

Hawai'i Community Foundation's Connecting for Success Initiative

Learning Brief: Data Use Capacity among Connecting for Success Teams

Prepared For

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I. Introduction

The purpose of this learning brief is to document what we have learned to date about data use capacity at the eight CFS schools: the critical components of effective data use practices, how the CFS Initiative has helped to build CFS teams' data use capacity, and the opportunities for further growth in using data to inform learning and program improvement.

Data use is a critical element of the CFS Initiative and one of four components of the CFS Implementation Framework (buy-in, data use, infrastructure, and partnerships). HCF recognizes data use capacity as critical for schools to adjust to the realities of the modern "data rich" environment. As schools build this capacity, they can develop skills needed to predict which students are at risk of dropping out and continually tailor their approach to meet students' needs.

This learning brief is part of a larger Connecting for Success (CFS) evaluation that addresses student outcomes and the effect of CFS participation on those outcomes; progress on CFS implementation; and what it takes to implement CFS effectively at the schools.

The following sources inform this learning brief:

- Eight 90-minute interviews with CFS Data Leads from each school. The interviews were a deep dive into the four data use factors in the Program Implementation Self-Assessment (PISA), a tool that was developed by Learning for Action to assess teams' implementation of CFS on a developmental trajectory;
- Evaluation Liaison case knowledge from site visits and other interactions with CFS schools;
- Schools' Year 3 CFS plans; and
- High-level input from HCF and Hawai'i P-20 staff, who engage regularly with the schools as part of grant implementation and administration.

About the CFS Initiative

Connecting for Success (CFS) is a four-year initiative funded by the Hawai'i Community Foundation and 14 funding partners, currently in its third year. Through CFS, eight public middle schools and three community partners are using an early identification and intervention strategy, serving students in the sixth, seventh, and eighth grades identified to be at risk of academic failure and later high school dropout.

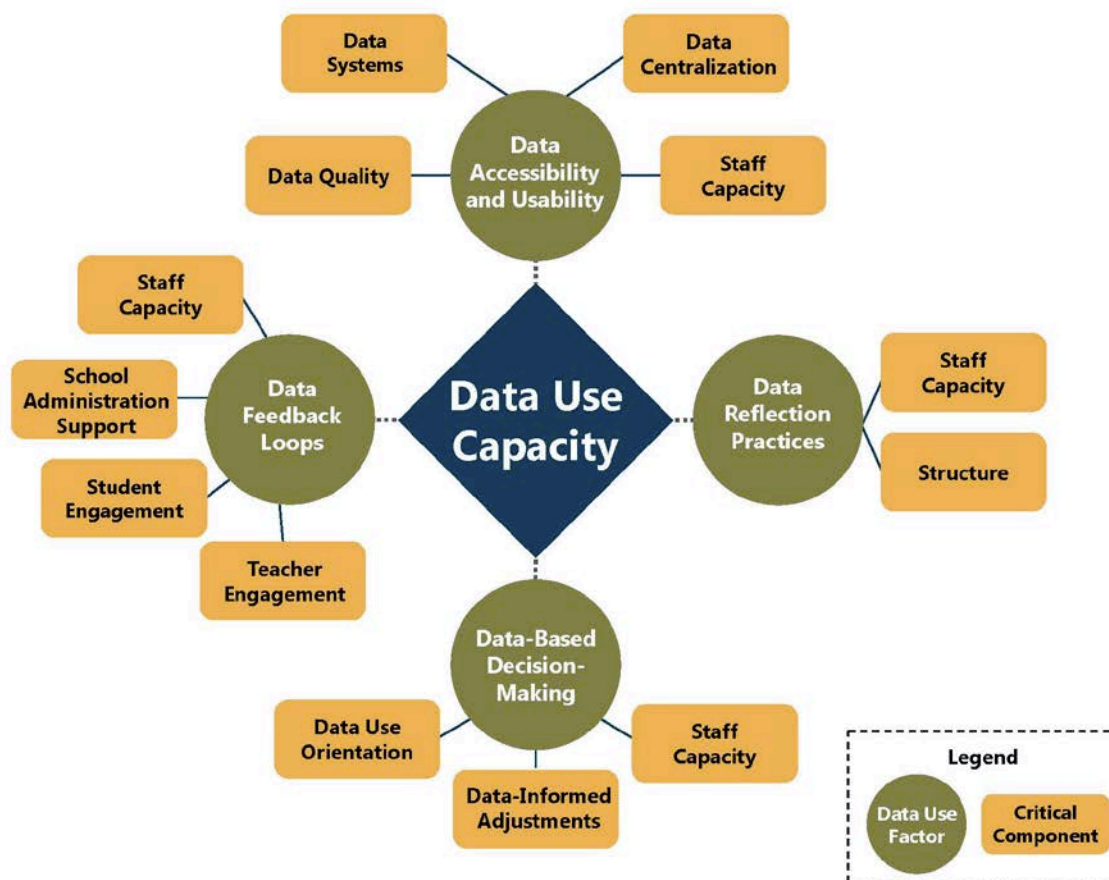
CFS provides academic and enrichment supports, as well as interventions designed to increase students' "connectedness" to school. Through increasing students' academic achievement and connection to school, CFS programming is designed to make it more likely that participating at-risk youth will transition successfully to high school, stay on the path to graduate from high school, and ultimately succeed by graduating high school on time, and being ready for success in college, career, and the community.

II. Overview of the Data Use Capacity Framework

The Data Use Capacity Framework (depicted below) is the theoretical basis for understanding CFS teams' efforts to integrate data use into their everyday practice. The framework consists of:

- **Four factors of Data Use Capacity (in green):** Data Accessibility and Usability, Data Reflection Practices, Data-Based Decision-Making, and Data Feedback Loops.
- **The critical components that compose each data use factor (in yellow):** Each data use factor has between two and four critical components, with staff capacity being a common critical component across all four data use factors.

