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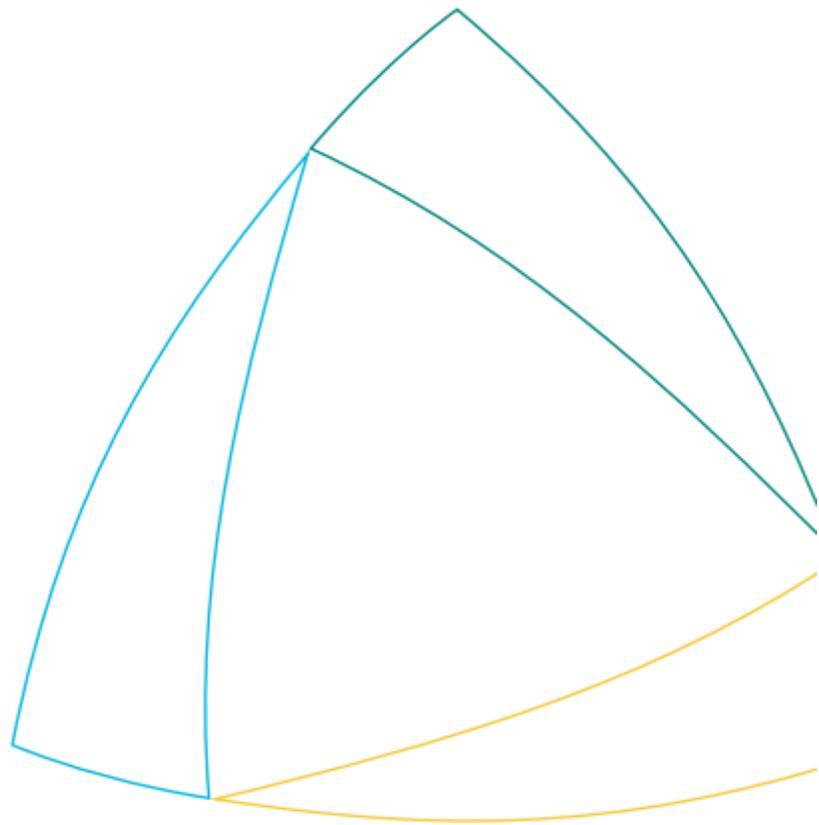
STATE HIGHER EDUCATION EXECUTIVE OFFICERS ASSOCIATION

COMMUNICATING VALUE & OUTCOMES THROUGH TWO-YEAR SECTOR DATA RESOURCES

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ACKNOWLEDGEMENTS

The State Higher Education Executive Officers Association (SHEEO) serves the executives of statewide governing, policy, and coordinating boards of postsecondary education and their staffs. Founded in 1954, SHEEO promotes an environment that values higher education and its role in ensuring the equitable education of all Americans, regardless of race/ethnicity, gender, or socioeconomic factors. Together with its members, SHEEO aims to achieve this vision by equipping state higher education executive officers and their staffs with the tools to effectively advance the value of higher education, promoting public policies and academic practices that enable all Americans to achieve success in the 21st century, and serving as an advocate for state higher education leadership. For more information, visit **www.sheeo.org**.

INTRODUCTION

Postsecondary education has faced growing transparency and accountability demands over the last three decades. Alongside those demands has been the rapid evolution of technologies that allow for improved collection of postsecondary data. These data, which include state-, institutional-, and student-level data, are being used by state agencies and systems to inform their strategic planning goals, to benchmark progress within and beyond state boundaries, and to support economic and student success goals.

The value of these data cannot be overstated. Yet data are only useful if the information therein is effectively used and communicated. With more and more complex data available for analysis, with the rapid growth of data repositories, like state longitudinal data systems (SLDSs), and with innovative data sharing and research platforms, like the National Student Clearinghouse's **Postsecondary Data Partnership** (PDP) and Coleridge Initiative's **Administrative Data Research Facility** (ADRF), state agencies and systems must find ways to make data more readily usable for policy development and decision-making.

The use of data to promote the value and outcomes at the two-year sector is especially important. Two-year institutions include community and technical colleges that grant associate degrees and career certificates and may grant baccalaureate degrees. They are an essential link in the education-to-workforce pipeline, helping to produce career-ready graduates, and have been a lever for both improved access and equity across the postsecondary space through dual enrollment, transfer, and other pathway initiatives. In 2019, 5.6 million students were enrolled in two-year institutions.[1] Over the course of the COVID-19 pandemic, the number of students attending public two-year institutions has dropped by nearly three-quarters of a million students.[2] Given the importance of this sector to higher education, state economies, and individual student outcomes, effective use and communication of data to inform goals and outcomes is vital. Yet, individual two-year institutions often have constrained research and reporting capacity.[3] Providing state agencies and systems with institutional research resources can help bridge capacity constraints.

