CASE STUDY: Indiana's Journey with Data-Driven CTE Decisionmaking

Introduction

Indiana has embarked on a journey toward data-driven decisionmaking, leveraging the power of two essential tools: the **Opportunity Gap Analysis** (OGA) and the **Achieving Inclusive CTE (AICTE) Goal-Setting Tool**. This case study explores Indiana's insightful approach, highlighting key challenges, promising practices, and the state's vision for the work ahead.

Setting the Context

In the heartland of America, Indiana stands at a crossroads of opportunity. Its rich industrial heritage laid the foundation for a skilled workforce, but the winds of change are sweeping across the landscape. Automation and globalization demand new skill sets, and Indiana recognizes the crucial role of Career Technical Education (CTE) in adapting and thriving. From bustling urban centers to sprawling farmlands, the Hoosier State is reimagining CTE as a dynamic pathway to fulfilling careers.

CTE is an integral part of Indiana's talent development system. The state team is housed at the Indiana Commission for Higher Education and helps connect industry, workforce development, and education. CTE staff assist with developing and implementing rigorous and relevant CTE programs of study that prepare learners for a wide range of high-wage, high-skill, and in-demand careers. In Indiana's CTE programs, learners will gain the knowledge, skills, and abilities needed for success in postsecondary education and economically viable career opportunities.

In the past decade, Indiana has made substantial investments and progress in CTE:

Enhancing the Quality of CTE Programs

Indiana fully launched new secondary CTE courses in the 2022-23 school year. This initiative, called Next Level Programs of Study (NLPS), aims to improve the consistency, quality, and intentionality of CTE instruction across Indiana. The state's *Career and Technical Education Career Guide* provides a quick overview of NLPS.

Expanding High-Quality Career Pathways

Indianapolis, Indiana, is one of the six sites selected to participate in the *New Skills ready network*. This 5-year initiative, launched by JPMorgan Chase & Co. in 2020, aims to improve learner completion of high-quality career pathways. Throughout the initiative, the Indianapolis, Indiana project team has increased the number of high-quality career pathways, aligned seamless advising structures to support learners, and expanded real-world work experiences with work-based learning opportunities. The work of this initiative is executed by cross-sector partners including the State CTE Director, secondary and postsecondary partners, workforce development leaders, and industry partners.

Scaling Equitable College and Career Pathways

Indiana participates in Launch: Equitable & Accelerated Pathways for All, a national college and career pathways initiative that strives for every learner to have access to and succeed in high-quality and equitable career pathways. As a member of the Impact Cohort, Indiana has completed needs assessments, participates in academies, and has started developing its strategic action plan to support improving and scaling equitable college and career pathways for learners.

Indiana's overarching goals for CTE are ambitious and multifaceted. The state aims to ensure that all Hoosier learners have access to high-quality programs that prepare them for success in the evolving workforce.
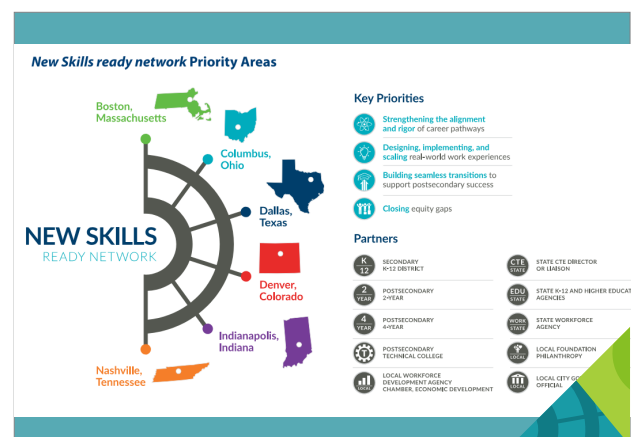
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WORKFORCE ALIGNMENT

- **Meeting industry needs:** Indiana prioritizes aligning CTE programs with the state's current and future workforce needs. This work involves collaborating with industry leaders to identify in-demand skills and develop relevant curricula.

- **Stackable credentials:** The state focuses on preparing learners for the workforce with industry-recognized certifications, certificates, and technical certificates that progress through associate's degrees and are often directly aligned to bachelor's degrees.