The framework is grounded within multiple years of evaluation findings, in addition to literature review and Learning for Action's (LFA) field knowledge and expertise. Data use was first explored as a dimension of CFS implementation in the Year One Implementation Report. The four data use factors (in green) were further articulated within the 2015 Program Implementation Self-Assessment (PISA), a tool that LFA developed to assess teams' implementation of CFS on a developmental trajectory. The critical components (in yellow) were refined for this 2016 learning brief, based upon interviews with CFS teams and the LFA team's case knowledge of CFS schools.



Definitions of the Critical Components of Data Use Capacity

To ground the reader in the concepts explored in following chapters of this learning brief, we offer high-level definitions of each critical component of Data Use Capacity, organized according to the four data use factors.

Data Accessibility and Usability

- **Data Quality:** High-quality data are accurate (i.e. data errors are minimal), complete (i.e. records are not missing), consistent (e.g. dates all appear in the same format), and up-to-date. High-quality data are also relevant and tailored to the needs of users.
- **Data Systems:** A database or other repository where data is stored. Data systems should be user-friendly (e.g. have an easy to navigate interface, include user support resources such as manuals, etc.); encourage use (e.g. include analytic features or support data extraction in multiple universal formats such as .xls and .csv); be regularly upgraded to address system bugs and/or improve user-experience; and comply with data ethics regulations.
- **Data Centralization:** A tool (or meta-system) that brings together all relevant data from different systems into one centralized place. Data centralization tools allow users to follow individual students across systems and time. Data centralization also makes it possible to see individual student data holistically, instead of fragmented across systems.

Data Reflection Practices

- **Structure:** The way in which data reflection is organized to achieve the CFS team's purpose and objectives. A well-defined structure answers "who," "what," "when," and "why" for each component of the data reflection process. This organization may be long-term (e.g. a workplan for the year) or short-term (e.g. the objectives for a specific data reflection meeting). The structure creates accountability for the entire team (e.g. the entire team attends biweekly reflection meetings) and individual staff (e.g. each action item has an owner assigned).

Data-Based Decision-Making

- **Data Use Orientation:** The team's level of comfort, buy-in, and commitment toward adopting data-based practices on a proactive, consistent basis. Teams with a strong data use orientation take a critical stance as evaluative thinkers, asking questions such as: "How do we know X?", "What evidence do we have for X?", "What are we assuming about X?", and "What decisions can we make based on the data we have about X?"
- **Data-Informed Adjustments:** The way in which the team changes CFS interventions based upon the insights learned during data reflection practices. CFS staff may make changes at the program level (e.g. adding, eliminating, or modifying a CFS intervention) or at the individual level (i.e. modifying the mix of interventions that a particular student receives). Teams who thrive in making data-informed adjustments use data as an opportunity to reflect upon their workplans: they compare the results they see to the results they expected to see, and they use evidence to question the hypotheses, assumptions, and rationale embedded in their strategies. Ongoing, iterative refinements are an indicator that teams are continuously responding to the needs highlighted in the data.

Data Feedback Loops

- **Student Engagement:** Data practices, such as goal-setting activities and incentives, which allow students to interact with and feel ownership over their own data. The extent to which students feel ownership over their data is important because control/autonomy is a key dimension of motivation:

the student sees a direct link between his/her actions and the outcome, retaining autonomy by deciding whether or how to undertake tasks.

- **Teacher Engagement:** Data practices that encourage classroom teachers to engage with CFS data. These practices may include meetings between CFS staff and teachers, collaboration between CFS staff and teachers to place students into interventions, and sharing centralized CFS data with teachers. These practices can help build teacher buy-in for the CFS program, provide teachers with data to inform their instructional practices, and ensure that the CFS program benefits from teachers' expertise and knowledge of students' needs.
- **School Administration Support:** The support the CFS team receives from Principals and other members of the school administration, including: resolving data access issues, building school-wide buy-in, and sharing pertinent information, including school- and state-wide developments with implications for the CFS team and updates on individual students.

Cross-Cutting

Staff capacity is a cross-cutting, critical component for all four data use factors. We have listed the definition below, rather than repeating the definition for each factor.

- **Staff Capacity:** Staff time, knowledge, and skillset needed to effectively use and act on data.

What You Will Find in This Learning Brief

The following four chapters explore team's current data use capacity within each of the four data use factors: Data Accessibility and Usability, Data Reflection Practices, Data-Based Decision-Making, and Data Feedback Loops. Within each chapter, we address:

- Components that are critical to successfully address each data use factor;
- Ways that CFS teams implement each critical factor in practice; and
- Opportunities to further practice and strengthen each critical factor.

In the final chapter, we summarize opportunities for HCF to work with HDOE to support CFS teams and provide recommendations for CFS teams to consider in their ongoing efforts to implement data use practices.

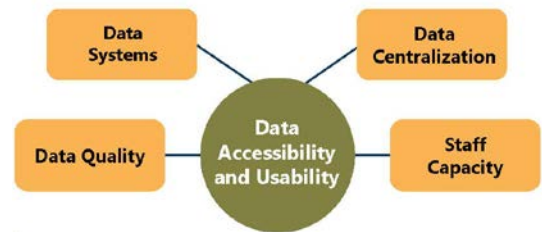
III. Data Accessibility and Usability

Critical Components of Data Accessibility and Usability

Data Accessibility and Usability is an important precursor for other data use factors. In order to effectively incorporate data routines – reflection, feedback, and decision-making – into their everyday practices, CFS teams need to be able to readily access and use student data.