The purpose of this report is to share exemplary data use and communication by agencies and systems that oversee the two-year sectors in their states. Through a review of state agency and system websites and data resources, we highlight how these entities are highlighting the work, value, and outcomes of two-year institutions. We focused specifically on the use of dashboards, infographics, and other data visualizations that help communicate progress associated with strategic planning, workforce development, and equity goals. Further, we highlight resources that effectively convey information not

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[1] National Center for Education Statistics (NCES). (2021, May). *Undergraduate enrollment*. **https://nces.ed.gov/programs/coe/indicator/cha**

[2] National Student Clearinghouse (NSC). (2021, Fall). *Current term enrollment estimates fall 2021*. **https://nscresearchcenter.org/wp-content/uploads/CTEE_Report_Fall_2021.pdf**

[3] Morest, V.S., & Jenkins, P.D. (2014). Institutional research and the culture of evidence at community colleges. Columbia University Libraries Academic Commons. **https://academiccommons.columbia.edu/doi/10.7916/D8416V41**

just to internal users (for example, institutional or scholarly researchers), but also use language and visualizations geared toward stakeholder consumption (for example, students, families, legislators, etc.).

EFFECTIVE INFORMATION SHARING VIA DATA RESOURCES

As a part of their work, SHEEO agencies and community and technical college systems create various data resources using data from their institutions, from other state agencies, and from data sharing and research platforms like the Postsecondary Data Partnership. Examples of effective resources created by agencies and systems include data dashboards, mapping, and infographics. Agencies and systems also use data guides, dictionaries, and privacy policies to help convey how data can be used. The value of these resources is their ability to make large datasets understandable through visualizations of those data. These visualizations promote stakeholder comprehension and use of state postsecondary data and underscore the impact of postsecondary education in their state. The following examples of four state agencies and systems show how data can be leveraged, across various resource types and through effective partnerships, to communicate success.

CONNECTICUT: ILLUSTRATING PERFORMANCE WITH DATA STORYTELLING

The Connecticut State Colleges and Universities (CSCU) system, which oversees 12 community colleges, puts institutional impact and student success front and center through dynamic data dashboards. Powered by Tableau, **CSCU has created dashboards** for the key performance indicators (KPIs) associated with their community colleges and student success pathways. These dashboards are broken down by institution, indicator, term, zip code, and equity (group difference) KPIs and allow for interactive insight into their two-year institutions. CSCU's **Office of Decision Support & Institutional Research** has also created other dashboard visualizations associated with access, affordability, appropriations, enrollment, retention, completion, and employment rates and wages. These dashboards allow for manipulation by institution, program, zip code, employment, and wage data.

CSCU has used data from these dashboards and from the state's **P20WIN** initiative to craft a **data story** about state employment and wage outcomes for its graduates. The data tables on the site are paired with a narrative that explains the impact of Connecticut's academic programs on the state's economy and workforce. Jan Kiehne, CSCU's interim associate vice president and data privacy officer, has noted that this form of data storytelling is "the most engaging way to explain and to help people understand what the data are saying by presenting it in a way that carries them along into a deeper awareness of the information." By pairing data dashboard information with compelling storytelling, CSCU is able to better relay how the system and its institutions are impacting student and state outcomes.

MINNESOTA: CENTERING STAKEHOLDERS AND EQUITY IN DATA

The Minnesota Office of Higher Education (MOHE), which oversees state public higher education across sectors, also has robust data dashboards as a part of their **Minnesota Measures** reporting. Like CSCU, MOHE uses Tableau dashboards to illustrate the state's access, attainment, financial aid, affordability, and student health and safety outcomes metrics across geographic, economic, and demographic differences. One of the many strengths of Minnesota Measures is the work MOHE has done to make data accessible to its stakeholders. On the Minnesota Measures website, they provide a data dictionary for stakeholders, where—in accessible language—they explain the meaning of data terms and elements. To help users interact with their dashboards, Minnesota also **provides users with a guide** to their dashboards, data definitions, and links to state and federal data sources, including **Minnesota's Department of Education Data Center** and the National Center for Education Statistics' **College Navigator**.

The focus on stakeholder use of data is tied to MOHE's commitment to equity, something that is evident in the modifications they have made to student data collection. In their **Elevating Equity Through Better Data** resource, MOHE explains how they are disaggregating race and ethnicity data beyond the traditionally reported categories, to include additional race/ethnicity and gender sub-categories. By providing this level of analysis in their dashboards, MOHE and its stakeholders are better able to understand the nuances that exist in their data, their state, and their institutions and how specific communities and students are impacted by state context.

