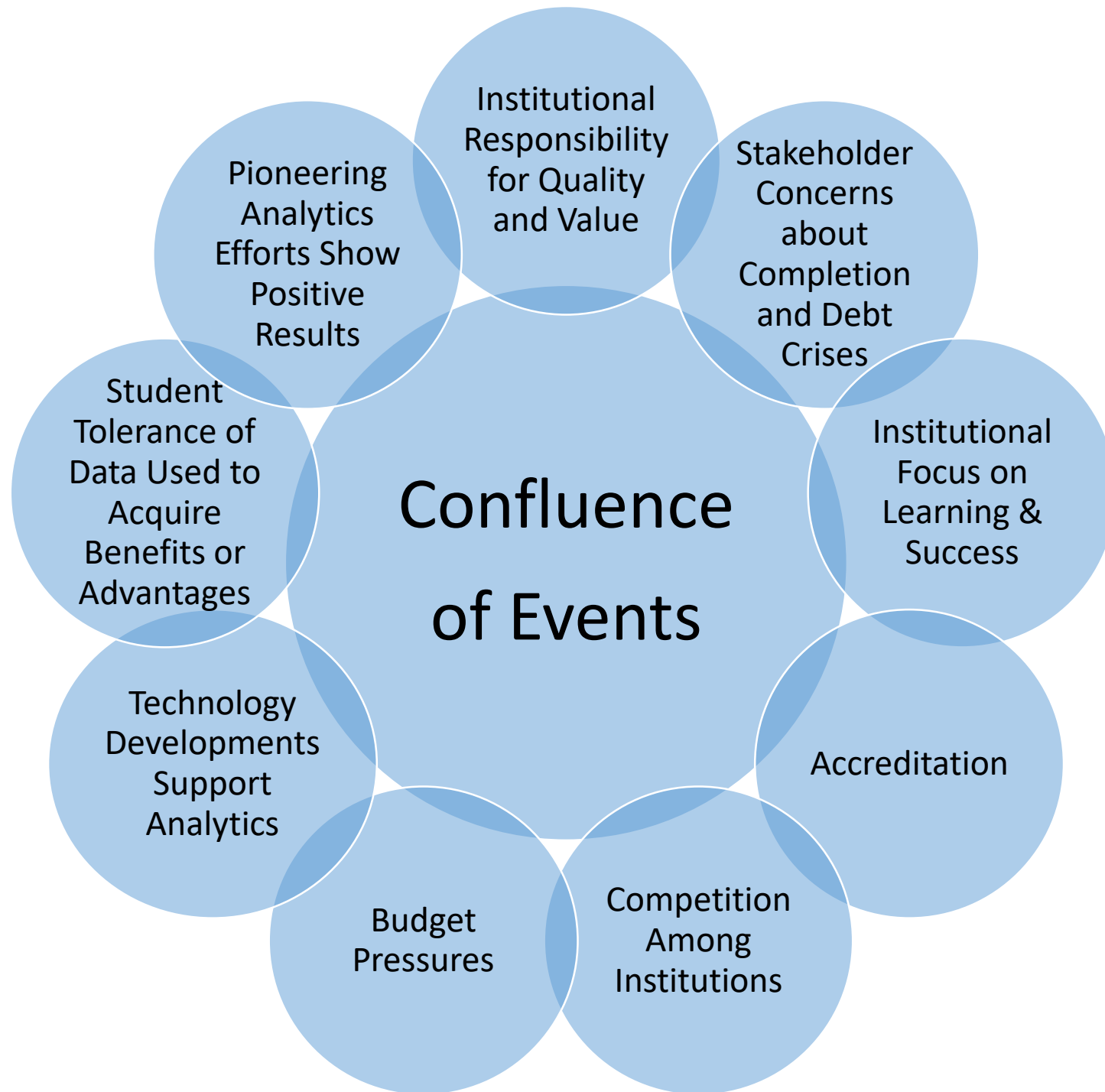
DATA

Is there a role for libraries
in learning analytics initiatives?

And if so, what does that role look like?



Coalescing Facilitators for Library Engagement in Learning Analytics



What unique knowledge, skills, and abilities do librarians bring to learning analytics efforts?



