Evaluation Design: Data Analyst and Reporting Specialist and System (Power BI)

Description: The position and system were designed to improve strategic and operational decision-making by increasing access to data and reporting for staff members across the school division.

Metrics from Budget Proposal: Building and department heads will be able to efficiently access the data reports and dashboards. **Goal Met**

We will create a principal focus group to develop an individual job performance dashboard for school level administrators. [Created School Current Data and Equity Dashboard; Review presentation to principals about honing our "data gym," presented during Making Connections] **Goal Met**

Cabinet level administrators, building administrators, and department heads will use data dashboards and custom reports from the reporting system to measure progress towards existing goals and design new goals based on data provided by the reporting system while *planning* for teacher use of the reports and individual job performance dashboards during the 2021-22 school year. **Goal Met** [See previous "data gym" presentation; Division leadership should provide clear goals for the teacher use of reports]

Evaluation Questions: Is the system (Power BI) being used by administrators and department heads? Who is accessing the reports and who is accessing the dashboards?

What reports were created and which ones are being used?

How are the reports being used?

How is the new system and position being utilized?

How are schools and departments using the data?

Evaluation Activities:

1. Interview Data Analyst and Reporting Specialist and Supervisor ✔
2. Pull Power BI usage report ✔
3. Survey to all identified users ✔
   a. Sent to all Cabinet Members, All Principals, Equity Specialists, Lead Coaches, School Counselors, and anyone identified in the usage report as having used it
   b. 43 respondents to the survey with 29 reporting that they have used Power BI and 14 reporting that they have not used it
4. Identify available reports in Power BI ✔

Findings

1. The position (Data Analyst and Reporting Specialist) and system (Power BI) have been used for strategic and operational decision-making.
2. Administrators from all schools and several departments have accessed and used the data reports and dashboards.
3. Data Dashboards created for school and division use: Equity Dashboard, School Current Data, Student Location, CCCRI Accreditation, On-Time Graduation Rates, School Counselors Report, Elementary Reading Report, Budget Book-School Summaries.
4. Data Dashboards that are in progress: State of the Division, Teacher Focused Dashboard, Data Portal, Speak Up Survey results, Center 1.
5. Survey results indicated that increased training and use of the Data Dashboards within Power BI is needed to improve participants familiarity with the system and use in decision-making.

Recommendations

1. Continue work to support *Learning for All*, specifically, partner with Human Resources (Employee Services) to create an equity dashboard for retention rates. This goal is referenced in the Strategic Plan.
2. The Office of Strategic Planning should continue to support and promote this work to ensure accountability of data entry as well as direction for teacher focused reports and others.
3. Continue to provide training for staff in collaboration with the Office of Strategic Planning and the Director of Professional Development in order to institutionalize the use of the Data Dashboards.
   a. Continued use in School and Department Improvement Planning in collaboration with comprehensive school improvement teams (includes Technology, Instruction, Community Engagement, and Strategic Planning staff in conjunction with the school/department)
   b. Continued use in Division reporting such as the State of the Division and the Anti-Racism report
   c. Embed in on-boarding of new administrators
   d. Develop training calendar or planned training in schools/departments
   e. Place the Data Portal and supporting resources more prominently on the website

Other Results

Power BI Access and Navigation Instructions

The work that the Data Analyst and Reporting Specialist has completed in two years has been useful and directly supports the strategic plan. She created our first school equity dashboards, which is a strategy in *Learning for All*, and she also spent countless hours monitoring and tracking the employees who have completed the Anti-Racism Policy Training. This work

supports our goal to have 100% of staff members trained in the policy. The reports that she has created so far in Power BI support school and department improvement planning, budget development, and customer service for the Department of Technology.

Our Data Analyst and Reporting Specialist has been agile, flexible, and able to meet the school administrators needs during the COVID-19 pandemic. When presented with an immediate need, she was able to quickly create reports to help monitor and track information during the COVID-19 Pandemic when attendance and participation data by demographic group became necessary data. In short, the position has been highly utilized in the past two years. She has been given praise from many administrators and central office staff members for her work to create useful reports and to help understand the data. The attached survey shows a few of these types of comments including, "[the Data Analyst and Reporting Specialist] has been great in helping us run reports and understand what we are seeing" or, "I really appreciate the access and support from [the Data Analyst and Reporting Specialist] in utilizing Power BI."

