



Effectively Launching and Convening a Task Force That Identifies and Implements Mathematics Skills and Practices for High-Demand Careers

OVERVIEW

A working knowledge of basic mathematics empowers individuals to engage productively in today's society and economy. All too often, however, mathematics is an obstacle, rather than an opportunity, for students who want to achieve their career goals through postsecondary certification or degree.¹ Over the last decade, modernization of postsecondary mathematics has swept across the nation to diversify entry-level mathematics course offerings. This national movement, called *mathematics pathways*, allows students to take mathematics courses that are aligned to their chosen fields of study. Although state-, system-, and institution-level efforts have managed to align mathematics skills and practices for many postsecondary academic programs and their industries, misalignments remain for many other industries that are in dire need of skilled entry-level to mid-level employees.

This resource from the Charles A. Dana Center outlines the considerations and process for launching task forces that establish ongoing partnerships between workforce stakeholders (e.g., industry, higher education, advocacy organizations, professional organizations, students). The goal of these task forces is to ensure that students attain the mathematics skills specific to their chosen industries in order to have equitable opportunities for successful employment and promotion.

Based on past successes and learnings from convening two national task forces dealing with high-demand fields, this resource offers a detailed process for launching a task force, planning the initial convening, and learning from successes and challenges.

I. CONSIDERATIONS FOR LAUNCHING A TASK FORCE

Before launching a task force, stakeholders should consider whether a task force should or could be established. The suggestions noted below are derived from summative learnings of two national task forces, one for nurses and one for manufacturing. The Dana Center acknowledges that stakeholders may not be able to address all considerations, but they should consult with other stakeholders in industry, higher education, advocacy and economic development organizations, and students, among others. This strategy would help to gain a clearer perspective on the scope and viability of launching a task force to identify appropriate mathematics skills (including statistics) for a given discipline and to support the implementation of practical and relevant curricular resources.

Each consideration below should be approached with an equity-driven lens that intentionally prioritizes and promotes diversity, equity, and inclusion of stakeholders and students.

1. Clearly define the perceived disconnect (“the problem”) between mathematics needs and current preparation.

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¹ Charles A. Dana Center. (2019). *The case for mathematics pathways*. Retrieved from <https://dcmathpathways.org/resources/case-mathematics-pathways>

2. Gauge the level of interest from key stakeholder groups.
3. Collect research and existing literature about the mathematics skills and practices for the industry in question.
4. Define national, state, or employer-specific license or certification requirements.
5. Ascertain if other stakeholder groups are already working to solve the problem or if there is published guidance from the field to inform and guide the work.
6. Seek funding to support the work.

1. Clearly define the problem. The defined disconnect, or problem, may or may not be a new one. For example, when the High-Quality Mathematics Education for Nurses Task Force met, the problem was one that had been acknowledged and investigated for at least a century: What are the core quantitative skills that nursing students need in order to ensure safe and quality practice? In the case of the Mathematics Education for Manufacturing Task Force, the problem was more concerned with adapting mathematics skills and practices to current conditions: What are the current quantitative skills necessary for entry-level and mid-level manufacturing jobs given the increased automation of the field?

In addition to defining the problem, it is important to identify what the solution would look like. For example, solutions might include improved consistency in mathematics skills and practices across programs of study for high-demand careers; increased equitable access, success, and ultimately employment for historically marginalized students; and more students entering the talent pipeline for industries in need of skilled workers.

2. Gauge the level of interest from key stakeholder groups. Once a problem has been identified, consider if a task force and its intended representatives are the appropriate stakeholders to address the problem. Is there an organization or governing body that has more legitimacy to lead the work? Stakeholders may include mathematics faculty, mathematics education faculty, discipline faculty, K–12 partners, economic development leaders, industry leaders/employers, professional organization representatives, accrediting body or licensure body representatives, national or regional educational organizations, and students.

Sufficient representation across stakeholders' groups is critical to legitimize the task force work and to leverage key insights and expertise to strategize solutions to the problem. Insufficient representation within or across stakeholder groups should be a key signal that more work may be needed to deepen collective understanding of the problem and to identify barriers to participation before convening a task force.

Lessons Learned. At the Mathematics Education for Manufacturing Task Force convening, there was high engagement from educational partners, but there was a lack of engagement from the industry leaders and employers. It became clear that having invested and committed leadership from several employers to join with educational leaders as part of a core leadership team would have led to greater sustainability of the task force.