SKILL DEVELOPMENT

- **Technical proficiency:** While technical skills remain crucial, Indiana recognizes the importance of durable skills such as communication, teamwork, problem solving, and critical thinking. CTE programs integrate these skills into their curriculum, preparing learners for a broader range of workplace challenges.

- **Personal growth:** Beyond technical mastery, Indiana's CTE aims to foster personal growth, instilling confidence, adaptability, and entrepreneurial spirit in learners.

EQUITY AND ACCESS

- **Breaking down barriers:** Indiana strives to make CTE accessible to all learners, regardless of background, ability, or socioeconomic status. This work includes outreach programs for underrepresented groups and efforts to remove financial and logistical barriers to participation.

- **Expanding opportunities:** The state recognizes the diversity of learner needs and interests. It offers various CTE programs catering to different career aspirations and learning styles, ensuring every learner finds a successful career pathway.

CONTINUOUS IMPROVEMENT

- **Data-driven decisionmaking:** Indiana leverages data analysis to track progress, identify areas for improvement, and refine its CTE programs. This work ensures that the programs remain effective and responsive to changing workforce demands and learner needs.

- **Partnerships and collaboration:** Building strong partnerships with industry, higher education institutions, and community organizations is vital to Indiana's success. These collaborations provide CTE learners with valuable resources, expertise, and real-world experiences.

Embracing Data for Strategic Planning

Indiana recognizes the critical role of data in effectively allocating resources and ensuring equitable access to high-quality CTE programs. To comprehensively understand equity-centered data tools and their potential impact, the state began by completing the OGA and then the AICTE technical assistance (TA) cohorts offered by Advance CTE.

The OGA: Train-the-Trainer Workshop provides training, resources, and support to help state leaders identify and address gaps in access to high-quality CTE. The AICTE Goal-Setting Tool strives to equip state and local CTE and career pathways leaders to approach program participation, outcomes data, and goal setting with an inclusive and representative lens.

OGA: Train-the-Trainer Workshop

Indiana's story goes beyond mere training metrics. The state team actively tackled the challenge of making equity an ongoing priority, not a single event. Participating in the inaugural OGA cohort in September 2021, Indiana's team deepened their understanding of equity issues and felt highly prepared to lead the OGA training within their state. Empowered to deliver training on percentage-point gap analysis, root cause analysis, and implementation of practical strategies to close opportunity gaps, the Indiana team leveraged the TA resources to revamp regional performance labs—collaborative workshops designed to support regional CTE leaders and staff with the Comprehensive Local Needs Assessment (CLNA) process.

Building on Ohio's success since 2019, Indiana's regional performance labs empower local CTE leaders to identify and address their most pressing equity gaps in CTE programs. These intensive workshops leverage root cause analysis to delve deeper into the underlying reasons for these disparities. Through data-driven analysis and a commitment to advancing equity, these labs equip leaders with the tools and strategies necessary to dismantle systemic barriers in CTE.

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After training local CTE leaders on the OGA process, indicators of success emerged, including enhanced communication between educational levels for smoother transitions and improved career awareness for learners. Indiana CTE Director Anthony Harl shared, "These labs provide an opportunity to show local CTE Directors how to leverage data effectively." Leaders are analyzing data and implementing practices that support a more accessible and inclusive CTE system for all learners.

Despite its progress, Indiana's journey highlighted a fundamental challenge: access to outcomes-based data. The state, committed to aligning with Advance CTE's vision of ongoing equity advancement, seeks to integrate equity efforts into the core of its CTE system. However, the challenge of accessing readily-available data to track equity outcomes underscores the need for better data collection and analysis tools. Understanding the opportunities at hand when comprehensive data are accessible and available, the state team worked within their agency and with the Indiana Department of Education to gain access to vital demographic data to support inclusive analysis. Strong collaboration among core partners enabled the development of innovative approaches to analyze and improve learner access and outcomes in CTE programs, addressing the state's evolving needs.

Indiana's progress with the OGA training demonstrates the power of collaboration and a data-driven approach to advancing equity in CTE. State leaders across the country can learn valuable lessons from Indiana's experience:

INVEST IN OGA TRAINING

Equipping leaders with the knowledge and skills to facilitate the OGA process is crucial for effectively implementing percentage-point gap and root cause analyses. This training provides the foundation for more robust and effective data analysis for more accessible CTE. Leaders interested in the OGA Train-the-Trainer workshop can express interest and meet with an Advance CTE staff member to discuss training opportunities.

