

2020-22 RESEARCH AGENDA

OPTIMIZING DATA TO INFORM EQUITY ISSUES AND BARRIERS IN BIRTH THROUGH WORKFORCE PATHWAY ALIGNMENT TO WORKFORCE NEEDS

Research Agenda Committee Members:

Name	Department
Rob Akers	KDE
Mel Letteer	KHEAA
Rachel Adams	DWI
Cody Davidson	CPE
Hannah Poquette	KDE
Aaron Butler	KDE
Maik Schutze	CHFS
Kristina Slattery	Economic Development (CED)
Beth Moore	Corrections
Sara Robeson	Vital Statistics
Emily Keyser	Early Childhood (EC)
Amanda Flanary	Early Childhood (EC)
Jessica Cunningham	KYSTATS
Angie Tombari	KYSTATS

The Kentucky Center for Statistics (KYSTATS) is tasked with collecting accurate education and workforce data in the Kentucky Longitudinal Data System (KLDS) to evaluate, conduct research, and provide information about education and workforce to better inform decision makers throughout the Commonwealth. The Board of the Kentucky Center for Statistics is composed of key leadership from the Kentucky Department of Education (KDE), the Council on Postsecondary Education (CPE), the Kentucky Higher Education Assistance Authority (KHEAA), the Education and Workforce Development Cabinet (EWDC), and the Cabinet for Health and Family Services (CHFS). The Board has developed this biennial research agenda to help guide the work of KYSTATS to focus on critical education, training, and workforce areas of need.

The theme of the KYSTATS 2020-2022 Research Agenda is to optimize data to inform equity issues and barriers in birth through workforce pathway alignment to Kentucky workforce needs. The Board has identified four primary objectives with a focus on linking education and workforce data from multiple sources (KRS 151B.133) to identify pathways of students through employment to be used to guide

impactful decisions throughout the Commonwealth of Kentucky's education system and training programs (KRS 151B.132).

I. Expand Data Access and Use to Inform Equity Issues and Barriers Related to Birth through Workforce in the Commonwealth

A primary goal of this research agenda is to expand upon data access and use to increase alignment and data use between education and workforce by identifying equity issues and barriers in birth through workforce pathways. There will be a focus on first identifying necessary and currently lacking data elements for integration into the KLDS in order to identify and explore equity issues or barriers to education and workforce in Kentucky. As more data sources are integrated and existing data sources are expanded into the KLDS, development of standards and statistical procedures to maintain the accuracy of the de-identified data warehouse is crucial to the research agenda. The annual report series will incorporate education and workforce outcomes allowing various stakeholders to manipulate data and generate customized reports to highlight barriers throughout the pipeline. Data visualization best practices will continue to remain a priority area to expand data use across the Commonwealth. Ensuring the website remains current and offers user-friendly ways to request data and to view timely, dynamic reports is also on the forefront of expanding data usage across the state. KYSTATS will also expand agency partners' access to the de-identified reporting warehouse through the expansion of federal report capabilities. As the 2015 SLDS grant comes to a close, sustainability of current and future work is a continued priority. Research, related to the expansion of data use related to equity while maintaining the current research priorities, should address the following critical questions:

- What data are available to best inform equity issues and barriers to education and workforce in the Commonwealth?
- What are best practices in visualization to incorporate geocoded education and workforce outcomes into dynamic reporting?
- What are the best ways to incorporate out-of-state education and workforce outcomes into the annual report series?
- How can data be visualized in dynamic reporting to highlight equity issues and barriers in a meaningful way to inform decisions?
- How might KYSTATS better market the tools and resources available to all stakeholders to address current and future needs?
- How might KYSTATS better meet the needs for readily available and relevant data use to inform policymakers?
- How can sustainability be achieved through cross-cabinet partnerships and external research?

II. Evaluate Outcomes and Barriers for Education and Workforce Programs Over Time

KYSTATS, partnering state agencies, regions and local education and workforce agencies will continue to collaborate to conduct research and program evaluations to inform efforts to improve outcomes in early

learning programs, K-12, postsecondary and workforce systems. This research agenda will also incorporate evaluating outcomes and barriers for education and workforce program with justice-involvement. Another specific priority area for this research objective is evaluating education and service programs in early learning – specifically incorporating the use of the unique child identifier to better inform the effectiveness of birth through five programs in Kentucky. The integration of additional early childhood data into the KLDS will enable questions related to the impact of early learning programs on successful transitions to Kindergarten through high school and eventually through the workforce.