3. Collect research and existing literature. To help further define the problem, it is essential to collect research and existing literature on the current landscape of mathematics education for the industry in question. Having a broad understanding of the landscape will help determine who should participate in the task force, identify the types of work to enact change, and ensure a common understanding of the issues among task force members.

Use the guidance below to navigate this task of information gathering.

- Identify the current status/condition of mathematics education in the industry and any published concerns about alignment.
- Clarify whether there are published recommendations or guidance from industry, professional, and

educational organizations, including whether mathematics is explicitly discussed or specific topics are identified. Locate examples of how mathematics is used in the industry and in the entry-level and mid-level positions in the field.

- Highlight innovative or emerging work that has addressed the issues or problem identified (if applicable).
- Surface known inequities in the industry that can be partially explained by uneven or inconsistent mathematics requirements and instruction.

Examples of research and information gathering by the Dana Center:

[Emerging Solutions in Mathematics Education for Nursing](#)

[Emerging Issues in Mathematics Education for Manufacturing](#)

4. Define license or certification requirements. Certain issues may be beyond the scope of a task force, such as changing licensure, accreditation, or testing requirements at a national level or dealing with issues related to non-academic, non-mathematical barriers to employment (e.g., pay, unionization, safety considerations).

Lessons Learned. In order to work as a registered nurse in the United States, students must pass the National Council Licensure Examination for Registered Nurses (NCLEX), developed and administered by the National Council of State Boards of Nursing (NCSBN). Having this common assessment allowed the conversations to focus on the mathematics skills needed for success on that, although the High-Quality Mathematics Education for Nurses Task Force also looked at skills beyond those required for the NCLEX, which only measures whether a student is able to complete the tasks in the first year after licensure. Having NCSBN representatives on the task force added legitimacy to the work and provided an opportunity for correcting misconceptions among stakeholders about math requirements for the NCLEX.

In contrast, the Mathematics Education for Manufacturing Task Force did not have a common licensure or accreditation to reference. It found that the high national levels of variation among programs and employers' expectations would have possibly been better served by having a regional task force work with higher levels of commonality (e.g., aerospace manufacturing in Washington and Oregon.).

5. Ascertain if other stakeholders are already working to solve the problem or if there is published guidance to inform or guide the work. If other stakeholder groups or guidance related to mathematics in the industry already exists, it might be more prudent to join or collaborate with them or help publicize the existing guidance. If key stakeholders agree, however, that the existing guidance is inadequate, no longer relevant, or otherwise ineffective, make certain to include representatives of the existing stakeholders' groups or guidance in any task force engagements.

Lessons Learned. Both the High-Quality Mathematics Education for Nurses Task Force and the Mathematics Education for Manufacturing Task Force found that there were existing national or regional recommendations regarding the appropriate education and preparation for entry- to mid-level employment. However, in both cases, the guidance was vague on the topic of mathematics; this lack of clarity and specificity led to wide variation in educational experiences for students. The Emerging Solutions and Emerging Issues briefs highlighted this lack of clarity in those fields and was part of the justification for holding the task force convenings.

If, however, a field has clear mathematics requirements published by professional organizations or educational institutions, it may still be appropriate to consider whether those recommendations need to be updated based on innovations in the field (as has been the case in both nursing and manufacturing). The mathematics needed for certain jobs may have evolved since the guidance was produced. There may also be a disconnect between the published guidance and what students are encountering in reality, especially if the guidance is not enforced and/or supported by an accrediting body.

Lessons Learned. Upon convening the Mathematics Education for Manufacturing Task Force, the Dana Center learned from task force members that there were several local or regional initiatives currently working on the question of mathematics education for manufacturing. However, many of the initiatives were not widely known or publicized, leading to their lack of inclusion in the *Emerging Issues in Mathematics Education for Manufacturing* brief. Had organizers been aware of this ongoing work around the country, it might have been more appropriate to either work with one of the existing groups or gather representatives from several of the initiatives to collaborate more broadly. However, after reaching out to the initiative leads, it was determined that the variations in type of manufacturing and lack of national licensure would not be productive to the task force's charge.

6. Seek funding to support the work. Given the significant time, effort, and resources needed for this work, consider whether funding is available to convene stakeholders and to support the work of a task force. The availability of funding impacts a number of factors for the task force, especially if an initial convening occurs, such as stipends for task force members and facility rental, travel, and food service costs. If funding is limited or has not been secured to support the work, then effort should be made to identify such resources.