DEVELOP ONGOING EQUITY STRATEGIES

For lasting impact, moving beyond one-time initiatives and integrating equity into the core of CTE systems is essential. Leveraging Ohio's and Indiana's models of embedding performance improvement into existing processes, such as the CLNA, can support long-lasting efforts that become part of the culture of state CTE systems.
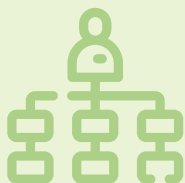
BUILD RELATIONSHIPS WITH DATA TEAMS

Strong collaboration with internal data teams is essential for securing access to vital data and developing effective data analysis strategies. By fostering these relationships, states can unlock the full potential of data to inform decisionmaking and advance equity in CTE programs.

AICTE Goal-Setting Tool TA Workshops

In spring 2023, Indiana delved into the intricacies of the AICTE Goal-Setting Tool through dedicated TA workshops hosted by Advance CTE and the Association for Career and Technical Education. Recognizing the tool's power to translate data analysis into actionable goals, Indiana's team embraced the opportunity to refine equity strategies and empower local districts to chart their paths toward inclusive programs. Through collaborative sessions and tailored support, they tackled the nuances of integrating performance metrics, navigating postsecondary data hurdles, and developing practical strategies to address identified gaps.

In fall 2023, the Indiana team leveraged the regional performance labs to train local leaders on equity and access in CTE, the OGA process with CTE enrollment data, and the AICTE tool with CTE performance data. The 3-hour workshops showed CTE leaders how to complete deep dives and analyses of CTE enrollment and performance data using Advance CTE data tools. The Indiana state team maximizes training time with local leaders and includes the following lab stages:
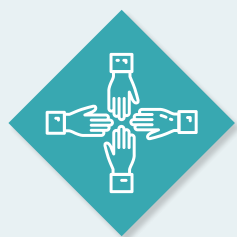
STAGE 1

1

FOUNDATIONAL LEVEL-SETTING ON EQUITY AND ACCESS IN CTE

The Indiana state team provides local leaders with the tools to discuss diversity, equity, and inclusion in CTE. Alignment on equitable access supports an environment in which all collaborators have the language and comfort to discuss challenges and opportunities related to equity in CTE.

STAGE 2

2

OPPORTUNITY GAP ANALYSIS TRAINING AND PRACTICE

Building on the shared understanding of the importance of accessible CTE for all learners, the Indiana state team trains local leaders on the OGA process. The OGA training includes a workbook focusing on CTE enrollment data through the lens of accessibility. The workbook conducts a percentage-point gap analysis across all CTE program enrollments and includes a heatmap that local leaders use to identify priority focus areas. This training includes root cause analysis and implementing practical strategies to close opportunity gaps. Advance CTE recommends that users leverage the OGA and AICTE tools in tandem to facilitate a more targeted analysis.

STAGE 3

3

ACHIEVING INCLUSIVE CTE GOAL-SETTING TOOL APPLICATION

Leveraging insights from the OGA workbook, local leaders use the AICTE Goal-Setting Tool to delve deeper into specific opportunity gaps. The state team prepares data reports for local leaders for the most recently graduated cohort of learners. Locals learn the basic operations and functions of the tool, including how to enter data, structure comparison populations, read the analyses, and understand various scenarios for setting goals. After leaders feel comfortable with the tool, locals use the AICTE tool again with data for a forward-looking cohort. This step allows leaders to review and set goals for incoming learners in CTE programs.

Using this scaffolded approach, the team accomplished the following:

Strengthened data-driven goal setting: The AICTE tool analyzes performance metrics and translates data into actionable goals. The results empower districts to set clear, data-informed targets for improving equity and inclusivity in their CTE programs. The Indiana team leveraged the tool's functionality to set goals and targets that support local, regional, and statewide goals for CTE programs. The goal-setting feature of the AICTE tool supports the CLNA process as leaders can solidify the number of learners who need to be engaged, supported, or recruited in CTE programs. Using the AICTE tool's analytics, Indiana's leaders focused on metrics such as program completion rates for underrepresented groups, identifying specific areas for improvement within CTE programs. This granular analysis empowers Indiana to craft goals that address not just statewide averages but the specific needs of individual learners within diverse communities. By putting names to faces in the data, Indiana leaders can ensure that their equity efforts have a tangible impact on learners.

