CIR IS

Data Culture Assessment

Center for Institutional Research in Independent Schools

Data Culture Area	Subcategory	0	1	2	3	4	YOUR SCORE
Data Infrastructure & Governance	Data cataloging: current systems	We have no database systems	We rarely interact with data outside of its home system and find exporting data quite challenging.	We are able to locate specific data sets (e.g. data used regularly in annual reporting) but can finding other data sets challenging.	While we do not have official data maps, we have personnel who can easily find and extract any data requested.	We have regularly maintained maps of all data systems that catalogue all of the data we store, its location, and accessibility	
	Data cataloging: legacy systems	We have no legacy data systems	We have legacy data systems, but we aren't sure how to locate any data from them.	We are able to locate data from a small number of our legacy systems.	We can locate data from most of our legacy systems	We can easily locate data from all legacy systems	
	Data interoperability: current systems	We do not have multiple data systems in current use	We rely heavily on manual processes (like name matching) to unite data sets from multiple systems OR we are unsure because we have rarely/never built integrated data sets.	We have a unique identifier that we can use to integrate data from some sources but must rely on name matching in other cases.	We have an official unique identifier (or combination of identifiers) that is intentionally used across all systems to allow for data integration.	We have a data warehouse or infrastructure in place that integrates data from across systems. Moreover, all datasets (where applicable) use a UUID for relating tables.	
	Data interoperability: legacy systems	We have no legacy data systems	The only way to integrate legacy data with current data is through manual matching OR we have rarely/never attempted to integrate legacy data with current data.	We are able to integrate legacy data, but find it quite onerous due to record matching challenges or differences in data structure between systems.	We are able to easily integrate legacy data with current data using a unique identifier AND we have established policies for how to resolve discrepancies in data structures between systems.	We have a data warehouse or infrastructure in place that integrates data from our legacy systems with our current systems. Moreover, all datasets (where applicable) use a UUID for relating tables.	
	Data hygeine: collection	We have no guidelines for data format. Each member of data-collecting offices uses their own judgement.	Each data-collecting office has its own unofficial understanding of data input and formatting conventions.	Some offices have official guidelines for data entry while others follow their own unofficial conventions.	Each office has an official data style manual outlining the content and formatting of data, but these manuals are not coordinated across offices.	We have an official data style manual that governs the content and format of the the data we collect in every office.	
	Data hygeine: validation	We have no procedures in place to detect missing or inconsistent data. We would only notice this if we happened to pull data for a specific task.	We check for data completeness and consistency on a sporadic, ad hoc basis in response to specific circumstances.	We regularly monitor data completeness and integrity only through day-to-day use of our data within its native systems.	We regularly monitor data completeness and integrity for specific data sets, but not all.	We have procedures in place to actively and regularly monitor the completeness and integrity of our existing data across all offices/systems.	
	Database managers & IR	We have no institutional research or data analysis function at our school.	We have designated institutional research/data analysis personnel but they handle their own data collection and storage needs separately from our database managers/tech department. Supporting IR functions is not part of database administration roles.	Database managers have limited responsibility for supporting specific data reporting requirements or analysis projects (annual board report, accreditation reports, etc.)	Supporting data analysis initatives is an expectation of database administrators, but collaboration is on an ad hoc, project-by-project basis.	Supporting data analysis initiatives is explicitly part of our database administrator's role and they actively collaborate with the schools institutional researcher/data analyst (s) throughout the research cycle.	
						Data Infrastructure & Governance Total:	0
Data Literacy	Statistical Knowledge: IR Person	We have no designated IR staff.	We have an IR person or team, but they have little to no background in statistical analysis	Our IR person or team is building their statistical skills but are still developing an understanding of introductory statistics.	Our IR person has mastery of introductory statistical analysis including descriptive statistics, regression analysis, inference testing, and standard types of graphs (box plots, pie charts, line graphs, etc.)	Our IR person is trained in advanced statistical techniques including quantitative and qualitative analysis, survey/study design, mathematical modeling, etc. (typically skills that come with a degree specifically in statistics or social science research methods.)	