Below are the critical components of Data Accessibility and Usability, based upon lessons learned among CFS schools:

- Data Quality
- Data Systems
- Data Centralization
- Staff Capacity



Data Accessibility and Usability in Practice

Component	How CFS Schools Implement this Component in Practice
	<i>iResult Participation Data:</i> CFS teams have improved their consistency and accuracy in entering iResult participation data during the last two years.
Data Quality	<i>Alternate Attendance Indicators:</i> Some CFS teams have improved the quality of their attendance data by exploring indicators to supplement HEWS attendance data. In HEWS, a student who is “off track” on attendance cannot get back “on track,” which makes it difficult to monitor improvement. Some additional data points that CFS teams have used include: using HEWS categories but starting over each month, tracking the number of student absences per week in a classroom attendance challenge, or tracking the total number of student absences per year.
	<i>CFS Data System:</i> CFS teams use iResult to track student service and participation data, as well as HEWS indicators. Over the years, iResult has made improvements in response to the needs of CFS teams. Some CFS team members appreciate iResult’s recent software improvements, such as new options for comparing data and linking to Achieve3000 and STAR data.
Data Systems	<i>HIDOE Data Systems:</i> Almost all CFS teams have access to HIDOE data systems that allow them to identify at-risk students, track the supports that students receive, and monitor student progress such as Hawai’i Early Warning System (HEWS), Electronic Student Information System (eSIS), and Electronic Comprehensive Student Support System (eCSSS). These data systems help CFS teams to triangulate and supplement data in iResult.
	<i>Holistic Data:</i> Many CFS teams collect supplemental data beyond what is required for the CFS grant in order to understand student needs at a more holistic, granular level. For example, some teams collect test scores (STAR, Measures of Academic Progress, Lexile scores, TeenBiz, etc.), coursemarks, student reflection sheets, and detailed attendance data.
Data Centralization	<i>Excel Spreadsheets:</i> Almost all CFS teams aggregate student data from multiple systems into spreadsheets. CFS has encouraged schools to compile their data and to look at data in new ways. Multiple teams share that centralizing data has increased their access to data, and ultimately, increased their data use capacity.

Component	How CFS Schools Implement this Component in Practice
Staff Capacity	<i>Dedicated Staff:</i> CFS teams have thrived when a full-time staff member is dedicated to analyzing CFS data. This increased staff capacity enables the team to aggregate data with a level of rigor that otherwise would not be possible.
	<i>Skills to Increase Data Usability:</i> Multiple CFS teams have demonstrated the skills needed to increase their data usability through visual aids. For example, some teams have added color-coding or charts to their Excel spreadsheets, which help staff readily identify trends and areas where students need most support. These helpful practices can make data formats more accessible for team reflection and data-based decision-making.

Further Opportunities to Strengthen and Practice Data Accessibility and Usability

Component	Further Opportunities to Strengthen and Practice this Component
Data Quality	<i>iResult Consistency:</i> In order to understand how the CFS Initiative is working, CFS teams must track participation data consistently. While CFS teams have improved their use of iResult over the last two years, some CFS teams still do not regularly record their intervention data.
	<i>Up-to-Date Coursemarks:</i> CFS teams should consider increasing their communications with teachers to highlight the specific ways in which CFS staff use coursemark data to support students and emphasize the importance of having access to up-to-date coursemarks. Coursemarks are not updated consistently by some teachers, which can mean that CFS team members do not know how to support their students during certain interventions such as tutoring. One CFS team estimates that 25% of teachers do not regularly upload their coursemarks.
	<i>Coursemarks that Reflect Academic Growth:</i> Some CFS staff share that students' assignments may not be tied to academic standards, which means that coursemarks are not necessarily a marker of academic growth. CFS teams should reflect upon additional indicators – such as Lexile scores or STAR scores – that can be triangulated with coursemarks to track students' academic progress over time.
	<i>Capturing Student Improvement in Attendance:</i> As noted above, CFS teams can increase the quality of their attendance data by triangulating HEWS attendance markers with additional attendance indicators. HEWS attendance markers do not show student improvement – a student who is “off track” cannot get back “on track.” Additionally, CFS team members share that any absence is counted as a full day's absence in HEWS – even if a student only missed one period— which means that using more specific data from eSIS or the school registrar may help teams have a more accurate picture of students' attendance.
	<i>Underreported Behavior Incidents:</i> CFS teams may want to consider additional ways to track student behavior. Behavior incidents may be underreported at some schools, meaning that the reported number of incidents does not fully capture student behavior issues.

Component

Further Opportunities to Strengthen and Practice this Component

The following points relate to CFS team members' ability to *access* data systems:

Data Access for Coaches, Tutors, and Community Partners: Since these key staff members are not official school employees, they do not have direct access to HEWS or iResult data due to Family Educational Rights and Privacy Act (FERPA) requirements. However, these staff members play a critical role in CFS and need access to data to inform their practice and approaches to working with individual students. HCF and CFS teams should revisit the data needs of these stakeholders and discuss how these needs could be met in compliance with FERPA requirements. For example, perhaps coaches, tutors, and community partners could participate in FERPA training and be given access to select de-identified, aggregate data, allowing them to monitor progress for the group of students they work with.

Password Storage: Staff may want to consider technical solutions for retrieving passwords needed for many different systems, such as a cloud-based password management system (e.g. LastPass) or storing passwords in an encrypted, password-protected file. Some teachers can lose access to certain data systems because they forget their passwords.

Ensuring Data Permissions Amid Staff Transitions: School administrators should keep data access in mind when filling CFS positions following staff transition, since data access is critical for CFS Leads and Data Leads to assume their responsibilities. One CFS Lead who took on the leadership role following the former CFS Lead's transition does not have access to HEWS data; the appropriate data permissions did not transfer during the transition, and s/he does not have such permissions in her/his current position.

The following points relate to CFS team members' ability to *use* data systems:

Data Systems

Ability to Extract Sub-Group Data: The ability to extract sub-group data for the CFS cohort would greatly improve CFS teams' efficiency and accuracy in inputting data into Excel. Multiple teams share that they cannot extract sub-group data for the CFS cohort in eSIS, eCSSS, HEWS, or their grading software. As a result, CFS teams must input *individual* student data manually into Excel spreadsheets. Entering this data into Excel (manually and student-by-student) takes a lot of time, which can slow down the team's ability to update data on a regular basis and lead to data entry errors.

Real-Time, "Cloud-Based" Data: Using a cloud-based platform, instead of Excel files, could support teams' ability to easily access and update their CFS data. Using Excel files can lead to version control issues or limit team members' ability to share real-time progress with each other. Furthermore, some teams use paper formats to track students' progress, which can limit teams' ability to search for data easily.

iResult Functionality: The fact that many schools still rely heavily on Excel spreadsheets as their principal database is a sign that iResult is either missing key features to meet the needs of the CFS teams or that CFS teams need additional supports to ensure they are using iResult effectively. iResult improvements that are on the horizon, such as the ability to upload data extracts from other data systems, are promising and could reduce the need for schools to rely so heavily on Excel spreadsheets.