Elevated CTE program performance focus: Compared to previous tools that relied mainly on enrollment data, the AICTE tool allows users to delve deeper into learner outcomes, analyzing specific performance metrics such as program completion and concentrator attainment. This deeper analysis provides a more comprehensive picture of learner success and identifies areas for targeted interventions within the CTE continuum. Districts use the tool to pinpoint specific programs with lagging completion rates or low concentrator numbers, focusing their support on closing these performance gaps.

By shifting the focus beyond enrollment, the tool transformed the CLNA from a static snapshot to a dynamic roadmap for progress. With each passing year, Indiana can refine its strategies based on real-time learner outcomes, ensuring that every CTE program becomes a launchpad for success, not just a gateway to participation.

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Increased collaboration and engagement: The AICTE tool encourages collaboration among state and local leaders, fostering a shared understanding of equity challenges and potential solutions. This collaborative approach can lead to more effective and sustainable equity strategies. Advance CTE recommends leveraging mixed methodologies when analyzing data and setting goals. To better understand the reasons behind the data, OGA and AICTE tool users are encouraged to conduct root cause analyses'. The root cause analysis calls on leaders to engage with other groups, including educators, learners, families, and more. This critical component of analyzing data for inclusivity has been shared across Indiana's regional performance labs so leaders can leverage the input and feedback of collaborators to inform goals and practical strategies.

Enhanced monitoring practices: The Indiana team recognizes the AICTE tool as a valuable resource for continuous improvement. It allows them to track progress, evaluate the effectiveness of their strategies, and adapt their approach as needed. This commitment to ongoing data-driven decisionmaking ensures that their equity efforts remain effective and responsive to evolving needs.

Overall, Indiana identified significant advantages in using the AICTE Goal-Setting Tool. Its focus on data-driven goal setting, performance analysis, collaboration, and practical strategies aligns with the state's commitment to promoting equitable access to and success in CTE.

Integrating postsecondary data: The team acknowledged the difficulty of incorporating data from postsecondary institutions within the AICTE tool. This difficulty presents a hurdle in thoroughly analyzing the learner journey and measuring the impact of CTE programs beyond high school graduation. As the team continues to foster relationships across partners, they look forward to identifying solutions to leverage the tool across all institutions.

These challenges demonstrate the ongoing need to refine and improve data tools such as the AICTE tool and the importance of collaborative efforts to address data quality and accessibility across various educational levels. Indiana's proactive approach to sharing these challenges can contribute to the continual development of better resources for promoting equity and inclusivity in CTE systems nationwide.

Equipping Local Leaders for Equity: Sharing the Power of Data

Advance CTE recognizes the crucial role of local leadership in driving equitable access to and success in CTE programs. Sharing the learnings from data-driven trainings, such as OGA and AICTE, empowers local CTE leaders to leverage data effectively. Equipped with the knowledge and tools needed to identify and address equity gaps within communities, states can create a future in which every learner has the opportunity to thrive in high-quality CTE programs.

As with any new effort, challenges were also identified when beginning the process of leveraging the tool in the state:

Providing ongoing support for participants: After a 3-hour data training session in the performance labs, initial exposure proved overwhelming for some local leaders. Recognizing this challenge, the Indiana state team proactively addressed the need for ongoing support by providing a comprehensive post-session workbook with detailed instructions, information about both the OGA and AICTE tools, and guidance on data sources, ensuring easy access to critical resources. This commitment to facilitating a smooth transition empowers local leaders to leverage the AICTE tool effectively in their ongoing work toward equity in CTE programs.

The focus on local leaders guides the Indiana team's approach, as exemplified by their implementation strategy for the OGA and AICTE tools, which included the following steps:

Build expertise for effective implementation:
Equipping the state team with the necessary knowledge and skills is essential for successfully implementing data-driven tools such as the OGA and AICTE. Recognizing this need, Indiana adopted a collaborative approach, convening a team of critical partners:

- **State agency data team:** Their expertise ensured accurate data integration and analysis within the tools.