	Statistical Knowledge: Leadership team	Most members of our SLT have no experience in interpreting quantitative reports in the context of school policy decisions.	Statistical knowledge within our SLT is generally low and/or uneven from person to person. There is no formal data literacy training for people in these roles, and interpreting statistical results requires extensive support and explanation from an IR or data analysis practitioner.	Everyone on our SLT has had some exposure to basic statistical concepts, and the group is able to understand statistical results with some support/explanation from an IR or data analysis practitioner.	Everyone on our SLT is practiced in independently reading and interpreting standard graphs and statistics (including mean/median, standard deviation, regression coefficients, and inference test results.) They either came to their role with this knowledge or it was the result of training provided internally.	Not only is everyone on our SLT a fluent data consumer, but they are also able to independently communicate with their reports and wider community about data. They also actively participate in project selection and design.	
	Statistical Knowledge: General faculty/staff	No one on our faculty/staff has experience with reading or interpreting statistical results.	While there may be pockets of expertise in data literacy in some departments/offices, our typical faculty/staff member has low exposure to or background knowledge of introductory statistical concepts.	Some of our faculty/staff, including some of those outside of quantitative job functions, have regular experience with interpreting basic statistics.	The large majority of our faculty/staff, including those outside of quantitative job functions, have regular experience with interpreting basic statistics.	Everyone on our faculty/staff already has a background in interpreting basic statistics OR we do formal data literacy training for all staff to teach them how to read and interpret the reports they routinely see in the course of their work.	
	Interface Experience: IR person	Our IR/data analysis staff produces static reports (e.g. Word documents or PowerPoints that are not interactive) only and can find the process challenging.	Our IR/data analysis staff produces static reports only but is able to do so easily while also presenting a variety of type of graphs/tables.	Our IR/data analysis staff is fluent with the production of static reports and can also produce basic interactive dashboards using visualization packages like Google Data Studio, Microsoft PowerBI, and/or Tableau.	Our IR/data analysis staff can fluently use advanced built-in features in interactive dashboard packages (like Google Looker Studio, Microsoft PowerBI, and/or Tableau.) Advanced skills include access control via data blends and use of parameters to dynamically alter the content of graphs.	Our IR/data analysis staff meets all previous criteria AND can build custom visualizations using scripts and/or programming languages like R or Python.	
	Interface Experience: Leadership team	This group has no experience with reading statistical reports.	Members of this group have some familiarity with reading static reports that include basic graphs and statistics but often need some guidance or scaffolding to interpret them.	Members of this group generally have regular practice with reading static reports and can accurately interpret them independently.	The primary format of reports is interactive dashboards but most people in this group need scaffolding and guidance to navigate them.	This group has regular practice at independently using interactive dashboards and can use them fluently to explore their own questions.	
	Interface Experience: General faculty/staff	This group has no experience with reading statistical reports.	Members of this group have some familiarity with reading static reports that include basic graphs and statistics but often need some guidance or scaffolding to interpret them.	Members of this group generally have regular practice with reading static reports and can accurately interpret them independently.	The primary format of reports is interactive dashboards but most people in this group need scaffolding and guidance to navigate them.	This group has regular practice at independently using interactive dashboards and can use them fluently to explore their own questions.	
						Data Literacy Total:	0
Trust	Closing feedback loop; communication of findings	In the large majority of cases, we do not share data results outside of the SLT	Some data results are shared but only after an intense vetting process that tends to cherry pick positive results to report publicly	We do share both positive and critical results with stakeholders on an ad hoc, inconsistent basis	We do consistently make both positive and criticial results available, but there is little to no opportunity for stakeholders in engage with school leaders about the results.	There are established protocols for sharing out results (whether they be positive or critical), and these protocols are publicized to stakeholders at the outset of projects. When sharing out results, stakeholders have the opportunity to ask clarifying questions and engage in dialogue about them.	
	Takes action based on data	Data analysis exists, but it is not part of operational decision-making discussions	Data analysis results are referenced as a motivating factor for changes when they happen to coincide with a course of action the leadership had already selected.	The administration occasionally takes action based on data they have collected, but these occasions happen on an ad hoc, inconsistent basis.	The administration usually takes action based on data they have collected. Occasions when results are not incorporated into operational decisions are the exception rather than the rule.	There is no separation between data analysis and operational decision-making. Collecting and analyzing data to inform major policies is a required part of our decision-making process.	
	Transparency of methods	The administration does not share information about the data sources, methodologies, or the impact of data on decisions.	The administration occasionally shares information about the data sources, methodologies, or the impact of data on decisions.	Data sources and methodologies are shared with stakeholders to a moderate extent	Data sources and methodologies are clearly, but inconsistently shared with stakeholders	Data sources and methodologies are clearly and consistently shared with stakeholders	