Relevant Librarian Aptitudes & Attitudes

- Librarians traditionally collaborate across institutional and organizational silos and can leverage existing relationships or establish new partnerships.
- Librarians can supply knowledge, skills, and abilities in areas including data, visualization, learning expertise, and privacy to institutional learning analytics efforts.
- Librarians already gather large amounts of data for reporting, accountability, and managerial decision-making.
- Librarians seek to make an impact on student learning and success; this perspective is integral to their professional philosophy.

Relevant Librarian Aptitudes & Attitudes

- Librarians have established a history of conducting assessments for continuous improvement and embracing change.
- Librarians have constructed a corpus of research demonstrating the contributions of libraries to student success and learning that can be used to advocate for a greater role in student learning and success initiatives.
- Librarians have long engaged in student learning and success initiatives and possess decades of experience assessing student learning outcomes.
- Librarians are guided by professional principles and viewed as a “trustworthy” profession.

More on Librarian A&A for Learning Analytics

- Austin Booth, H. & Hendrix, D. (2015). Libraries and institutional data analytics: Challenges and opportunities. *The Journal of Academic Librarianship*, 41(5), 695-699. doi:10.1016/j.acalib.2015.08.001
- Oakleaf, M. (2016, December 8). What's missing from your institutional learning analytics initiatives? *EDUCAUSE Review*. Retrieved from <https://er.educause.edu/blogs/2016/12/whats-missing-from-your-institutional-learning-analytics-initiatives>
- Oakleaf, M. (2016). Getting ready & getting started: academic librarian involvement in institutional learning analytics initiatives. *The Journal of Academic Librarianship*, 42(4), 472-475. doi:10.1016/j.acalib.2016.05.013

What are the options for
librarian involvement in learning analytics
going forward?



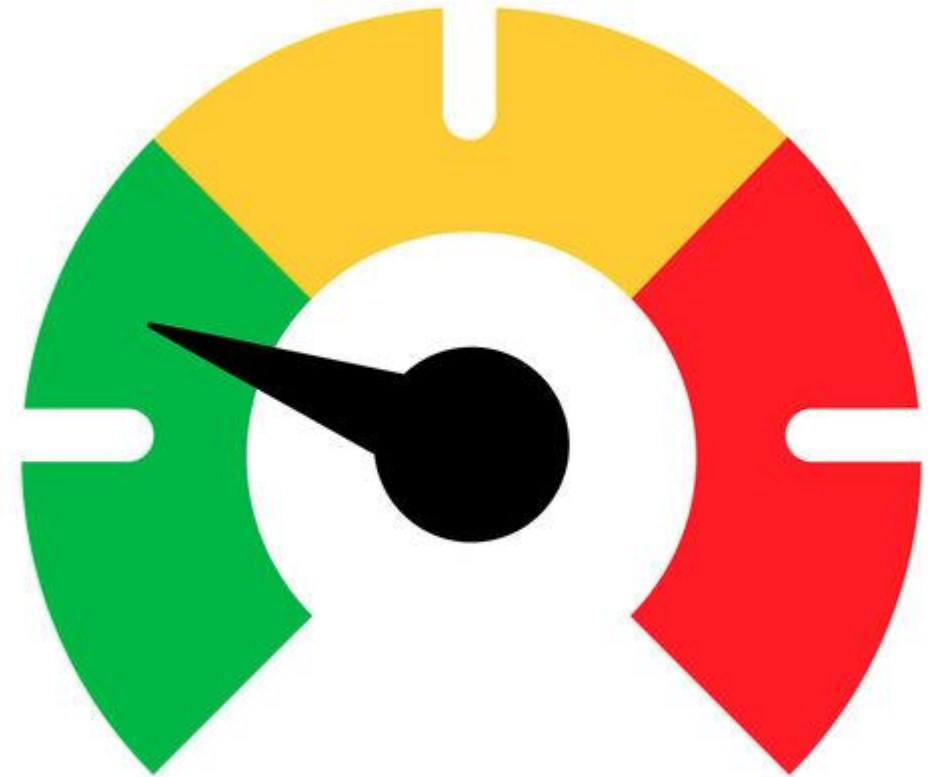


What do we want/need to know?

User Stories

- As [who], I want [what], so that [why].
- As a [user], I want [goal] so that [reason].
- As [stakeholder], I want [to be able to do an activity, to have awareness, to take an action requiring library data] in order to [achieve outcome, solve problem, meet need, maybe institutional in nature].