MOHE data analyst Steve Rogness notes that because the system views itself as a "steward of student information" they have intentionally created accessible data resources tied to student success and state interests that are aligned with the agency's mission of supporting postsecondary attainment for all Minnesotans. In turn, their stakeholders are using MOHE's data to inform policy and practice. Meredith Fergus, director of research for the system, noted that among the system's biggest successes "is the number of requests we get from legislators, legislative staff, and external stakeholders" to find out more about their data and data resources. By starting with stakeholder use in mind, MOHE is better able to position their data and messaging for policy and practice use.

TENNESSEE: COMMUNICATING THROUGH DATA PROFILES, MAPPING, & TRAINING

Like Connecticut and Minnesota, **The College System of Tennessee's Board of Regents** (TBR), which oversees 38 community and technical colleges, uses **dashboards** to communicate success and improve outcomes. Powered by PowerBi, Tennessee has developed its **2015-2025 strategic plan website** and associated dashboards with a focus on open access, completion, and community and workforce metrics. Through this interactive site, users can view student enrollment, success, and economic impact outcomes within and across Tennessee's community and technical college institutions.

TBR has also leveraged the power of infographics through **system-wide college profiles**. Containing eye-catching visualizations, these infographics provide stakeholders with quick and easy data points to help them understand Tennessee's community and technical college student population, enrollment, success, completion, and post-completion job placement. TBR has also created innovative data maps to

visualize the outcomes and demand for higher education and its connection to the workforce. Its **Tennessee Education and Workforce Maps** provide stakeholders with a localized view of education and opportunity in their state.

Through their infographics and dashboards, TBR works to effectively communicate data and information to stakeholders to facilitate accuracy and uptake. Further, they provide training to stakeholders on how to use that information. Amy Moreland, assistant vice chancellor of policy and strategy, noted that once the mapping tool was live, TBR did "a statewide tour with in-person training events and where we invited presidents and senior leadership teams from the community colleges to come for a day-long training and discussion about the tool." By localizing information for stakeholder use through the mapping tool and by providing the support needed for those stakeholders to use the data tool, TBR has made data more relevant and useful to stakeholders. Making connections between people and information is a vital aspect of ensuring effective use of data resources and information.

KENTUCKY: CONNECTING TO PROVIDE P20W DATA

Kentucky benefits from one of the most mature and connected data systems in the U.S. This maturity and connectivity, paired with cross-sector partnerships, allows them to leverage their data for impact across the P20W landscape. The **Kentucky Council on Postsecondary Education** (KCPE), the **Kentucky Community and Technical College System** (KCTCS), and the **Kentucky Center for Statistics** (KYStats), share data and work together to improve state and individual outcomes.

An example of this partnership and connection at the two-year level is the work that KCTCS has done to create **labor market information scores** tied to their various programs and to convey the **economic impact** its work has on the state. The LMI scorecard associated with their **Program Alignment Tool** uses data from KCTCS, KYStats, KCPE, the Bureau of Labor Statistics, and others to create a series of dynamic dashboards and information to inform state stakeholders. KCTCS has also created robust dashboards through its online **system factbook** that draw from these sources and are interactive, data-grounded, and geared toward stakeholder use. Highlighting enrollment, demographics, graduation rates, credential production, tuition trends and more, the factbook allows students, their families, and other stakeholders to understand the value and impact of two-year education in their state. Notably, KCTCS leverages **qualitative data in its storytelling** through online videos to convey student success and economic impact.

KCPE has similarly leveraged the power of connections in the use and communication of their data at both the two- and four-year sectors through their **interactive data dashboards** and **infographics** that draw on data from their KCTCS and KYStats partners. KYStats has leveraged the power of its KCPE and KCTCS partnerships to create **interactive P20W data dashboards** that allow users to access information related to system-wide enrollment, transfer, completion, and employment outcomes, including longitudinal employment and wage data by institution, major, and degree type. KYStats is also participating in the **Coleridge ADRF**, which has allowed the state to **benchmark their postsecondary and workforce data across state's boundaries,** creating a broader network of data sharing and connection.

Certainly, Kentucky's data systems benefit from their data maturity and connection. However, it is the relationships between these entities that bolster the impact of the data resources they produce. Travis Muncie, executive director of data, research, and advanced analytics at KCPE, notes that "The personal relationships that our team at CPE have built with KYSTATS and KCTCS means there is an added level of trust when approaching data projects. This increases both the frequency and effectiveness of data collaboration in the state." Regardless of size, maturity, and connections of data systems, effective data resources are reliant upon the relationships that foster their creation.

CONCLUSION

Modern data and data systems have enormous potential to inform and improve postsecondary and workforce outcomes, especially for two-year sector systems and institutions and their stakeholders and students. State agencies and systems can leverage their data through robust data resources like dashboards, mapping, profiles, and infographics. These tools can be key levers for improving stakeholder insight and use, especially when they convey a strong story, are geared toward stakeholder realities, contexts, understanding, and use, are communicated effectively through localized relevance and training, and are developed in collaboration with state partners.