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	Involvement of stakeholders	There is no evidence of any efforts to involve stakeholders in understanding the role of data in decision-making processes.	There are few or no efforts to involve stakeholders in understanding the role of data in decision-making processes.	There are occasional efforts to involve stakeholders in understanding the role of data in decision-making processes.	There are regular efforts to involve stakeholders in understanding the role of data in decision-making processes.	There are proactive efforts to involve stakeholders in understanding the role of data in decision-making processes, including providing opportunities for feedback and engagement.	
	Balance and direction of feedback flows	We do not collect feedback in any formal, systematic ways. We absorb feedback from anecdotes and individual experiences.	We have formal feedback systems, but when school leaders share data results, they are primarily about their subordinates and are almost exclusively critical.	Feedback flows almost exclusively from supervisors to reports, but feedback is consistently a balance between positive and critical results.	There are some systems in place to allow certain constituencies to give multi-directional feedback, but other constituencies are excluded. For example, there's an annual parent/guardian survey to collect feedback about both teachers and school leaders but there is no analogue system for faculty/staff to give feedback about school leadership.	Feedback flows in all directions between constituency groups and a balance of positive and critical results are consistently communicated to recipients.	
						Trust Total:	0
Growth Mindset	Who can initiate programmatic change?	Only top-level administrators can initiate programmatic change. There is a top-down approach to decision-making.	Some middle-level administrators or department heads can propose changes, but final decision-making authority rests with top-level administrators.	Teachers and other staff can suggest programmatic changes, but the implementation process is controlled by the administration.	Teachers and staff can initiate programmatic changes, which are reviewed by an established committee or process that includes representation from various levels of the school community.	All members of the school community, including students and parents, can propose programmatic changes. The school has a clear, fair, and transparent process for reviewing and implementing these proposals that balances the need for diverse input with effective decision-making.	
	What factors motivate assessment and change of program?	The motivation for assessing programs and implementing change is unclear or non-existent. Changes seem to be made arbitrarily or reactively, without clear goals or objectives.	There is some motivation for assessing programs and implementing changes, but it is not well-defined or consistent. The school may be reacting to external pressures or mandates rather than proactively seeking improvement.	The school has clear motivations for assessing programs and implementing changes, often driven by a desire for improvement or responding to identified needs. However, these motivations may not be well integrated with a broader strategic vision or goals.	The school consistently assesses programs and implements changes with clear motivations that align with strategic goals. However, these motivations might not be fully data-informed or might not take into account a comprehensive set of stakeholder perspectives.	The school's motivation for assessing programs and implementing changes is clearly defined, strategic, and data-informed. The school uses a wide range of data to inform its motivations and to guide its decision-making processes. Changes are implemented in a systematic way with clear goals and objectives, and these are communicated effectively to all stakeholders.	
	How are programs evaluated?	The school does not regularly evaluate its programs or the evaluation process is ad-hoc and not systematic. Data, if used at all, is anecdotal or informal.	The school has begun to evaluate its programs using some formal data, but the process is not yet systematic or comprehensive. Data may not be used consistently, and there may be a lack of understanding or training on how to use data effectively in evaluations.	The school has a process for evaluating its programs that includes the regular use of formal data. However, the data used might be limited in scope (for example, only looking at test scores) and not fully integrated into decision-making processes.	The school uses a comprehensive set of data in its program evaluations, including both quantitative and qualitative data. The data is integrated into the decision-making process, but the school may still be developing its capacity to use data to drive action and improvement.	The school has a robust, systematic process for evaluating its programs that fully integrates a wide range of data. The school consistently uses data to drive decision-making and improvement, and there is a strong culture of data literacy and data-driven decision making across the institution.	
	To what extent do teachers and staff embrace using data to assess and improve their work?	Teachers and staff do not embrace using data to improve their work. They do not actively seek or utilize data to make informed decisions or enhance their instructional practices. Data is not considered a valuable resource for professional growth or improvement.	Teachers and staff make limited use of data to improve their work. They may sporadically refer to data but do not consistently rely on it for making instructional adjustments or seeking areas for improvement. Data-driven practices are not fully integrated into their professional development or reflective processes.	Teachers and staff demonstrate a moderate level of embracing data to improve their work. They recognize the value of data-driven practices and occasionally use data to inform their instructional decisions and professional growth. However, there is room for improvement in terms of consistent utilization and integration of data for ongoing improvement.	Teachers and staff actively embrace using data to improve their work. They regularly collect and analyze data to evaluate their instructional practices, identify areas for growth, and make evidence-based adjustments. Data plays a significant role in their professional development, helping them refine their teaching strategies and meet the needs of their students.	Teachers and staff extensively embrace using data to improve their work. They have a deep commitment to data-driven decision-making and continuously seek opportunities to leverage data for professional growth. Data guides and fosters a culture of continuous improvement in their teaching practices.	
	To what extent are community members willing to question their core assumptions and institutional norms?	Community members rarely question core assumptions or institutional norms. Tradition and "the way things have always been done" predominates.	Some community members show a willingness to question core assumptions and norms, but this is not a widespread or consistent practice. Changes tend to be superficial and do not challenge underlying beliefs.	There is a growing culture of questioning and reflection within the community. Core assumptions and norms are often discussed, but there may still be resistance to deep or transformative change.	Many community members regularly question core assumptions and norms and are open to change. There is a willingness to engage in difficult conversations and to consider alternative perspectives. These traits may not be embedded in all institutional practices.	The community as a whole demonstrates a strong willingness to question core assumptions and norms. There is a culture of critical thinking and reflection, and this openness to questioning and change is embedded in institutional practices.	
						Growth Mindset Total:	0

	TOTAL SCORE: 0

Interpreting your score:

69-92: Highly developed Data Culture. Your school is doing a great job across the board in terms of collecting, analyzing, and leveraging data for decision making!
46-68: Very solid foundation. In many ways, the school is doing a good job of collecting, analyzing, and leveraging data. Check to see if any of the four areas seems markedly weaker than the others.
23-45: Developing Data Culture. While there may be a few areas that are strengths, there is room to grow across most dimensions of Data Culture.
0-22: Initial stages of Data Culture. There are likely a number of areas that need attention before launching an institutional research initiative.