Reports should address the following critical questions:

- What services do children receive birth through five and what is the impact on educational outcomes – school readiness, access to high quality childcare, third grade performance, etc.?
- In what ways can data inform educational impact of foster care children and justice-involved families?
- How can geocoding addresses inform school-level poverty measures in comparison to free/reduced priced lunch?
- What potential indicators, already integrated within the KLDS, most accurately indicate socio-economic barriers in education and workforce outcomes?
- In what ways do educational programs impact the achievement gap from early learning through the labor market in Kentucky?
- How does Kentucky compare over time on key education and workforce measures such as: successful transitions between high school and the workforce, impact of dual credit on college access and success, re-engagement of adult learners, and alignment between career technical education and sector workforce needs?
- What is the access to and success of postsecondary education and entry to the workforce for vulnerable populations?
- What impact does financial aid have on college going and persistence?
 - What is the distribution of state-funded financial aid and measures of success and equity for those recipients?
- Which teacher preparation programs are producing graduates who work in different parts of the state, what are their retention rates in the profession, and how do they compare over time in measures of teacher effectiveness?
- In what ways can teacher preparation program impact be measured and accurately reported?
- What are the completion, employment and retention rates for students in education, training provider, and apprenticeship programs across the Commonwealth?
- Which training providers and credentials are leading to employability in high demand jobs with higher salaries?
- What is the impact of education and employment outcomes for those reliant on social service programs?

- What are the training and workforce outcomes for those individuals discontinuing social service benefits?
- How does educational attainment prior to and education and training during incarceration impact workforce participation upon release?
- What are the data and reporting needs of stakeholders in order to provide research and evaluation for federal and state education and workforce programs?

III. Connect Supply and Demand of Kentucky Future Workforce

KYSTATS annual reports will continue to compare education and training pathways through initial workforce engagement, to current and anticipated employment opportunities in Kentucky's workforce. A priority objective for KYSTATS is the integration of Kentucky Revenue data coupled with Driver's License data to integrate its geolocation markers into the KLDS supplementing wage data provided by the Kentucky Unemployment Information System. This KLDS data combination will allow significantly better estimation of the alignment of the demand for new workforce entrants and the supply of individuals to fill those positions. KYSTATS will incorporate geocoded addresses into interactive reports to provide information about employment outcomes to secondary, postsecondary, correctional, and workforce programs with updated employment location data, which is currently unreliable. Location workforce data would allow research reports and evaluations to highlight more accurately the pathways from education through workforce engagement. Reports shall address the following critical questions:

- Is Kentucky's education and training pipeline aligned with Kentucky's projected needs, both current and near-term?
 - In what ways can skills and needs gaps be accurately measured and reported?
 - Is it possible to anticipate emerging workforce needs which will not be met by current education and training trends?
- How well is the state's current pipeline of students progressing through the education and training systems?
- How do employment outcomes vary by demographic characteristics (gender, age, race/ethnicity, income level, etc.) and by workforce area, educational attainment level, study program, and locale?
- Are there gaps in the Kentucky workforce preparation systems which may be causing Kentucky to be less competitive in terms of retaining more of our graduates and attracting skilled workers from other regions of the country?
- Is Kentucky's teacher education and training pipeline aligned with Kentucky's needs, both current and near-term?
 - What is the anticipated need for educators by subject area and region over the next several years?
 - How does the current supply of students in educator preparation programs compare to the anticipated need for educators?
 - Are there any critical shortage areas where Kentucky's educator preparation programs may not be able to fill an emerging demand for teachers in the near future?

- What is the impact of the refugee population, who qualify for Medicaid benefits, on Kentucky's workforce?
- How do international and exchange programs affect Kentucky's ability to attract a diverse, skilled workforce?

IV. Measure Impact of Out-Of-State Education and Workforce Migration

As a part of the supplemental funding received for the 2015 SLDS grant, KYSTATS will continue to prioritize pursuing out-of-state employment and earnings data to identify the education and workforce outcomes and workforce participation of Kentuckians working in other states. To date, little has been reported about the impact of in and out-of-state migration on workforce supply and demand in the Commonwealth. KYSTATS has identified three potential avenues for data related to in and out migration employment and earnings - specifically, the Western Interstate Commission for Higher Education (WICHE)/Multi-state Longitudinal Data Exchange (MLDE), the Coleridge Initiative, and the State Wage Interchange System (SWIS).

This objective involves selecting one or more of the listed data options to create and implement a sustainable model, which integrates these data into the KLDS for use in research and reports. Due to the Commonwealth's recent emphasis on connecting labor force supply and demand using an education through workforce engagement pathways model, KYSTATS perceives a need to address research questions regarding the interstate mobility of students, graduates, credential earners, etc. Reports shall address the following critical questions:

- What are the employment and earnings outcomes for those receiving credentials from out-of-state postsecondary institutions and returning for employment in Kentucky compared to those receiving credentials from in-state postsecondary institutions?
- What is the wage impact for those students moving out-of-state following secondary and/or postsecondary education in Kentucky compared to those students who remain in the Kentucky workforce? Are credential earners in high demand fields leaving Kentucky for employment?
- What is the impact on Kentucky projected gaps in workforce demand of students receiving credentials out-of-state and returning to Kentucky for employment?
- How does out-migration vary by demographic characteristics (gender, age, race/ethnicity, income level, etc.) and by workforce area, educational attainment level, study program, and locale?
- How can out-of-state data be used to identify talent for recruitment to meet Kentucky workforce shortages (i.e. nurses)?