Rural Magnet Programs

At the Secondary Level

District Leadership Forum

Teresa Liu
Research Associate

Luke Churchill
Research Manager

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1) Executive Overview

Key Observations

Administrators at profiled institutions established magnet programs to align school curricula with local workforce needs, improve student postsecondary readiness, and/or increase school enrollment. Many rural communities in the U.S. struggle to increase economic development, maintain schools (e.g., recruit and retain teachers, grow student enrollment), and keep talented youth in the community.[1] Research demonstrates that offering "high quality, relevant, affordable educational programs," such as magnet programs, can help retain families in rural communities and attract people who live outside of these communities.[2] For example, in response to flat or low enrollment, administrators at School B and School C established magnet programs to increase student choice, boost school appeal, and ultimately increase enrollment.

To align magnet themes with growing and high-demand fields, analyze local and regional labor trends. Administrators at District A and School D established planning committees, which comprised school and district administrators, community stakeholders from different industries, and representatives from local economic and workforce development organizations (e.g., chamber of commerce). The planning committee at District A noted that major companies operate distribution centers located in or near the county—and that one additional company would soon build a new center. Thus, the committee recognized job growth in the logistics industry (e.g., supply chain management, storage, transportation). Administrators accordingly implemented Logistics-themed Career Academies at two of the district's high schools.

Establish partnerships with local organizations and businesses to provide meaningful industry-relevant learning experiences for students. Administrators at School C partner with a local hospital to provide paid internships for students in the Exercise Science magnet program. Students intern as a nurse's assistant at the hospital during their senior year, while taking a reduced course load at school. Similarly, students in the Health Care program at School D intern at the local assisted-living facilities and with the fire-department paramedics team. Through these hands-on, experiential learning experiences, students gain valuable workplace skills and industry-specific knowledge.

Spotlight student learning and host school tours to recruit students and build the magnet program brand. Administrators and teachers at School B regularly showcase student learning through multiple channels, including social media platforms (e.g., Instagram, Twitter), the school website and blog, and student-led "TED-style" talks. At School C, the principal invites all rising eighth grade students and their families in the district to participate in small-group tours of the magnet program during or after school. Administrators at profiled institutions use these tactics to increase prospective student and parent interest in the program.

1) Moody, Linda, S Fritz, et al. "Building a Magnet School Network in Rural Communities." University of Nebraska Lincoln, 2001. Accessed October 23, 2019. https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1003&context=nn21publications; Mathis, Williams J. "Equity and Adequacy Challenges in Rural Schools and Communities." American Education Finance Association, 2003. Accessed October 30, 2019. https://eric.ed.gov/?id=ED478057.
2) Moody, Linda, S Fritz, et al. "Building a Magnet School Network in Rural Communities." University of Nebraska Lincoln, 2001. Accessed October 23, 2019. https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1003&context=nn21publications.

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2) Motivations and Program Selection

Overview

Many Rural Communities Implement Magnet Programs in Response to Low or Declining School Enrollment

Many rural communities in the U.S. struggle to increase economic development, maintain schools (e.g., recruit and retain teachers, grow student enrollment), and retain talented youth.[3] Research demonstrates that offering "high quality, relevant, affordable educational programs," such as magnet programs, can help retain families in rural communities and attract people who live outside of rural communities.[4] According to 2011-2012 data from the National Center for Educational Statistics (NCES), there are 323 rural magnet schools in the U.S.—representing approximately 12 percent of all magnet schools (i.e., around 3,000) in the U.S.[5]

NCES designates all profiled institutions—with the exception of School D (which is not listed in the NCES database)— as schools or districts that serve rural communities and operate magnet programs.