II. PLANNING THE INITIAL TASK FORCE CONVENING

Once it has been determined to launch a task force to address a defined problem between mathematics needs and current career preparation, an initial convening should be held. Facilitating an initial task force convening comprises three overarching steps that guide stakeholders to **plan, facilitate, and follow up**. The steps outlined below are not exhaustive nor perfectly linear; steps may overlap and circumstances leading up to the decision to convene a task force may necessitate additional steps in the process to reach the task force's outcomes.

Step 1: Plan for the Initial Convening

A number of important factors should be considered when planning to convene stakeholders.

Create a planning team. A core planning team should be assembled to be responsible for planning, facilitating, and conducting post-convening activities. The work of the planning team may include drafting convening outcomes, recruiting convening participants (task force members), identifying the convening location, constructing the agenda, communicating with participants, and monitoring progress both during and immediately following the event.

Develop convening outcomes. Be very clear on the purpose of the convening; that is, consider how the convening will serve the problem or issue that was identified during the research and information-gathering work. If addressing this defined problem is a long-term goal, then consider how the activities at a convening will support the task force in achieving this goal.

Specifying convening outcomes will help to provide a framework for identifying whom to invite and for designing the convening agenda. Below are convening outcomes from the High-Quality Mathematics Education for Nurses Task Force and the Math Education for Manufacturing Education Task Force. **Lessons Learned** details how each planning team constructed the outcomes for their respective convening.

Example: High-Quality Mathematics Education for Nurses Task Force Convening Outcomes

1. Connect the mathematics, statistics, and nursing communities and become more familiar with the unique challenges at the intersection of these disciplines.
2. Collaborate to build consensus around (a) the quantitative skills and competencies necessary for safe nursing practice, and (b) the curricular and pedagogical implications for supporting nursing students and those currently practicing.

Example: Math Education for Manufacturing Task Force Convening Outcomes

1. Identify a task force and advisory board structure and develop a strategy and communication plan for facilitating collaboration and stewarding recommendations forward.
2. Synthesize relevant research and attendees' expertise to identify gaps and disconnects between the quantitative skills included in entry-level manufacturing certificates, training, and/or associate of applied science programs, and the skills needed by employees in the modern manufacturing industries.
3. Develop recommendations for future work by task force members, industry, and education partners, and manufacturing professional organizations.

Lessons Learned. The first outcome of the High-Quality Mathematics Education for Nurses Task Force Convening was to build connections among the mathematics, statistics, nursing, and education communities, and to arrive at a shared understanding of the unique challenges at the intersection of these disciplines. This outcome was identified in part because there were very few formal structures for these groups to directly engage with one another. The convening would serve as an opportunity to foster lasting connections among discipline stakeholders. As a result of these lessons learned, the planning team of the Mathematics Education for Manufacturing Convening decided that one of their outcomes would be to formalize these connections by identifying a task force and advisory board structure.

Additional outcomes for both convenings were created with the intention of **arriving at some shared consensus** about the mathematics skills and competencies necessary for their respective disciplines. However, when comparing these outcomes for each of the convenings (outcome #2 for nursing, and outcomes #2 and #3 for manufacturing), there is a difference in specificity: The language in the second outcome of the mathematics for nursing convening is more general. This was due to the state of the disciplines at the time, when there were no formalized structures, organizations, or groups at the intersection of the mathematics, statistics, and nursing communities. Therefore, there was some uncertainty about where the conversations at the convening would ultimately lead. The planning team was unsure if attendees would mainly focus on entry-level nursing positions or if practicing nurses would also be considered a priority. Additionally, the team was uncertain if discussions would center on curriculum and pedagogy in the classroom, in clinical practice, or both.

By contrast, there were more specific convening outcomes focused on entry-level manufacturing. The planning teams also decided that constructing a recommendations document would be one outcome of the nursing and manufacturing convenings.

Identify and recruit convening participants. Participants to the event should represent the various key stakeholder groups that have been identified (e.g., mathematics and statistics faculty, mathematics education faculty, discipline faculty, K-12 partners, economic development leaders, industry leaders/employers).

Also consider inviting individuals who are:

- Active in research at the intersection of the participating disciplines,
- Associated with organizations or institutions that have the potential to fund future work related to the initiative, or
- Serve as an administrator at a higher education institution (e.g., dean, provost, president) that may already be involved or have the potential to be active in future task force work.