HEWS Functionality: CFS teams would benefit if the HEWS system had the ability to generate combined reports. Currently, HEWS generates data reports for attendance, behavior, and academic data as separate exports, which creates additional data extraction steps for CFS teams. Additionally, HEWS system overwrites itself daily, which means teams cannot see students' movement over time.

Component	Further Opportunities to Strengthen and Practice this Component
Data Centralization	<p><i>More Data Needed to Understand the Full Story:</i> Some CFS teams monitor too few indicators – relying predominantly on HEWS – and would like to reference more data points to have a more nuanced understanding of student progress. These teams should consider that HEWS is a diagnostic <i>warning</i> and monitoring system that is not intended to measure student performance; additional indicators can serve as performance measures to supplement the trends captured in HEWS.</p> <p><i>Drowning in Data:</i> Other CFS teams have chosen to track so many indicators that the multiple data points may, in fact, limit the teams' ability to focus where it matters most in order to make data-informed decisions. In particular, CFS teams with large cohorts should be mindful of focusing their data collection and analysis, since any inefficiency is multiplied with a larger group of students.</p>
Staff Capacity	<p><i>iResult Skill-Building:</i> CFS team members may benefit from additional skill-building to take full advantage of iResult's functionality.</p> <p><i>Staff Time:</i> Ensuring that staff members have dedicated time to centralize CFS data is critical to support teams' data routines. Some CFS teams are not able to aggregate data with the frequency or level of detail that they would like due to limited staff capacity.</p> <p><i>Instructional Practices:</i> Teachers may benefit from professional development that helps tie their assignments to academic standards, in order to improve the validity of coursemarks as a marker of academic growth.</p>

In their Own Words: CFS Team Reflections on Data Accessibility and Usability

- *On data access:* "We all have [consistent] access to the data.... That's the success of [CFS]."
- *On data centralization:* "It's easy to see a snapshot [using Excel filters]. How is my team doing? How is this coach doing? How is this teacher doing? What is working? What's not?"
- *On data quality:* "If they're absent seven times, they're already in the 'red' [in HEWS]. There is no way the students can see the possibility of growth. We like to reset [the attendance indicator] each quarter so they can try and improve."

IV. Data Reflection Practices

Critical Components of Data Reflection Practices

Data reflection practices allow CFS teams to view students' progress from a holistic perspective and make adjustments to CFS interventions, including the overall interventions offered by the CFS team and the specific mix of interventions that a particular student receives.

Below are the critical components of Data Reflection Practices, based upon lessons learned among CFS schools:

- Staff Capacity
- Structure



Data Reflection in Practice

Component	How CFS Schools Implement this Component in Practice
Staff Capacity	<i>Dedicated Staff Time:</i> The majority of CFS teams meet biweekly or weekly, which means that CFS teams are able to create the staff time needed to reflect on CFS data as a group. CFS staff share that carving out regularly scheduled time for group meetings is essential and helps “keep everyone on the same page.”
	<i>Holistic Analysis:</i> CFS teams increasingly look at many pieces of data or the “whole child” to better understand students’ narratives and address root causes.
	<i>Self-Evaluation:</i> As part of their grant reporting, CFS teams use the Education Delivery Institute’s Assessment Framework, which has helped them reflect upon their CFS processes and interventions. One staff member shares that the rubrics helped his/her team understand where they specifically needed to make progress and that the team continually uses the framework to monitor their progress.
Structure	<i>Meeting Structure:</i> CFS teams thrive when data reflection meetings are well-structured: i.e. meetings have routines (e.g. going through academic reports first), there is an agenda with clearly-stated meeting objectives, and there is time to articulate concrete action items and assign an “owner” to each action item. One team uses a GoogleDoc for teachers to suggest meeting items in advance, which can help ensure that meetings are targeted and action-oriented.
	<i>Accountability Structure:</i> The accountability created by having an “owner” for tasks – in addition to the external accountability created by HCF’s grant requirements – helps teams stay on track.
	<i>Workplan Schedule:</i> Setting a workplan schedule for the year at the beginning of the year can help CFS teams articulate how they will accomplish their goals, sequence tasks, and establish milestones to track and reflect on progress.
	<i>Data Walls:</i> Waimea Charter and Ewa Makai use data walls within their CFS team to visualize students’ progress and observe trends easily (the data walls are not shared with students). Waimea Charter tracks students’ progress on a monthly basis using HEWS criteria and students’ initials. Ewa Makai also uses HEWS and tracks students’ progress monthly, but uses numbers instead of initials to identify students.

Further Opportunities to Strengthen and Practice Data Reflection

Component	Further Opportunities to Strengthen and Practice this Component
Staff Capacity	<p><i>Meeting Time:</i> Some CFS teams may benefit from working with their school administration to carve out protected time for CFS team meetings. CFS staff members have many competing priorities, and finding a time to meet can be very difficult, particularly for part-time CFS staff and team members on “quick response” capacity who may be called for student emergencies. Two CFS teams do not have the capacity to meet frequently (one team meets quarterly and the other meets more than once per term, but less than monthly), which limits these teams’ opportunities for group data reflection.</p>
	<p><i>Dedicated Staff:</i> Counselors in particular are pulled in many different directions due to managing the needs of all their assigned students (including at-risk and not at risk). It may helpful for all CFS schools to have a dedicated counselor for at-risk students like Waimea Charter and Stevenson. A dedicated counselor can help overcome bandwidth challenges, but also ensure that there is one person who can focus on the CFS cohort, ensure students’ needs are being met, and keep other team members accountable.</p>
	<p><i>Analytical Skills:</i> Some CFS staff may not know what to look for when interpreting CFS data and could benefit from training in basic data analyses, such as exploring student results by sub-group (e.g. students participating in a certain intervention) or calculating student improvement over time. Some CFS staff may also benefit from learning additional Excel skills to support their data reflection, such as conditional formatting, pivot tables, and filters.</p>
Structure	<p><i>Meeting Routines:</i> Some CFS teams can benefit from putting additional meeting routines into place. When teams do not have concrete meeting routines in place, and focus on “housekeeping” or general check-in items, their efficiency and focus may become limited.</p>
	<p><i>Data Walls:</i> CFS staff can work to address logistical challenges with their data walls, such as lags in certain data points (e.g. referrals entered or counselor reports completed) that can delay the team’s ability to input data. Additionally, data walls that do not include students’ names or initials can make it difficult to spot-check and understand individual students’ progress.</p>