- **CTE program managers:** Their understanding of program nuances facilitated the application of data insights to specific CTE contexts.

- **Indiana Department of Education data team:** Their collaboration fostered alignment and streamlined data sharing across the state and local levels.

This cohesive team participated in comprehensive data training on both tools. They also prepared data for diverse learner groups within various CTE programs and centers and engaged in practice sessions to refine their proficiency.

This investment in data literacy, competency, and capacity proved critical. It allowed the team to thoroughly explore data needs, identify and address potential data challenges, and develop proficiency in generating insightful reports for practical data analysis. Ultimately, this meticulous preparation positioned the Indiana state team to confidently lead data training and support local leaders in leveraging the OGA and AICTE tools for meaningful equity advancement.

Streamline access for local leaders: CTE leaders face competing demands for their time and attention. While they are deeply committed to improving learner experiences in CTE programs, adopting new data tools can sometimes feel burdensome. Understanding these challenges, the Indiana state team prioritized eliminating barriers to local leaders' use of the OGA and AICTE tools.

They acknowledged that a laborious data analysis process could disincentivize leaders from leveraging these powerful tools. In response, Indiana focused on the following:

- *User-friendly resources:* The state team developed clear and concise training materials, including post-session workbooks and readily accessible online resources such as webinars and instructional videos to guide local leaders on effectively using the data tools.

- *Streamlined data access:* The state team collaborated with the Indiana Department of Education to ensure that local leaders can access the data needed for effective tool use. The state team worked within and across agency partners to develop a customized data report in the Indiana data system that seamlessly aligns with the formatting of the AICTE Goal-Setting Tool. Leaders can access this data report format and easily copy and paste the data into the tool. This functionality reduces the burden on local leaders and empowers them to apply the tools quickly within their unique contexts.

- *Targeted support:* Providing ongoing support to local leaders, the state team offers ad hoc TA sessions to address specific questions or challenges local leaders encounter.

By focusing on accessibility and user experience, Indiana aimed to empower local leaders to seamlessly integrate the OGA and AICTE tools into their existing workflows, ultimately facilitating a more data-driven approach to promoting equity in their CTE programs. Indiana's model for implementing OGA and the AICTE tool offers valuable lessons for other state directors about investing in capacity building, facilitating collaboration, and empowering customization. By replicating these strategies for their contexts, states can empower local leaders to champion equity and inclusive CTE within their communities, paving the way for a future in which every learner has the opportunity to thrive in a diverse and dynamic workforce.

Current Progress and Early Outcomes

Indiana's proactive embrace of OGA and the AICTE tool is already bearing fruit, showcasing the transformative power of data-driven equity efforts. Some of the promising early outcomes that hold valuable lessons for other leaders interested in this work include the following:

Improved data literacy across CTE systems: Thanks to robust training and ongoing support, Indiana's local leaders are more adept at using data to inform decision-making. They now confidently navigate their districts' data, uncovering previously hidden trends and disparities. This newfound fluency translates into informed, data-driven decisionmaking, ensuring that resources are allocated most effectively to address identified equity gaps.

OGA and AICTE have become powerful tools for illuminating program access and success disparities across learner groups. Local leaders are now acutely aware of these gaps, allowing

them to prioritize initiatives addressing specific needs and ensuring equitable opportunities for all learners. These priorities are further developed through local applications; local leaders are instructed to leverage both tools to inform goals and targets. The state team believes these tools will help local leaders set realistic goals for inclusivity and expanded access to CTE programs.

Increased awareness of equity gaps: The tools have helped identify disparities in program access and outcomes across various learner demographics, revealing previously hidden inequities for diverse learner groups. This newfound awareness is crucial for prioritizing resources and designing targeted interventions to close the gaps.

Indiana is not just analyzing numbers; the state is listening to the stories behind them. Local leaders engage with learners and educators to understand the lived experiences of those facing inequities, adding depth and context to the data analysis.

Equipped with a clearer understanding of the challenges faced by different groups, local leaders are developing actionable plans to address specific disparities. This data-driven approach ensures that interventions are laser-focused and have the highest potential for impact.