High Potential Impact
Medium Potential Impact
Low Potential Impact



Communication

- Engage in discussions about learning analytics across the institution
- Convene institutional or cross-institutional discussions about learning analytics

Policy & Procedure Activism

- Shape policies governing the deployment and use of learning analytics
- Establish procedures for learning analytics
- Advocate for data security and privacy

Participation

- Participate in institutional learning analytics by contributing library data
- Determine the library data to contribute (or withhold) from learning analytics systems
- Experiment and innovate in learning analytics

Meaning Creation

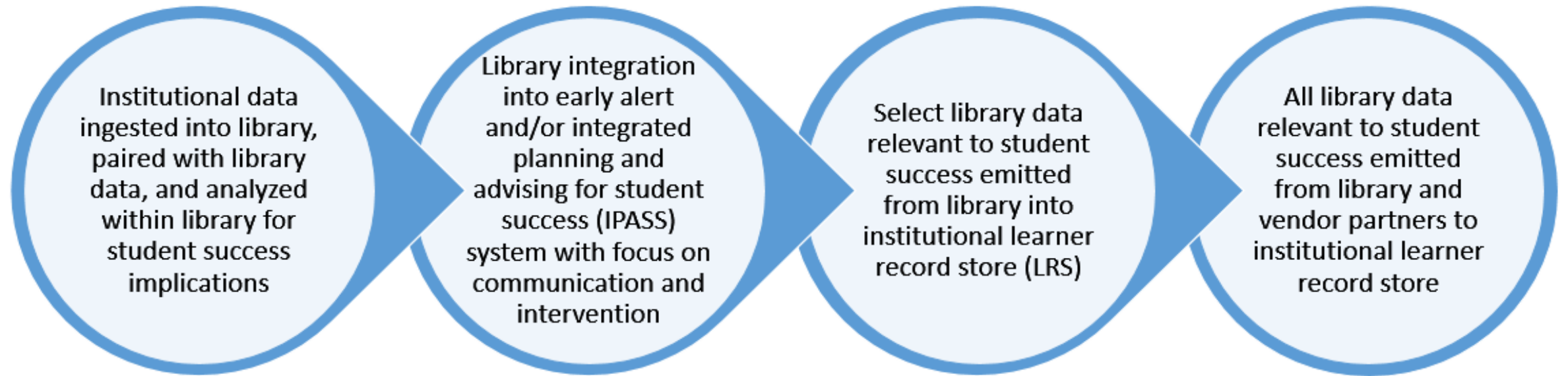
- Consult on meaningful data ingested into learning analytics systems
- Provide expertise in data science, curation, stewardship, metadata, taxonomies, classification, and visualization
- Demonstrate and articulate the value of information revealed by learning analytics