The appropriate number of participants will vary depending on the defined problem and convening outcomes; however, be mindful of the number of individuals representing each of the various stakeholder groups in order to support equitable sharing of power in convening discussions and activities.

A recruitment e-mail should be sent to participants that includes general information about the problem being pursued by the task force, the purpose of the convening, and expectations of interested participants before, during, and after the convening. If funding is available to compensate participants for their time and/or other associated costs, this information should be clearly communicated. (See a sample recruitment e-mail in Section IV, Resources.)

Identify a venue for the convening. A successful initial task force convening can be held virtually or in person, with each format having its own benefits and limitations. Deciding on which format to choose may depend on the amount of available funding or if there is a benefit associated with meeting at a particular venue or location.

If there are no funding or logistical constraints, holding the convening virtually may be a more convenient and cost-saving option. Doing so will require additional considerations, such as identifying a time that is accessible for participants in various time zones and constructing an agenda that keeps participants engaged in a virtual setting.

Lessons Learned. The High-Quality Mathematics Education for Nurses Task Force Convening was held at the University of Miami in October 2019, and required logistical planning, including venue rental, food services, and lodging reimbursement for participants. A benefit to holding the event in person was being able to use the university's facilities, including a state-of-the-art simulation hospital. Touring the simulation hospital was an integral part of the convening agenda as it provided a unique background for attendees to discuss how nursing students utilize quantitative reasoning in clinical practice. It is unlikely this activity could have been replicated in a virtual setting.

Create the convening agenda and supporting materials. The planning team should develop an agenda with activities that directly support the convening outcomes. These activities include opportunities for both small and large group discussions and for allowing representatives from within and between stakeholder groups to engage with one another.

Although creating an agenda will depend on the specific convening outcomes, the following suggestions may help to promote meaningful engagement among the participants.

- **Disseminate a preparatory assignment to begin engaging stakeholders before the convening.** To ensure stakeholders are well prepared to participate in discussions, the planning team should share the convening agenda and essential supporting resources at least one week prior to the event. Supplemental resources might include links to a welcome video, a prep reading, or helpful resources identified during the initial research and information-gathering work (e.g., research articles, literature reviews, landscape briefs). The content of these resources might also include:
 - Data supporting why a task force has been launched (e.g., lack of skilled employees, talent shortage) and how mathematics relates to the defined problem.
 - Summary of any existing guidance related to the mathematics skills and practices needed for the discipline, and how mathematics educational offerings are currently designed and taught for students pursuing the field.
 - Summary of any existing regional or national initiatives intended to address student/employee preparation that include mathematics and statistics.
- **Construct convening activities to build awareness and relationships and to surface stakeholders' expertise.** At the start of the task force convening, stakeholders should be given an opportunity to get to know one another and learn about the various expertise each individual brings to the discussion. This can be done through individual introductions or an icebreaker activity. Another option is to ask participants to introduce themselves asynchronously prior to the initial convening through a discussion board or other online tool.

At the beginning of the convening, the planning team should provide participants with any rules or norms to be followed throughout the event. This protocol is especially important for convenings that are held virtually in order to minimize distractions and ensure that participants are thoroughly engaged. Essential definitions and guiding frameworks should also be shared with stakeholders at the start.

An example of group norms and equity framework for the Mathematics Education for Manufacturing Convening can be found here: <https://utexas.box.com/s/e1ete1nx67m5n22sel5htl7isv419cfm> (slides 4-6).

Following the introductions and convening norms, a keynote address by a leader in the field can be a helpful way to articulate the issue or problem at hand. It can also provide an additional opportunity to clearly articulate the task force convening outcomes and how the event will support long-term task force goals. Other activities should be designed to promote engagement, surface the stakeholders' expertise, and achieve the convening outcomes.

Lessons Learned. At the High-Quality Mathematics Education for Nurses Task Force Convening, Dr. John Clochesy, Professor of Nursing at the University of Miami, presented on how mathematics and statistics have been a challenge in nursing education for over 100 years. Dr. Clochesy's presentation (see Section IV, Resources) not only provided attendees with a great foundation on the issues and challenges in the field, but it also reinforced the importance of taking a new, collaborative approach among all stakeholders.

Participants from the nursing and manufacturing convenings share the following insights.