The system, "Power BI," is being used by school administrators and some department heads. The types of users who have accessed the system include Cabinet members, all school principals and/or assistant principals, members of the Departments of Technology, Strategic Planning, Special Education, Fiscal Services, school counselors and a few classroom teachers. Building Services reached out to the Technology Team after this survey was released to see how their department could benefit from the use of Power BI.

As of April 29, 2022, 35 Departments/Schools and 131 individual users have accessed the 12 reports in the main "work space," the ACPS work space. There are two other work spaces: one for the Department of Technology and their reports and one for the Department of Fiscal Services and their reports.

Image below: Usage Report from 7/1/2020 - 4/29/2022
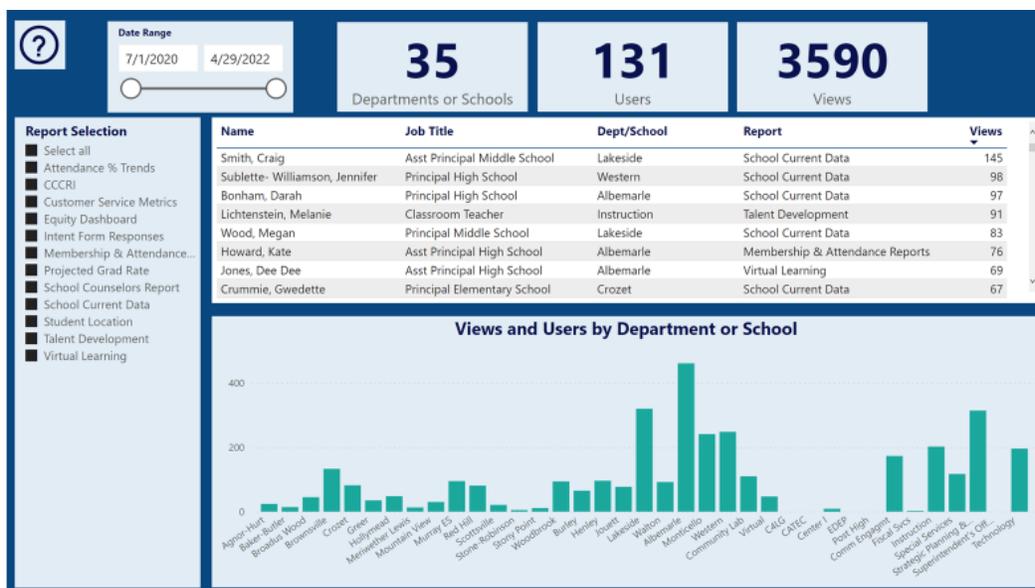
In the ACPS work space, the most popular dashboard report is the "School Current Data" followed by the "Equity Dashboard."
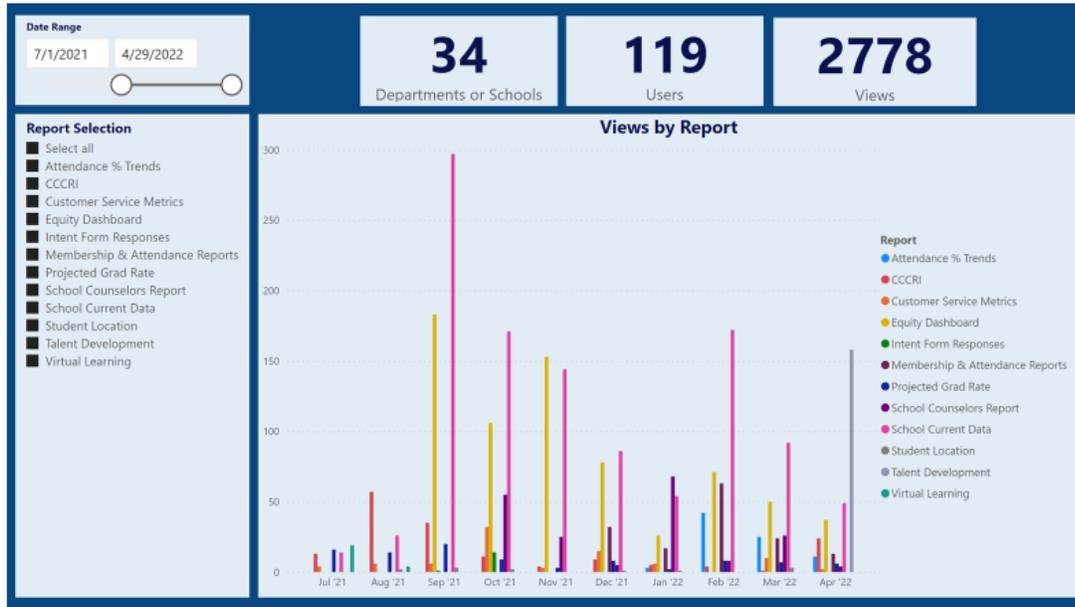
Survey results indicated that the weighted score for "ease of use" of Power BI is a 2.88 out of 5. This shows that there could be a need for increased training and doing it in a more strategic way will help with familiarity. For example, the Office of Strategic Planning has used the data dashboards during the school improvement process and in school triad meetings, but doing this regularly and consistently and with a professional development component could improve the ease of use. Also, finding Power BI and the supporting resources on the website is difficult if the user does not have it "bookmarked."Additional communication about already available resources as well as considering placement of links could improve survey results. More than half of survey respondents indicated that they would like additional training.