In their Own Words: CFS Team Reflections on Data Reflection Practices

On staff capacity:

- “We made it a point to set aside time, as busy as everybody is.... Before, it was more ‘as needed’ or when we have time to meet, but now, we have dedicated time and it’s been a huge improvement.”
- “We have a space for discussion to figure out root causes – being able to find the context in the data.... [If a student has good coursemarks and bad attendance,] we could talk to the counselors and see what was going on.”
- “Having the coaches [at our CFS meetings is essential]. They can see the charts.... They’re made aware of why a student is doing well or not doing well.... They know how to encourage the students or say ‘You have all green! Keep it up!’”
- “We look at each child, each cohort kid, and see where they are in terms of grades, attendance, behavior, or other issues (test scores, etc.): what we should focus on for that kid. Drilling down for each child. That’s what we value.”
- “Going through [EDI’s Assessment Framework] rubric and going through those questions... in our mind, we were like ‘Yeah! Everything is great!’ But when we put everything against the rubric, it was like, ‘No, we don’t have this.’”

On structure:

- "We go through academic reports first – who's struggling where, how we can help them raise grades, do we need to assign tutors for certain students. Then we'll go the attendance and the behavior side – where certain truancy petitions are at, how behavior is looking, where students are at with parents. Then, we go into the community partner side – any issues or activities they have.... We learned quickly that we need the agenda – if not, we're sitting there randomly talking about things."

V. Data-Based Decision-Making

Critical Components of Data-Based Decision-Making

Data-based decision-making is the process through which CFS teams translate their data into action. By examining where students are and are not making progress, CFS teams can use this data to make decisions about how to adjust CFS interventions and their CFS workplan.

Overall, CFS teams rated themselves **lowest** in data-based decision-making (compared to the other three data use factors), which suggests this factor should be a **learning priority** for teams moving forward.

Below are the critical components of Data-Based Decision-Making, based upon lessons learned among CFS schools:

- Data Use Orientation
- Data-Informed Adjustments
- Staff Capacity



Data-Based Decision-Making in Practice

Component	How CFS Schools Implement this Component in Practice
Data Use Orientation	<p><i>Increased Comfort and Appreciation:</i> CFS team members have increased comfort with and appreciation for data-driven approaches. Some staff share that they initially felt some resistance to data use because they preferred more “human element,” “gut-level,” or “intuitive” approaches; however, they have come to realize that data use helps them make informed, unbiased decisions and shift from a reactive to proactive stance.</p> <p><i>Building Community Buy-in:</i> Multiple CFS teams have used data, such as data that show CFS students’ growth from sixth to eighth grade, to build buy-in from teachers and others for the CFS Initiative and its efforts to act on student data. Waiakea is using attendance data to inspire community-level support and buy-in for improving student attendance. Waimea Canyon promoted teacher buy-in for schoolwide efforts to improve students’ behavioral outcomes, and the school has seen a sharp decline in referrals since beginning this process.</p>
Data-Informed Adjustments	<p><i>Shifting CFS Priorities:</i> CFS teams are able to redefine their priorities according to the student needs that are illuminated when teams examine multiple data points. Some teams shifted their focus from behavior to attendance after they realized that some students with “good” behavior records were not attending school frequently enough to accumulate a discipline record.</p> <p><i>Consistent Data Monitoring and Timely Follow-up:</i> Multiple CFS teams continuously monitor data and act in timely way to address student needs. Waimea Charter consistently monitors students’ attendance to support students and ensure they are not falling through the cracks. The team is able to quickly follow-up with parents/caregivers to find creative solutions that promote students’ attendance. Waiakea and Stevenson track students’ reading-level scores and address individual reading needs through supplemental tutoring.</p>

Component	How CFS Schools Implement this Component in Practice
Data-Informed Adjustments cont'd	<p><i>Changing Intervention Offerings:</i> CFS teams continuously adjust their interventions in response to the needs of their students. For example, Central adjusted their intervention offerings after data patterns showed that students skipped their dance intervention class but regularly showed up for cooking class. Waimea Charter's CFS team has worked with teachers to create smaller learning environments for students who are struggling in class, providing a practical resource for teachers to differentiate instruction. They have also worked with mentors and asked them to meet on days that individual students tend to be absent, in order to encourage students' attendance. Ewa Makai used academic data from last year to adjust the grading format for a particular class.</p>
	<p><i>More Meeting Time Dedicated to Analysis and Decision-Making:</i> CFS team have become more familiar with their schools' data systems and increased their data analysis skills. As a result, many teams are able to spend more of their meeting time on analysis and decision-making, rather than using time to figure out the data systems.</p> <p><i>More Sophisticated Data Routines:</i> Some teams have used more sophisticated analyses to further their decision-making, such as spreadsheets that track students' attendance, behavior, and coursemarks each month or calculate gains/losses in standardized test scores. These more targeted data routines help busy CFS staff manage competing student needs, increase their focus, and respond to individual students' needs more quickly.</p>
Staff Capacity	<p><i>Increased Ability to Address Attendance Needs:</i> The attendance discussions with Hedy Chang were incredibly valuable and paradigm-shifting for CFS teams – they increased CFS teams' understanding of how much attendance affects students' prospects for success in high school, helped teams learn ways to unearth patterns and trends in attendance data, and highlighted additional attendance strategies to consider when making decisions.</p> <p><i>Strengthened Community of Practice:</i> CFS staff share that one of the CFS Initiative's greatest benefits is the opportunity to build face-to-face relationships with other schools and learn from each other. Community of Learners (COL) meetings and visits among CFS schools create spaces for schools to exchange ideas. These relationships support teams' ability to learn new approaches and adjust their interventions, in order to make decisions based upon students' progress. For example, multiple teams began using data walls after learning about the approach from Stevenson, and Stevenson is using a customized version of Waimea Charter's Individual Learning Plans with its CFS cohort.</p>