Enhanced collaboration: Regional meetings have fostered collaboration and knowledge sharing among local leaders. Indiana's regional meetings are buzzing with the exchange of promising practices and ideas. Local leaders are no longer isolated islands but part of a thriving collaboration network. This cross-pollination of knowledge accelerates the spread of practical strategies and fosters a supportive environment for tackling shared challenges.

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ACTIONABLE TAKEAWAYS FOR STATE DIRECTORS

PRIORITIZE DATA FLUENCY

Equip local leaders with the skills and resources to analyze and use data confidently.

INVESTIGATE AND SOLVE EQUITY GAPS

Leverage the OGA and AICTE tools to identify and address program access and outcomes disparities.

INFLUENCE GOAL SETTING

Guide local leaders in developing data-driven, measurable goals for closing equity gaps.

FOSTER COLLABORATION

Facilitate regional meetings and knowledge-sharing networks to connect local leaders and accelerate progress.

Looking Ahead: A Focus on Goal Setting and Equity

Indiana's journey with the OGA and AICTE tools does not end with data analysis and goal setting. Looking ahead, the team is focusing on turning insights into action and ensuring sustainable progress toward equity in CTE. This work involves empowering local leaders by taking the following steps:

Requiring Goal Setting Based on Performance Gaps

The AICTE tool will be the preferred choice, with districts required to create at least one local plan activity targeting identified disparities.

Equipping Them with Practical Strategies

Training and resources will be readily available, providing the know-how to translate data into actionable interventions.

Testing the Waters with the AICTE Tool

The tool will be their virtual laboratory, allowing them to simulate and refine performance targets before setting them in stone.

Finally, ongoing support remains paramount. Indiana understands the value of collaborating with local leaders and offering consistent TA and guidance to achieve equitable CTE. By staying the course and building upon the promising foundation laid by the OGA and AICTE tools, Indiana can become a beacon of inspiration for states nationwide, proving that data-driven equity in CTE is not just a dream but a tangible reality within reach.

Call to Action: *Empowering Every Learner Through Data-Driven CTE*

Indiana's journey with data-driven equity in CTE is a powerful example.

THE FOLLOWING IS HOW ADVANCE CTE CAN HELP YOU TRANSFORM YOUR CTE SYSTEM AND ENSURE EQUITABLE ACCESS AND SUCCESS FOR ALL LEARNERS:

1 DEEPEN YOUR UNDERSTANDING

Review Advance CTE's Equity Continuum page: Use this comprehensive resource to explore the various support levers available to bolster your data-driven initiatives. Discover best practices, frameworks, and tools to guide your efforts.

2 CONNECT WITH EXPERTS

Submit a TA request: Tailor your approach by submitting Advance CTE's Technical Assistance Interest and Request Form. Share your specific goals and interests, including tools such as OGA and AICTE. The Advance CTE team will connect you with the resources and expertise to propel your success.

3 EQUIP YOUR LEADERS

Embrace data-driven decisions: Replicate Indiana's model by completing Advance CTE's TA training. Empower local leaders with the knowledge and tools to analyze data and set measurable goals for closing equity gaps in your state's CTE programs.

Acknowledgments

This resource was developed through JPMorgan Chase's New Skills ready network, a partnership of Advance CTE and Education Strategy Group. New Skills ready network, launched by JPMorgan Chase & Co. in 2020, bolsters the firm's efforts to support an inclusive economic recovery, as part of both their $350 million, five-year New Skills at Work initiative to prepare people for the future of work and their new $30 billion commitment to advance racial equity. Advance CTE and Education Strategy Group are working with sites to improve student completion of high-quality career pathways in six US communities. The six New Skills ready network sites are: Boston, Massachusetts; Columbus, Ohio; Dallas, Texas; Denver, Colorado; Indianapolis, Indiana; and Nashville, Tennessee. These sites are formulating new partnerships between local school systems, higher education, employers, and government entities to develop pathways and policy recommendations that give underserved students access to higher education and real-world work experiences that lead to high-wage, in-demand jobs.

NEW SKILLS
READY NETWORK

ADVANCE CTE
State Leaders Connecting Learning to Work

ESG Education Strategy Group
ACHIEVING GREATER IMPACT