Action

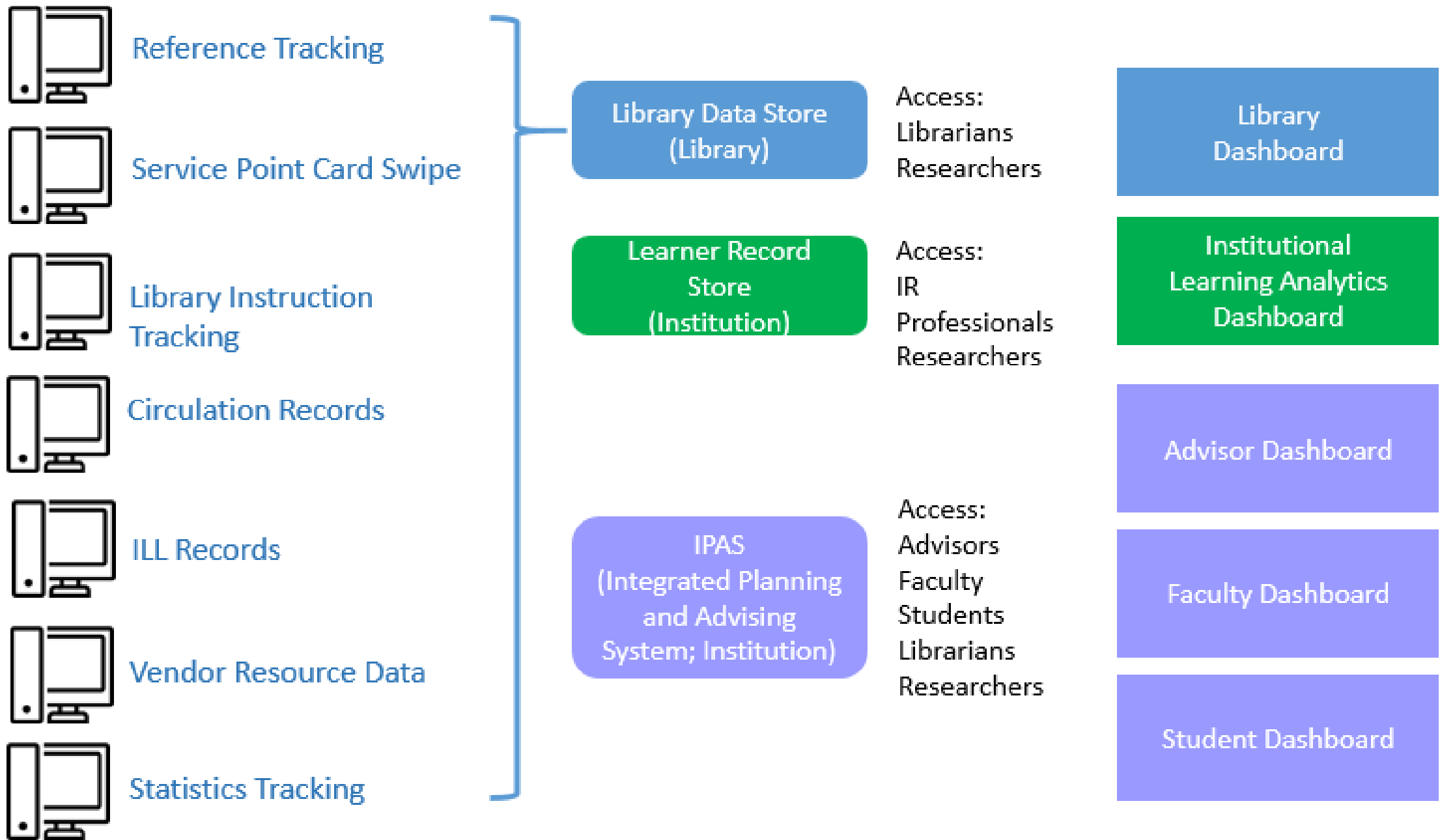
- Collaborate to act upon findings revealed by learning analytics
- Intervene with students seeking assistance through or identified by learning analytics efforts

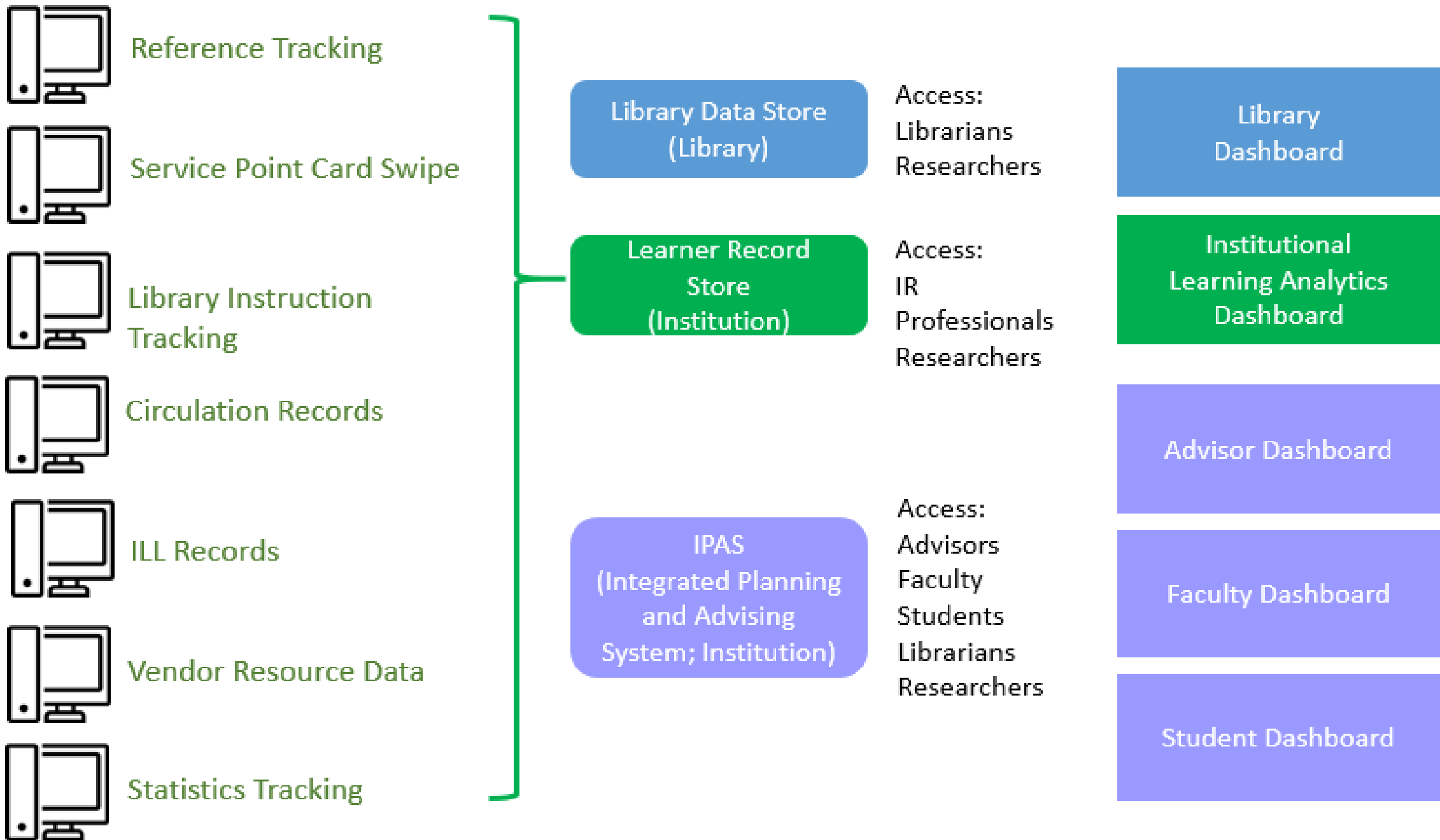
Possible Librarian Roles in Learning Analytics