Further Opportunities to Strengthen and Practice Data-Based Decision-Making

Component	Further Opportunities to Strengthen and Practice this Component
Data-Informed Adjustments	<p><i>Improving Student Outcomes:</i> Some CFS teams need support in identifying further ways to adjust interventions after trying approaches that do not seem to work. After trying multiple strategies to improve student outcomes, some CFS teams are at a loss about what else to try. Although teams generally have solid routines and reflection processes, some rate themselves <i>low</i> on data-based decision-making because they do not know how to best proceed when students' performance continues to lag. CFS teams particularly feel out of options with family engagement and attendance. CFS teams still struggle to connect with parents/caregivers and to increase student attendance, especially since truancy petitions have limited success. One CFS team has encountered challenges in adjusting academic interventions and was surprised to see students' performance decline <i>after</i> the addition of a highly skilled teacher.</p>

Component	Further Opportunities to Strengthen and Practice this Component
Staff Capacity	<p><i>Adopting a Decision-Making Lens in All Phases of Data Use:</i> CFS teams can improve their data use by adopting a “decision-making lens” into their data centralization and data reflection practices. For example, CFS teams can work to ensure they have the right amount of data needed for focused decision-making. Teams can also work to articulate clear, specific research questions (e.g. Does attendance vary on the days our intervention is offered? Is there a relationship between tutoring and students’ Lexile scores?) in their data reflection meetings, which can support the team’s ability to transition from reflection into actionable, holistic decision-making. Research questions that are vague or too broad (e.g. How are CFS students doing? How do we need to adjust our interventions?) can make it challenging to dig into and unearth specific data patterns and trends needed to inform decision-making.</p>

In their Own Words: CFS Team Reflections on Data-Based Decision-Making

On data use orientation:

- “A lot of the way we did business before was gut level. This kid is not making progress because ‘blank.’ It wasn’t based upon data. We didn’t look at necessarily their reading score, we didn’t drill down on their attendance, whatever may impact their lack of progress. It’s not ‘we think’ [anymore]. Now, we *know*.”
- “As a school counselor, I want to see certain things and I look for those certain things. And I look for the good. But the data shows the true side of things. It takes away the emotion and shows the true measure of how things are truly working.”

On data-informed adjustments:

- “What we came to find out, our biggest problem was the attendance. Our behavior was fine because the kids were missing a lot of school. We’re running the numbers and we’re like ‘Hey, our behavior’s fine – let’s not focus on the behavior.’ The troublemaker’s aren’t coming to school, so we need to focus on getting them to school first.”

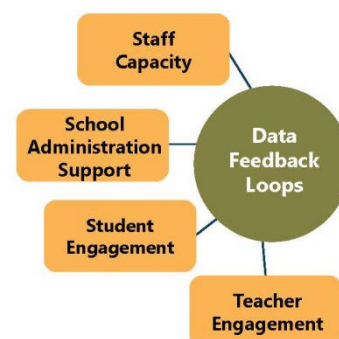
VI. Data Feedback Loops

Critical Components of Data Feedback Loops

Data feedback loops ensure that CFS data is shared with the people who need it. First, strong feedback loops within the CFS team ensure that each type of student data (academic, attendance, etc.) is consistently collected and shared in a timely fashion within the CFS team. Data feedback loops with teachers ensure that teachers receive the information needed to inform their instructional practices. Student-focused initiatives, such as incentives or goal-setting activities, serve as data feedback loops that can help students understand their progress and reflect on their goals.

Below are the critical components of Data Feedback Loops, based upon lessons learned among CFS schools:

- Staff Capacity
- School Administration Support
- Student Engagement
- Teacher Engagement



Data Feedback Loops in Practice

Component	How CFS Schools Implement this Component in Practice
Staff Capacity	<i>Clear Roles and Responsibilities:</i> Overall, CFS teams have clear roles and responsibilities for data use (e.g. dedicated staff to handle each data type).
School Administration Support	<i>School Administration Supports:</i> Principals and other school administration support CFS staff in multiple ways, including: sharing timely anecdotal data about CFS students, resolving data system access issues, engaging teachers to build collective buy-in for CFS, and providing high-level guidance to align CFS efforts with school- and state-level initiatives.
Student Engagement	<i>Students' Increased Motivation, Control, and Autonomy:</i> Multiple CFS staff share that students take more "ownership" of their performance as a result of engaging with their data. Students ask more questions (e.g. What's an excused absence? Why am I red?), are more aware of the consequences of their actions, and may be more optimistic about their hope for improvement since they can focus on specific, measurable actions (e.g. turning in their homework) rather than global performance (e.g. report card coursemarks). At Waiakea, the CFS team helped students get a more realistic understanding of their school attendance through sharing data: they asked students to guess how many days they had been absent and then gave students a card with their actual days absent (many students had grossly underestimated their absences and therefore understood the strong need to attend school more). <i>Student Incentives:</i> Multiple CFS teams use incentives to inspire students to change their behaviors and engage with their data. For example, Stevenson has a "passport program" where students can earn tickets or stamps, and Central has a "points system" with incentives for positive behaviors, such as arriving on time to school, attending tutoring, or not having any behavior incidents. <i>Goal-Tracking Activities:</i> Multiple CFS teams use goal-tracking activities that chart students' progress each quarter (e.g. coursemarks in core classes, attendance, STAR scores, behavioral incidents, etc.). Students update the sheets with their progress and set new goals, articulating the steps they will take to reach those goals.