In the comments, many respondents noted that they would like actual student data. This is already provided in many reports in Power BI through student ID numbers. There is also a video to show how to export this data into PowerSchool to get the student names. This indicates a lack of awareness of this ability.

Respondents also indicated with a weighted score of 3.17 out of 5 that Power BI has improved their school or department. There are three "workspaces" so far that have been created. The first is the Albemarle County Public Schools workspace which stores all of the school and Division-level reports related to student information (the majority of the reports). The Data and Reporting Specialist has also created workspaces for the Department of Technology and for Fiscal Services. Here are some of the ways that survey respondents indicated that they use the reports available in no particular order:

- Tracking student issues (discipline)
- Equity audits based on timely data

- Attendance reports used to address students with attendance concerns and consider student engagement
- Provides clear, actionable data to meet division goals and supporting individual students
- School Improvement planning
- Graduation requirements
- Understanding which students we are connecting with and those we are not
- Financial information in the budget document
- Talent Development Service data log - visual data and can break down the service log data to do equity audits
- Customer service reports (Technology) that provide real time information about how staff feel about technology support; informs department improvement plan
- Used attendance and discipline data to create priority schools for the roll out of mental health services
- Used data for reflective conversations with PLCs and to revise intervention structures
- Used to make budgetary decisions

Complete Survey Results

**Samples of Other Reports without links in the Findings Section**

1. Student Location - This report visually represents the physical address of all students for a school on the Albemarle County map.
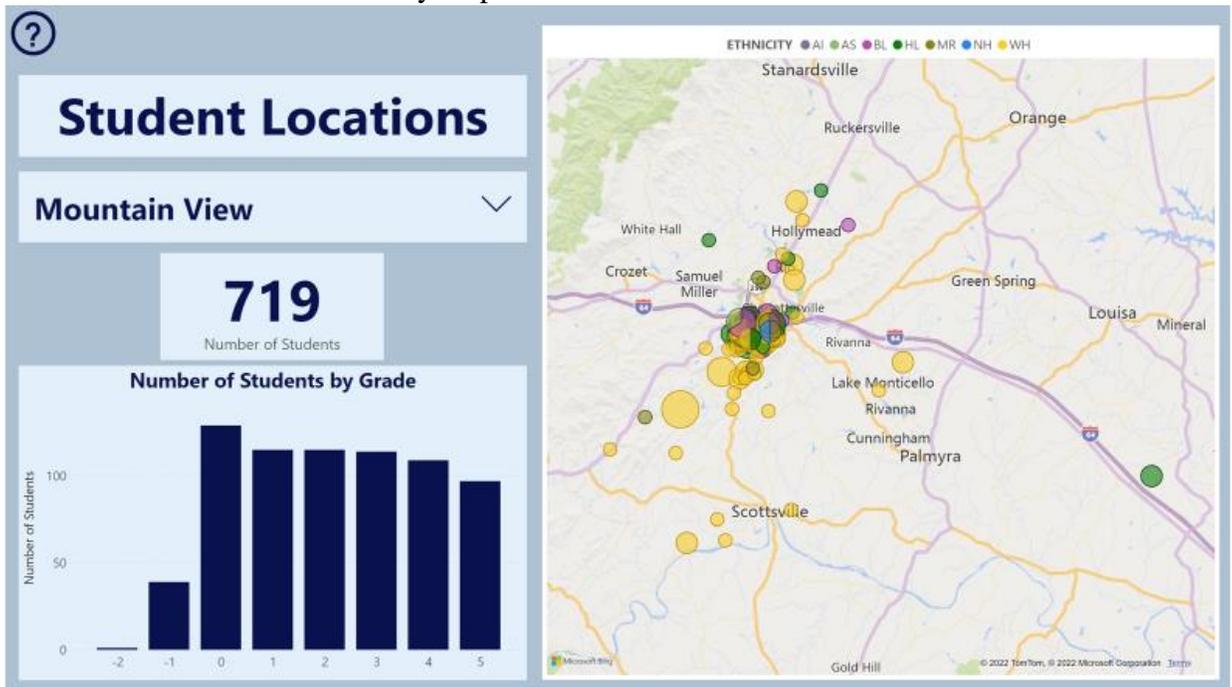
2. CCRI Accreditation Status Dashboard- Shows College Career Readiness Indicator Level for each high school; the CCRI accreditation status by cohort and by race at each school; Advanced Placement, Dual Enrollment, and IB credits earned by each cohort and by race at each school; and the CTE and Industry Credentials earned at each school by cohort and race. The below visual shows the Division-level dashboard but this can be broken down in multiple ways.
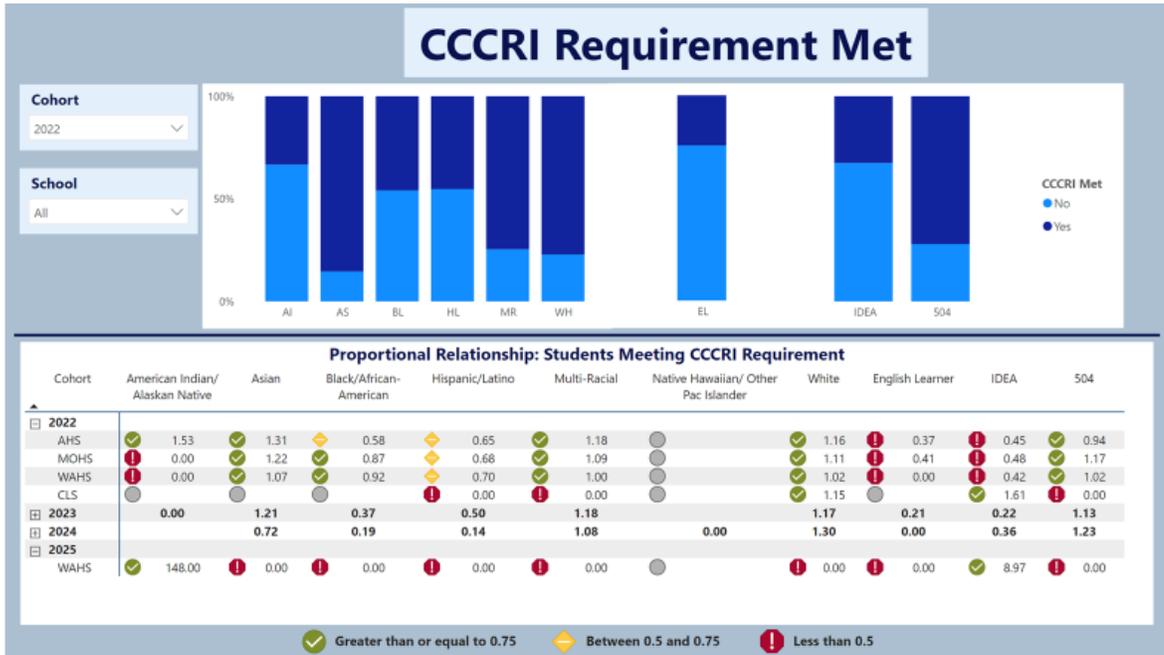
3. Elementary Reading Report: This report shows the progress of our elementary students as evidenced by their Guided Reading Tests. It also shows the progress by demographic group and can be broken down into data tables that show specific students.
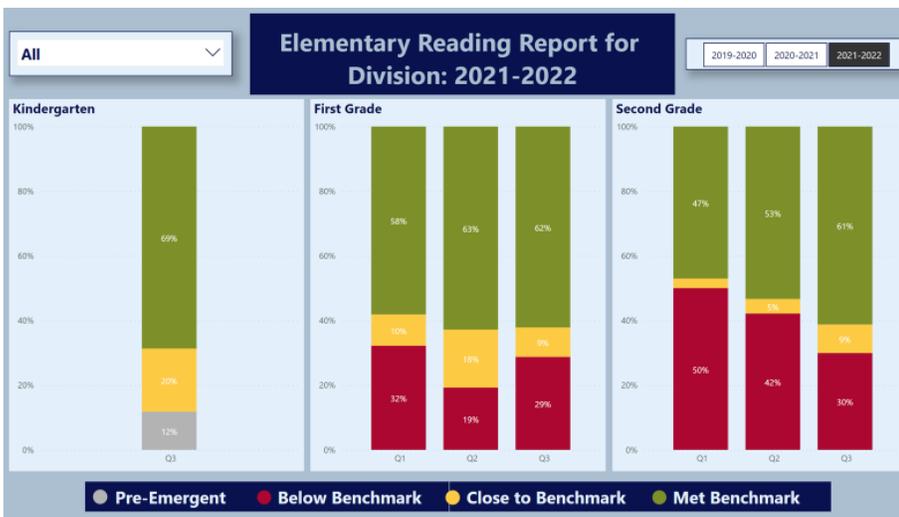
4. Budget-Book School Summaries: This report is located in the Fiscal Services workspace. Creating tables in Power BI rather than in Excel allowed for Fiscal Services to display a five year trend for budget information instead of only three.