Provide an opportunity for participants to debrief on the literature and resources that were distributed before the initial convening. Hold a large group discussion, small group discussions, or a think-pair-share activity. Potential reflection questions for participants:

- What is something that you learned?
- What is something that surprised you?
- What is something that you disagreed with?
- What questions or concerns do you have after reviewing these resources?

Allow key stakeholder affinity groups to share their perspectives and to address questions from other participants. Consider organizing a series of panel discussions on authentic scenarios from the field, best practices in pedagogy and curriculum, or other trends in the discipline. The planning team should select panelists with unique expertise. If the panelists are not accustomed to lead discussions about the intersection of mathematics and the specific discipline, plan to disseminate supporting materials to the panelists so they can be adequately prepared in advance. (See Section IV for examples.)

Allot time for stakeholders to discuss potential funding sources to support long-term work. Although funding was available to support the High-Quality Mathematics for Nurses Task Force Convening, the availability of funding post-event was less certain. The planning team, therefore, made sure to allot time on the agenda to discuss potential funding sources to support the work of the task force.

Have stakeholders examine scenarios, synthesize material from the literature, or complete a collaborative task. In an effort to promote discussion around the skills and competencies necessary for nursing and manufacturing, representatives of the respective convenings collaborated in breakout groups to address a series of prompts and synthesize ideas. For example, participants at the High-Quality Mathematics Education for Nurses Task Force Convening were divided into two groups and asked to discuss the following questions:

- What mathematics and statistics skills/competences are required for safe nursing practice?

- What are the educational implications for supporting nurses' acquisition of these skills/competencies?

These groups were also given a number of related sub-questions to encourage conversation and a suggested method to synthesize their findings. The breakout groups then shared their discussion with the larger group. Those discussions helped to inform the next day's work and the resulting convening recommendations document. (See Section IV for examples of breakout questions.)

Encourage participants to experience and/or engage in an activity that surfaces best practices or innovations in the field. Participants of the High-Quality Mathematics Education for Nurses Task Force Convening at the University of Miami were fortunate to experience S.H.A.R.E. ([Simulation Hospital Advancing Research & Education](#)). This 5-story, simulation hospital offered “on-site, virtual, and extended-reality simulation opportunities in a variety of clinical, research, and educational settings.” Participants toured the simulation emergency department, incident command center, operation rooms, and labor and delivery suites. Attendees were able to have more meaningful discussions on the integration of mathematics, statistics, and nursing in various contexts.

Make time for breaks, downtime, and informal discussions. Although agenda activities are designed to for full participation, the richest discussions often take place during downtime (e.g., breaks, mealtimes). Allow time for such discussions to take place. An additional option is to provide an opportunity for informal discussion and Q&A at the beginning and end of the day's activities.

Step 2: Facilitate the Task Force Convening

An important task of the planning team is to monitor the time between the activities, to actively facilitate so that everyone has the opportunity to contribute, and to ensure that participants have all necessary materials and resources to engage in rich discussions. To increase engagement during and after the event, organize and share all convening materials with attendees using an online file storage solution (e.g., Google Drive, Box).

At the end of each day of the convening, the planning team should prepare and communicate a summary of that day's activities and findings, reminders of any tasks or assignments for the following day (e.g., readings, journal reflection, posts for a discussion board), and any resources needed for the next day's activities.

For convenings held over multiple days, the planning team should plan to debrief after each day's activities to discuss what went well, what did not, and what (if any) changes might be needed for the next day's planned activities. The planning team should be prepared with a back-up plan in case convening outcomes may no longer be achievable.

Lessons Learned. Following the first day of activities, leaders of the High-Quality Mathematics Education for Nurses Task Force Convening recognized that the second day's planned activities were no longer suitable given the direction of the first day discussions. More specifically, results of the first day's activities suggested that arriving at a consensus on the foundational quantitative skills and competencies necessary for safe nursing practice would not be possible due to time constraints. Additionally, convening representatives from national organizations shared concerns about the logistical constraints associated with asking their institutions to formally adopt a convening publication.

Consequently, the second day's activities were adjusted, focusing now on surfacing all general areas of consensus among those in attendance (rather than producing a concise list of quantitative skills and competencies). Additionally, it was determined that any document created following the initial convening would serve as an artifact of that convening rather than as a formal document that required approval or adoption from the various participating organizations.