Component	How CFS Schools Implement this Component in Practice
Student Engagement cont'd	<p><i>Data Walls:</i> Multiple teams create data walls to visualize students' progress and share it with students. At Central, the CFS team uses a data wall with HEWS categories that functions as a feedback loop because students engage with the wall in a real-time, ongoing way to check their progress. Stevenson's data wall also tracks students' performance on HEWS indicators; however, since the wall lives in the counselor's office, students can check their progress during appointments, but may not engage with the wall as directly as Central students. Kealakehe uses data walls as part of an "attendance challenge:" in Ho Hui classrooms, students place a sticker on the wall every day they attend CFS classes and receive awards for consistent attendance. At Waiakea, some workshop teachers use data walls to track classroom-level performance on benchmark assessments.</p> <p><i>Individual Learning Plans:</i> Some CFS teams use aggregated CFS data to create Individual Learning Plans (ILP) for each student, which act as a feedback loop to share students' progress with students, teachers, and in some cases, parents/caregivers. One promising practice is Stevenson's use of "mail merge" to facilitate this data sharing by exporting their Excel data into the Individual Learning Plans in Microsoft Word (one version for teachers/staff and another for parents/caregivers). This technique is particularly helpful and innovative because it eliminates the need for manual data transfer between the spreadsheet and the ILPs, reducing the staff time required and likelihood of error.</p>
Teacher Engagement	<p><i>Involving Teachers in CFS Data Reflection:</i> About half of CFS teams involve teachers in CFS data reflection. This engagement can help create buy-in among teachers for CFS, which in turn increases the likelihood that teachers will remind students to attend CFS interventions or work with students to reflect upon their CFS data. Examples of the ways CFS teams engage teachers include: CFS team members attending grade-level teacher meetings, teachers attending CFS team meetings, and CFS collaboration with teachers to place students into interventions. Together, CFS staff and teachers can discuss practical challenges and strategies – two critical aspects of an effective feedback loop system.</p>

Further Opportunities to Strengthen and Practice Data Feedback Loops

Component	Further Opportunities to Strengthen and Practice this Component
Staff Capacity	<p><i>Competing Priorities:</i> CFS teams may benefit from working within their team – or with their school administration – to manage their competing priorities, and if possible, increase their limited staff planning time. Because staff must focus on the immediate support that students need, sharing data with others (such as teachers, parents/caregivers, etc.) can fall to the backburner. Using team meeting time to prioritize a few realistic and measurable ways to share data with others may help teams feel that this practice of sharing data is more attainable.</p>
School Administration Support	<p><i>Turnover among School Administration:</i> Some CFS schools have experienced challenges due to having multiple Principals in a short time. Newer Principals may have limited background knowledge of the CFS team's priorities, which may limit the amount of support they can provide to the team. Given the important role of the Principal in these efforts, HCF and HDOE may want to consider providing specific guidance and support to Principals as part of the Initiative, building school leadership capacity to support the CFS team in its data use efforts.</p>

Component	Further Opportunities to Strengthen and Practice this Component
School Administration Support cont'd	<p><i>Communication between CFS Teams and School Administration:</i> A strong relationship between Principals and CFS teams is critical for the successful implementation of CFS, including implementation of effective data use practices. When CFS teams and Principals are in close communication, it can help to ensure there are clear roles, access to data, and a shared understanding about the use of data to inform decision-making. Some teams see ways that they could strengthen communication with their Principal. In some instances, important data such as an administrative-level decision regarding a CFS student (e.g. a student crisis, serious behavior incident, or new intervention) was not connected back to the CFS team in a timely way. CFS teams can help to mitigate these challenges by working with their Principals to identify ways to maximize their communication practices and ensure that data regarding CFS students flow through clear and efficient channels. This includes setting up processes to share timely updates, understand the implications of decisions, and how to use data to inform those decisions. CFS teams and Principals may also want to explicitly articulate their roles and responsibilities, promoting a workflow in which CFS teams are supported by Principals' "big picture" guidance and insights, while they simultaneously feel trusted and empowered to make decisions and "own" day-to-day tasks.</p>
Student Engagement	<p><i>Funding for Incentives:</i> School administrators, HCF, and HIDEOE may want to consider additional funding sources for student incentives. Some CFS teams are concerned about continuing student incentives due to a lack of funding, and these incentives are a very effective way to engage students in monitoring and acting on their data.</p>
Teacher Engagement	<p><i>Teacher Buy-in:</i> CFS teams may want to consider implementing feedback loops with teachers on a multi-year scale. One CFS team suspects that some teachers are not bought-in to CFS because they only see students for one school year and are unable to see progress over time.</p> <p><i>Communication between Teachers and the CFS Team:</i> CFS teams should consider opportunities to practice more consistent communication with teachers. Some CFS teams collaborate with teachers on an "as needed" basis to support students who are struggling, but they do not routinely engage teachers in data reflection. Some CFS teams do not share aggregated CFS data with teachers at all, while another team shares some data with teachers but does not engage teachers on a consistent basis.</p> <p><i>Teacher Capacity:</i> When planning communications with teachers, CFS teams should take teachers' limited capacity into account. Ideally, the communications should be packaged in a way that is <i>helpful</i> for teachers with limited capacity by making student information readily accessible and supporting teachers' ability to meet students' needs.</p>

In their Own Words: CFS Team Reflections on Data Feedback Loops

On student engagement:

- "[Students] are a little more conscious about how many times they're absent because they know numbers now..... They realize that you have to be in school to be able to do well.... Not just so they can go on a field trip, but because it's hard to be absent, to have make-up work."
- "It was good to have a conversation [with students who couldn't go on the incentive field trip]. 'Well, maybe you can go on the next trip.' They knew what they need to do to join us next time."

On school administration support:

- "Sometimes, the admin[istration] doesn't really have time to stop and think, 'Is this kid a CFS kid?' We understand that, but we get frustrated at the same time."
- "It's difficult to make huge strides when you're always having to introduce a new member to the team or having to refocus because somebody left."

VII. Conclusion

In this chapter, we share an overall assessment of CFS teams' growth, summarize where we see opportunities for HCF to work with HDOE to support CFS teams in their continued data use efforts, and provide recommendations for CFS teams to consider as they continue their data use practices.