Overview of Magnet Programs at Profiled Institutions

Institution	Region	Locale, according to NCES	Program Type, Examples of Program Themes
District A	South	Rural fringe	• Career Academies* • Logistics; Manufacturing; Information Technology; Robotics, Automation, and Design; Education; Power and Energy
School B	South	Rural fringe	• Magnet program • Leadership
School C	South	Rural fringe	• Magnet program • Engineering, Entertainment, Entrepreneurship, Environmental Studies, Exercise Science (i.e., Biomedical Science)
School D	Pacific West	Rural fringe	• Magnet program • Culinary Arts, Education, Health Care, Process Technology, Construction

*Career Academies at District A are similar to the district's Career and Technical Education (CTE) programs—with the exception that Academies are based on the highest-demand industries in the region and are open to any student in the district. Both Career Academies at District A and magnet programs at other profiled institutions in this report represent programs of choice that offer specialized (i.e., themed) curricula to students. Thus, insights from administrators at District A are broadly applicable to administrators that seek to implement magnet programs in rural communities.

3) Mathis, Williams J. "Equity and Adequacy Challenges in Rural Schools and Communities." American Education Finance Association, 2003. Accessed October 30, 2019. https://eric.ed.gov/?id=ED478057; Moody, Linda, S Fritz, et al. "Building a Magnet School Network in Rural Communities." University of Nebraska Lincoln, 2001. Accessed October 23, 2019. https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1003&context=nn21publications.
4) Moody, Linda, S Fritz, et al. "Building a Magnet School Network in Rural Communities." University of Nebraska Lincoln, 2001. Accessed October 23, 2019. https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1003&context=nn21publications.
5) Williams, Sheneka M, AA Grooms. "Educational Opportunity in Rural Contexts: The Politics of Place." Information Age Publishing, 2015. Accessed October 23, 2019. https://books.google.com/books?id=5gYoDwAAQBAJ&pg=PA28&lpg=PA28&dq=rural+magnet+school&source=bl&ots=-RiFE1JhYN&sig=ACfU3U1XGxxEnv0uw9wIvEjrd-6GW0U_FA&hl=en&sa=X&ved=2ahUKEwjFr6Wp5sPkAhVyTd8KHdqzC54Q6AEwDnoECAoQAQ#v=onepage&q=rural%20magnet%20school&f=false.

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NCES provides the following definitions for rural areas (referenced above):

- **Fringe**: "census-defined rural territory that is less than or equal to five miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster,"
- **Distant**: "census-defined rural territory that is more than five miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster,"
- **Remote**: "census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster."[6]

Motivations

Rural Districts Create Magnet Programs to Boost Enrollment and Increase Students' Readiness to Work in Local Industries

In 1999, administrators created Mead Agricultural Sciences Magnet School in Nebraska—the first rural magnet school in the U.S.— in response to declining student enrollment, a state-mandated cap on school spending, and decreasing agricultural commodity prices.[7] Mead Public Schools partnered with the University of Nebraska's Agriculture Research and Development Center to establish the magnet school. The magnet school, which included pathways in agricultural technology, agribusiness, food science, plant science, and animal science, inspired other high schools in Nebraska—where approximately 25 percent of jobs relate to agriculture—to create similar agricultural science curricula to prepare graduates for the workforce.[8]

While the Mead Agricultural Sciences Magnet School is no longer in operation, many rural communities today navigate similar concerns that Mead Public Schools faced two decades ago. Administrators at profiled institutions—through their respective magnet programs—aimed to both increase enrollment and boost students' preparation for the local workforce. To meet both goals, administrators aligned magnet program curricula with local and regional workforce demands.

6) National Center for Education Statistics (NCES). http://nces.ed.gov/.
7) Williams, Sheneka M, AA Grooms. "Educational Opportunity in Rural Contexts: The Politics of Place." Information Age Publishing, 2015. Accessed October 23, 2019. https://books.google.com/books?id=5gYoDwAAQBAJ&pg=PA28&lpg=PA28&dq=rural+magnet+school&source=bl&ots=-RiFE1JhYN&sig=ACfU3U1XGxxEnv0uw9wIvEjrd-6GW0U_FA&hl=en&sa=X&ved=2ahUKEwjFr6Wp5sPkAhVyTd8KHdqzC54Q6AEwDnoECAoQAQ#v=onepage&q=rural%20magnet%20school&f=false.
8) "More Schools Join Mead Ag Magnet School Curriculum." High Plains Journal, 2001. Accessed October 23, 2019. https://www.hpj.com/archives/more-schools-join-mead-ag-magnet-school-curriculum/article_d468d1e6-2b60-5af4-a246-e9b9d06b64a4.html.