Departments Budget Summary

Department	18-19 Actuals	19-20 Actuals	20-21 Actuals	21-22 Adopted	21-22 FTE	FY 22-23 Adopted	FY 22-23 FTE	22 Adopted v. 23 Adopted % Increase
⊟ Executive Services	$1,768,704	$1,670,351	$1,702,989	$1,929,867	15.50	$2,234,792	17.50	15.8%
Office of the Superintendent	$848,748	$947,956	$914,186	$1,187,126	11.50	$1,393,553	7.00	17.4%
Division Support	$919,956	$722,395	$788,804	$742,741	4.00	$0	0.00	-100.0%
Office of the School Board						$841,239	10.50	
⊟ Department of Instruction	$4,036,824	$3,389,673	$2,759,852	$3,928,218	16.90	$5,108,645	16.90	30.0%
Instruction	$2,502,486	$2,631,355	$2,573,815	$3,074,354	15.50	$4,134,711	15.50	34.5%
Summer School	$39,621	$39,621						
Vocational Education	$30,478	$25,855	$29,551	$28,757	0.00	$30,262	0.00	5.2%
Federal Programs	$834,588	$87,195	$59,386	$201,951	0.40	$210,570	0.40	4.3%
Learning Resources	$629,651	$605,647	$97,099	$623,156	1.00	$733,102	1.00	17.6%
⊞ Special Education Department	$7,203,893	$8,416,956	$5,706,582	$6,910,491	19.00	$7,102,921	15.50	2.8%
⊞ Student Services Department						$587,297	5.00	
⊞ English for Speakers of Other Languages (ESOL)	$95,921	$223,274	$182,402	$400,601	3.40	$414,465	3.40	3.5%
⊟ Organizational Development & HR Leadership	$3,426,782	$3,838,635	$3,634,739	$4,277,656	24.54	$5,680,921	29.00	32.8%
Human Resources	$2,293,576	$2,582,268	$2,658,923	$2,694,399	22.54	$3,720,201	27.00	38.1%
Professional Development	$1,133,206	$1,256,367	$975,816	$1,583,257	2.00	$1,960,720	2.00	23.8%
⊞ Community Engagement	$569,768	$852,192	$747,305	$1,213,226	9.00	$1,949,555	14.00	60.7%
⊟ Strategic Planning	$1,294,393	$1,062,567	$1,298,292	$1,335,818	8.50	$1,135,764	5.50	-15.0%
Strategic Planning	$1,294,393	$1,062,567	$1,298,292	$1,335,818	8.50	$1,135,764	5.50	-15.0%
⊟ Fiscal Services	$2,393,065	$2,234,519	$6,471,252	$4,563,142	8.00	$10,725,638	8.00	135.0%
Fiscal Services	$2,001,915	$2,234,519	$2,351,240	$2,455,374	8.00	$2,607,595	8.00	6.2%
Lapse Factor				($1,450,811)	0.00	($1,903,973)	0.00	31.2%
Non-Departmental	$391,150		$4,120,011	$3,558,579	0.00	$10,022,016	0.00	181.6%
⊞ Transportation Services	$11,155,933	$11,130,046	$10,583,788	$12,058,766	213.63	$14,552,974	213.63	20.7%
⊞ Building Services	$11,431,134	$11,176,872	$11,822,376	$11,855,434	55.38	$14,296,297	60.38	20.6%
⊞ Technology	$5,339,065	$5,570,731	$5,809,767	$5,795,258	26.00	$9,818,582	28.00	69.4%
Total	$48,715,482	$49,565,816	$50,719,343	$54,268,477	399.85	$73,607,851	416.81	35.6%