Overall Assessment of CFS Schools' Growth in Data Use

The CFS Initiative has significantly helped to strengthen schools' data use capacity, contributing in some way to schools' ability to implement each of the critical components of data use. It is evident that HCF's investment has been meaningful and that schools strongly value this investment. Through CFS, teams have worked to develop centralized and accessible data spreadsheets, developed data routines and reflection processes, and shifted individual staff members' orientation toward working with data. Staff members have increased their analytical skills, tracked student progress, and changed CFS interventions to better meet students' needs. Data-based decision-making has become more integrated into school practices, and some schools plan to retain strategies such as data walls, Individual Learning Plans, and goal-setting portfolios even once the CFS initiative ends.

In exploring the ways in which schools have grown their data use efforts and the ongoing challenges that schools face in strengthening these efforts, several key lessons emerge:

- **While CFS has made a huge impact upon teams' data use capacity, this impact may not be fully sustainable without CFS.** We asked CFS teams whether their data routines will "stick" after CFS ends – nearly all said yes; however, multiple staff gave a variation of "I hope so" and expressed some hesitation. Some staff question whether their strong data practices could continue in the same way without CFS, for reasons such as: the importance of having a full-time dedicated staff person to handle CFS data, the necessity for an at-risk counselor dedicated to CFS students, the structure created by a defined CFS cohort and organized staff team, and the external accountability to HCF.
- **The biggest area of growth for CFS teams is data-based decision-making.** This growth will require anchoring teams' data routines in a decision-making lens *and* learning more ways to adjust interventions that have not been fully successful.
- **Data system limitations present an ongoing challenge for CFS teams to efficiently centralize and use student data.** Because iResult is not currently equipped to pull in and house all of the types of data CFS teams need to support students, CFS teams are manually inputting data from various systems into Excel. This process requires entering data manually (by student, not by group). This data entry is time-consuming, and teams' limited capacity could be better spent on data reflection, data-based decision-making, and engaging teachers and students with CFS data if iResult-related challenges are resolved.
- **CFS teams can grow by working to engage more teachers and students with CFS data.** Multiple teams use excellent strategies to engage teachers and students, and there is an opportunity to share these strategies more widely across CFS schools.

Recommendations for HCF to Support CFS Teams' Data Use Capacity

HCF can maximize its impact on CFS teams' data use capacity by continuing to focus on capacity-building and exploring technical solutions to data systems challenges.

Continue to Build Staff's Data Use Capacity

- **Continue to provide face-to-face professional development opportunities that promote relationships and exchange of best practices among schools.** Prioritize school-to-school sharing of best practices, such as Stevenson's work with "mail merge" to create Individualized Learning Plans, strategies to engage teachers, student incentives that have successfully inspired changes in student behavior, and ways to structure data reflection meetings.
- **Support CFS teams' data-based decision-making by generating discussion about strategies to adjust interventions.** CFS teams particularly struggle in making data-based decisions to adjust interventions that support student attendance and family engagement.
- **Reintroduce and reinforce the data reflection strategies that HIDOE and HCF shared with CFS schools.** CFS teams may benefit from revisiting the "Managing by Results" methodology from a 2016 iResult power session and the framework for data conversations that was introduced by HIDOE in the February 2015 Community of Learners meeting. These resources offer teams guidance on setting goals, checking data, reviewing progress over time, and making adjustments based on needs.
- **To the extent possible, work with HIDOE and school administrators to ensure that CFS teams have the capacity needed for planning and data reflection.** Seek to minimize the challenges created by recent adjustments to bell schedules that limit planning time and staff turnover. Advocate for full-time dedicated positions for CFS Leads and At-Risk Counselors.

Explore Technical Solutions to Data System Challenges

- **Work with HIDOE, P-20, and iResult to explore solutions to the technical difficulties CFS teams have encountered.** Ideally, CFS staff should be able to pull data together electronically without manually inputting data. At the least, data systems should have the option to pull data by group so that CFS team members can copy and paste columns of data from one data system to their Excel spreadsheet, instead of transferring hundreds of individual data points by hand.
- **Explore additional indicators that CFS teams can use to track student performance, since HEWS is meant to be a warning system.** In particular, schools may benefit from routinely collecting attendance indicators that are better able to capture improvement over time than HEWS attendance markers.

Recommendations for CFS Teams to Build their Data Use Capacity

CFS teams can continue to increase their data use capacity by rooting their data routines in a decision-making lens and working to build collective accountability and shared vision at their schools.

Intentionally Focus upon Data-Based Decision-Making

Given that data-based decision-making is the largest growth area for CFS teams overall, CFS staff should focus upon anchoring their routines in a decision-making lens. For example, CFS staff can consider these steps:

- **Refine data collection needs.** Before collecting data, CFS teams should first decide what data is needed for decision-making. This process will help teams focus on collecting key indicators, avoid collecting superfluous data, and identify data gaps.
- **Sharpen data reflection routines to make meetings more action-oriented and systematic.** A set reflection protocol based around a set of clear, specific research questions can help keep the team on track.
- **Reserve 5-10 minutes at the end of each data reflection meeting to review decisions made and next steps.** Discussing action items and recapping the team's decisions can help create clarity and promote team accountability.

Foster School-Wide Accountability and Shared Vision

- **Design alliances with school administration to develop better feedback loops among CFS team members and administrative staff.** Explicitly articulating CFS teams' needs – and their “asks” of Principals – may help improve communication between CFS teams and administrative staff. A written plan may help remind Principals of the ways that they can help increase teacher buy-in, advance the collective vision for CFS, and help CFS teams access and act upon student data.
- **Begin – or continue – to engage teachers in data reflection.** Engaging teachers in data reflection is necessary to change school culture, inform instructional practices, and build buy-in for the CFS program.
- **Continue to prioritize student engagement with data through goal-setting and incentives.** CFS teams should prioritize incentives that are structured and predictable so that students clearly understand what they are being asked to do. In addition, teams may want to consider collecting data not only on student performance (e.g. coursemarks), but student behaviors (e.g. turning in homework) so that students feel that success is attainable.