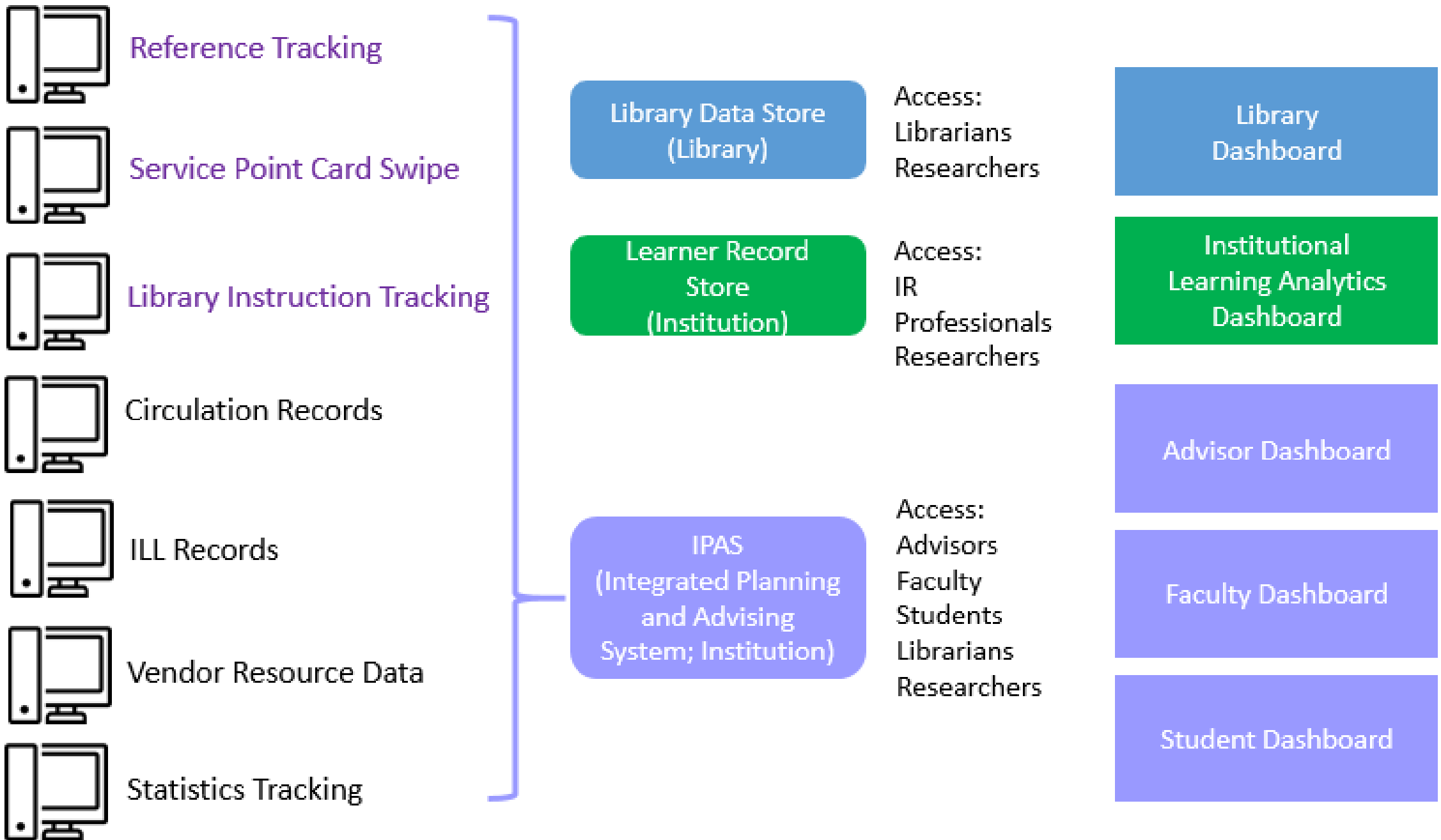
Possible Future States of Library Involvement in Learning Analytics