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Motivations for Establishing Magnet Programs at Profiled Institutions

For more information on CTE programs, review EAB's brief **Career and Technical Education-Focused High Schools**.

Increasing Enrollment

School B

- Though enrollment increased across the district overall, School B faced consistently low student enrollment. Many students (i.e., 30 to 40 percent) from the elementary school that feeds into School B chose to enroll in other middle schools in the district through the district's choice program. In addition, students at School B achieved lower-than-average state test scores.
- Administrators assessed current magnet programs in the district and selected one of the most successful programs—the Leadership Academy—to replicate at the school.

School C

- In response to flat enrollment (i.e., some students and families were choosing charter or private schools over School C), administrators established magnet programs to increase student choice, subsequently boost high school appeal, and ultimately increase enrollment. From 2013 to 2019, student enrollment nearly doubled from 567 to 1070.
- Contacts additionally note that the superintendent at the time had worked at another district with a long history of successful magnet programs and strongly supported the model.

Developing the Workforce

District A

- Each high school provides CTE programs (e.g., Agriculture, Health, Culinary). Administrators established additional industry-focused programs—Career Academies—which reflect the highest-growth industries in the region, to further increase students' readiness to work in these fields.
- By supplementing CTE programs with Academies and allowing any student in the district to enroll in Academies, administrators further expand all students' access to courses related to workforce needs.

School D

- Contacts note that five to 10 percent of students from the district attend college. Rather than focus on the needs of only college-going students, administrators decided to design programs to support students who wished to move directly to the workforce.
- Administrators thus established magnet programs to increase students' exposure to career pathways and develop the workforce in local industries such as mining and construction.

Selecting Program Themes

Create a Planning Committee of Local Stakeholders to Align Magnet Program Themes with Community Needs

To select magnet program themes that aligned with local workforce needs, administrators at District A and School D established planning committees of eight to 10 community stakeholders. Committee members included school and district administrators, community stakeholders from different industries (e.g., health care, manufacturing), and representatives from local economic and workforce development organizations (e.g., chamber of commerce). To recruit committee members, administrators at School D reached out to existing professional and personal contacts in person with a pitch that focused on the school's role in developing the community workforce.

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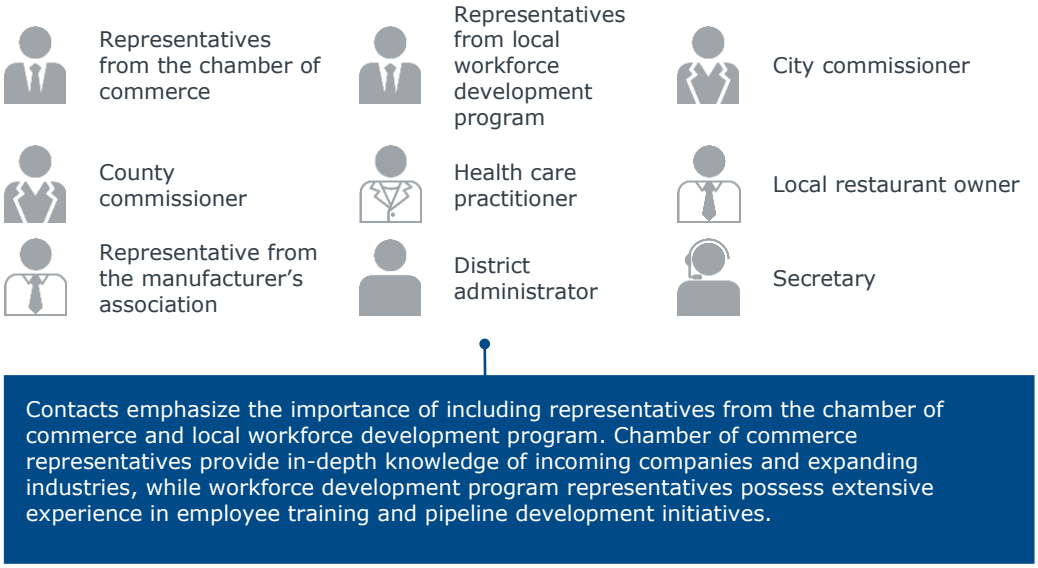
Planning Committee Structure at District A