Lessons Learned. The first day's agenda of the Mathematics Education for Manufacturing Convening included significant time for participants to discuss the potential structure and composition of the task force and advisory board that would support the initiative and work moving forward. After deciding on this structure, the planning team planned for the second day's

activities to specify the scope of the work to be completed by these groups. However, at the debrief after the first day, it became clear that there were still unanswered questions about the task force and advisory board structure. Consequently, the team sent participants an e-mail with adjustments to the next day's activities so that additional questions and concerns could be considered while the scope of the task force and advisory board were being defined.

Step 3: Follow Up After the Task Force Convening

It is essential for the planning team to follow up with participants immediately after the convening to debrief, evaluate whether the convening outcomes were achieved, and identify next steps and actions for the task force.

If needed, the planning team should also identify the individuals, responsibilities, and outcomes associated with the future work. A summary of convening resources, assignments of responsibility, and a timeline of the immediate next steps should be shared with the convening participants.

III. OPPORTUNITIES AFTER THE CONVENING

It is crucial to plan for how the work will be sustained after the initial convening, if such ongoing work is in alignment with the convening outcomes. Having a centralized means of communication with task force members as well as other interested parties will ensure that any recommendations are widely disseminated and that ongoing work is coordinated to address the recommendations.

Some possible strategies for continuing engagement are listed below. Most of these strategies require some level of management or curation, which will likely require ongoing leadership by one or more task force members.

- Online discussion forum
- Public webinar series
- Newsletter
- Website

Task force members and other interested parties may also consider developing conference and grant proposals, workshops, and collaborative work sessions.

Lessons Learned. In order to promote ongoing collaboration and efforts to address the High-Quality Mathematics Education for Nurses Task Force Convening recommendations, both a website (<https://sites.google.com/view/mathfornurses/home>) and Google group (<https://groups.google.com/g/mathandnursing>) were created by the task force leadership. The website provides a space where interested members of the task force, or the greater math and nursing education fields, can access publications, resources, webinar recordings, and a list of events planned by the task force. The group provides a forum where members can discuss their work as it relates to the recommendations, solicit collaborators and/or feedback, and share other opportunities such as grants, conferences, and workshops.

In addition to these structures to support ongoing collaboration and communication, the task force leaders hosted a public biweekly webinar discussion series to allow math and nursing educators to delve more deeply into each of the convening recommendations. While the *Convening Recommendations: Math and Statistics Education for Nurses* publication included resources and citations, the task force leaders recognized that collaborative discussions would provide participants with a deeper understanding of the drivers of each recommendation as well as lay the foundation for collaboration. Each discussion also included a discussion thread within the Google group so that those who were unable to attend could participate, and to provide a space for ongoing discussion.

IV. RESOURCES FOR THE INITIAL TASK FORCE CONVENING

Plan for the Initial Task Force Convening:

- Example task force convening agendas:
 - [High-Quality Mathematics Education for Nurses Task Force](#)
 - [Mathematics Education for Manufacturing Task Force Virtual Convening](#)
- Example [recruitment email](#) for High-Quality Mathematics Education for Nurses task force members
- [Group norms and equity framework](#) for the Mathematics Education for Manufacturing Convening (slides 4-6)
- [Dr. Clochesy's presentation](#) to build awareness and relationships and to surface stakeholders' expertise at the High-Quality Mathematics Education for Nurses Task Force Convening
- Example panel session prep materials from the manufacturing convening:
 - [Employer and Manufacturing Professional Organization Panel](#)
 - [Educator and Math Professional Organization Panel](#)
- [Breakout questions for day 1](#) of the High-Quality Mathematics Education for Nurses Task Force Convening.

Follow Up After the Task Force Convening:

- Example [outreach message](#) to Mathematics Education for Manufacturing task force members post-convening

All of the resources can be accessed here:

<https://utexas.box.com/s/uueh1z1nzozwrvb53271axhgb8yg3wgk>

About the Dana Center

The Dana Center develops and scales math and science education innovations to support educators, administrators, and policy makers in creating seamless transitions throughout the K-14 system for all students, especially those who have historically been underserved.

We focus in particular on strategies for improving student engagement, motivation, persistence, and achievement.

The Center was founded in 1991 at The University of Texas at Austin. Our staff members have expertise in leadership, literacy, research, program evaluation, mathematics and science education, policy and systemic reform, and services to high-need populations.

For more information about the Dana Center, visit www.utdanacenter.org.

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