mcontinuum







Library Interactions in Curriculum

Code	Title	Co-Req	Pre-Req	Major	Ave Grade	Retained to Following Semester	Library Resource Use	Library Participation
ENG 101	First-Year Writing	n/a	ENG 100	Gen Ed Core	87%	54%	* * * * *	* * * * *
MTH 101	Intro to Mathematical Reasoning	MTH 102	n/a	Gen Ed Core	82%	48%	* * * * *	* * * * *
IST 101	Careers in Information Studies	n/a	n/a	Info Mgmt	93%	85%	* * * * *	* * * * *
SPN 101	Spanish I	SPN 102	n/a	Spanish	85%	82%	* * * * *	* * * * *
ART 351	Art History I	ART 352	ART 251	Art	94%	94%	* * * * *	* * * * *
BUS 251	Global Enterprise	n/a	BUS 101	Finance	76%	89%	* * * * *	* * * * *

Library Interactions in Student Population

Library Success Indicators	N Students	Ave GPA	Ave Earned Credits	Ave Retention Risk	Academic Integration Score	Ave Velocity Score
Participates Instruction Session	1025	3.2	36	1.4	2.4	45
Participates Reference Transaction	783	3.5	23	2.1	5.3	57
Participates Event or Exhibit	326	2.8	46	0.3	3.9	23
Attends Library Space	2130	2.9	34	1.8	2.9	37
Checks Out Resource	1467	3.4	23	0.9	1.7	61
Uses (Retrieves, Saves, Downloads) Resource	1823	3.4	43	0.8	6.4	78

Library Interactions and Student Success

Summary | **SSMx Predictors** | Student Watchlist

0% 100% 18 62

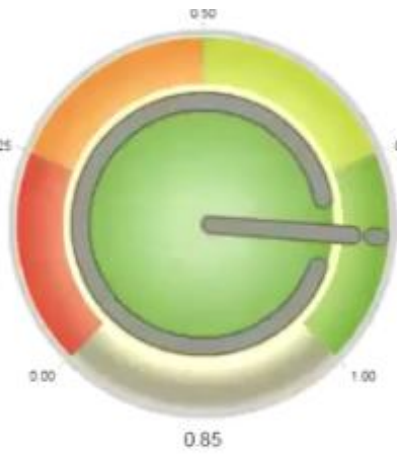
Library Score



GPA



Earned Credits



Retention Risk



Velocity



# Students	Months Enroll...	Attempted Credits	Earned Cr.	Prior Cr	W Cr	Transfer Cr After Start	Total Credits
400	25	54	46	22	2	2	70



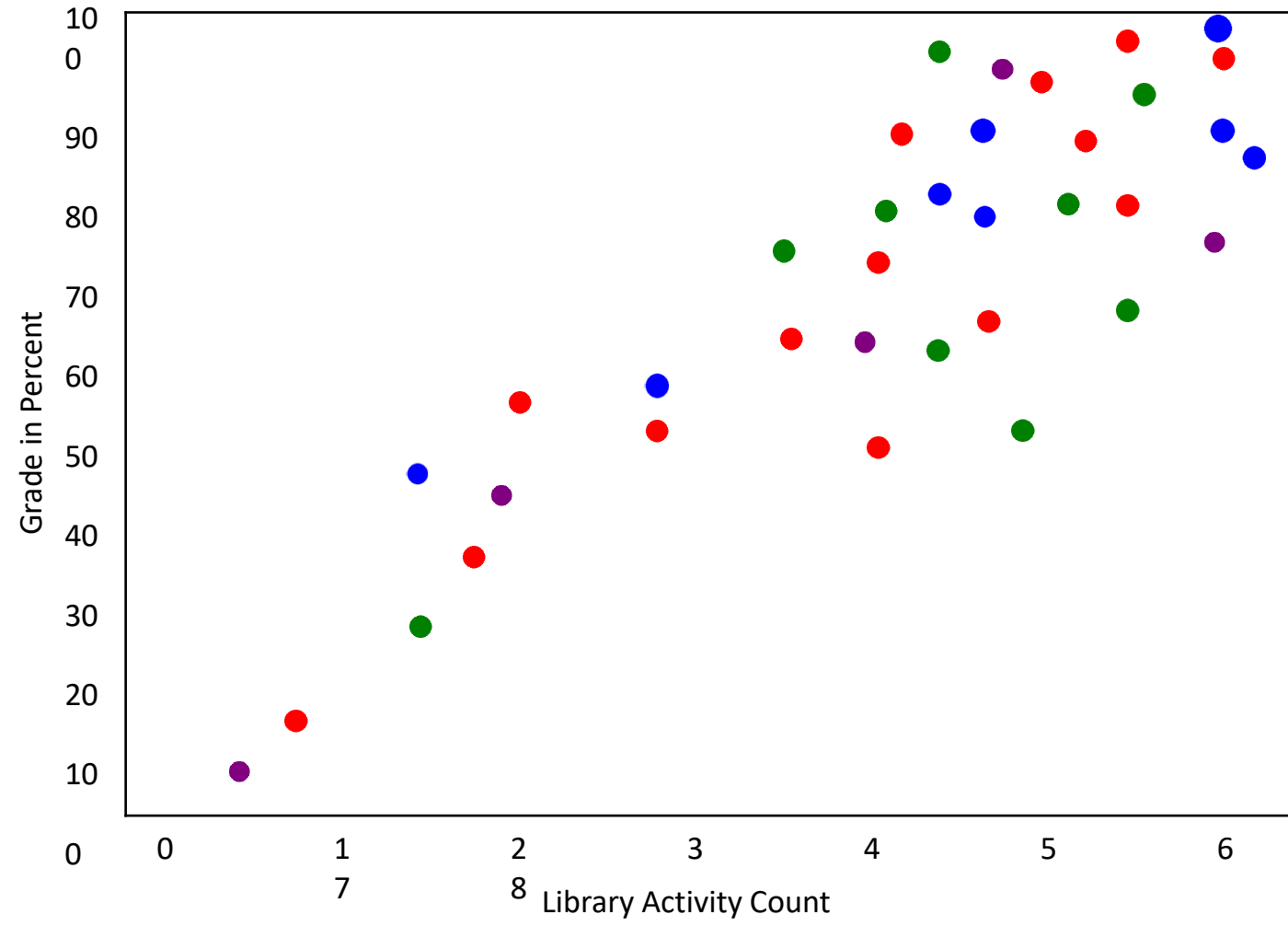
Library Interactions in a Course

Student (Identified? Masked?, Aggregated?)

Library Success Indicators	Comparison to Average			
	-4	-2	2	4
Participates in Intervention – Instruction Session				
Participates in Intervention – Reference Transaction				
Participates in Intervention – Event or Exhibit				
Attends – Library Building				
Attends – Learning Commons, Study Room				
Attends – Library Presentation Room, MakerSpace, Lab				
Attends – Special Collections, Archives				
Checks Out – Book, eReserve, Interlibrary Loan				
Checks Out – Technology				
Upload – Resource to Institutional Repository				
Logs In, Prints – Library Computer				
Uses (Retrieves, Saves, Downloads) – Article, Book (part/full)				

Library Interactions in a Course

- Participates
- Attends
- Checks Out
- Uses





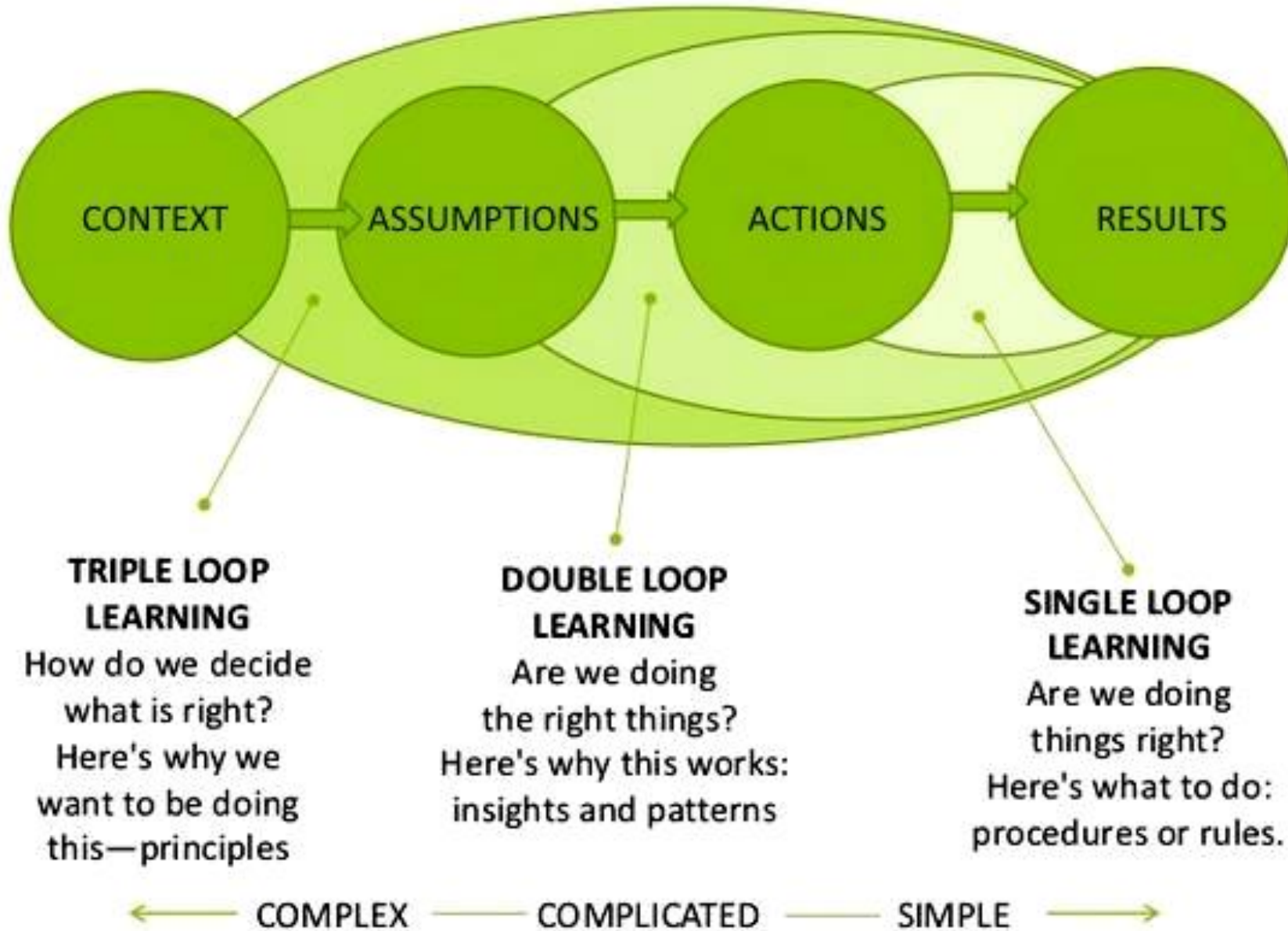
Whoa, Nellie!

What are the problems we're trying to solve?

What are the questions that stakeholders have?

What improvements, changes, or customizations could we make if we just knew more?

This is complicated.



This is important.

We need
to talk.

Yup.

Yes,
we do.

YES, NO,
MAYBE SO.

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