Administrators at District A and School D implemented similar meeting structures. Committees at both schools met three to four times per year during magnet program implementation. At District A, the planning committee convened for multiple 1.5-hour working lunch meetings during the three-year, gradual implementation process to select themes and plan Academy implementation. Administrators chose the local technical center's cafeteria as the meeting venue to allow students in the CTE Culinary Arts program to showcase their skills. Similarly, the planning committee at School D met over the course of two years to identify four primary high-demand fields in the region: process technology (i.e., monitoring and controlling industry equipment and processes in industries such as oil), culinary arts, education, and health care. Administrators at School D accordingly implemented magnet program themes associated with those four careers.

During these planning committee meetings, administrators at both District A and School D obtained data on new business and employers projected to enter the region—which they used to inform magnet program themes.

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Profiled Institutions Investigated Regional Labor Demands to Inform Magnet Program Themes

School D

- Administrators added the Construction program in response to upcoming expansion projects in the region (e.g., new school, port, airport runways).
- Contacts note that, prior to program launch, only two out of eleven school sites in the district offered construction courses—administrators recognized both employer need and an opportunity gap in the district.

District A

- Administrators observed that existing distribution centers for major companies—located in or near the county—created a high need for logistics workers. Administrators also discovered that a new distribution center would soon open in the area.
- Thus, administrators established two Logistics Academies at two high schools to respond to forecasted growth in the logistics industry (e.g., supply chain management, storage, transportation).

Use Current School Infrastructure and Existing District Offerings to Inform Magnet Theme Selection

Like other profiled districts, administrators at School C analyzed high-growth industries across the U.S. to select the school's five magnet program themes. In addition, administrators leveraged existing space in the building to reduce implementation costs. Administrators also considered existing magnet program offerings in the district, to set their own magnet programs apart from existing programs.

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Motivations for Selecting Magnet Program Themes at School C

1	2	3
Existing Building Space, Location, and District Programs	**Employer Demand**	**National Trends and Priorities**
Engineering Students in the Engineering program can take relevant classes at the existing Career and Technology Center in the district. Since another high school in the district already operated a robust STEM magnet program, administrators elected to focus on Engineering specifically, instead of implementing a broader STEM pathway.	**Entrepreneurship** Contacts highlight **The Coming Jobs War**—a book by Gallup Chairman Jim Clifton—as highly influential in the decision to establish an Entrepreneurship program. The book emphasizes the growing demand for entrepreneurial skills across the United States.	**Engineering** When visiting other programs across the country that ran innovative choice programs, administrators noted that technology was a common theme. In addition, the Obama administration strongly advocated for STEM education.
Entertainment To reduce operating costs, the school does not run its own music or athletics program. However, because school construction occurred prior to the decision to establish magnet programs, the building contained elements of a traditional school campus, including theater, band, chorus, and orchestra rooms. Administrators decided to leverage these spaces for an Entertainment program—converting unused rooms into digital photography and multimedia print centers.	**Exercise Science** Contacts note that healthcare jobs (e.g., nursing) are consistently well-paid and in high demand in the region.	**Environmental Science** Administrators implemented the Environmental Science program in response to the Obama administration's emphasis on clean energy (e.g., solar, wind).
Environmental Science The proximity of the coast and mountains (both within two hours' drive from the school) meant that students in the program could access these settings for experiential learning opportunities.		

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3) Program Components

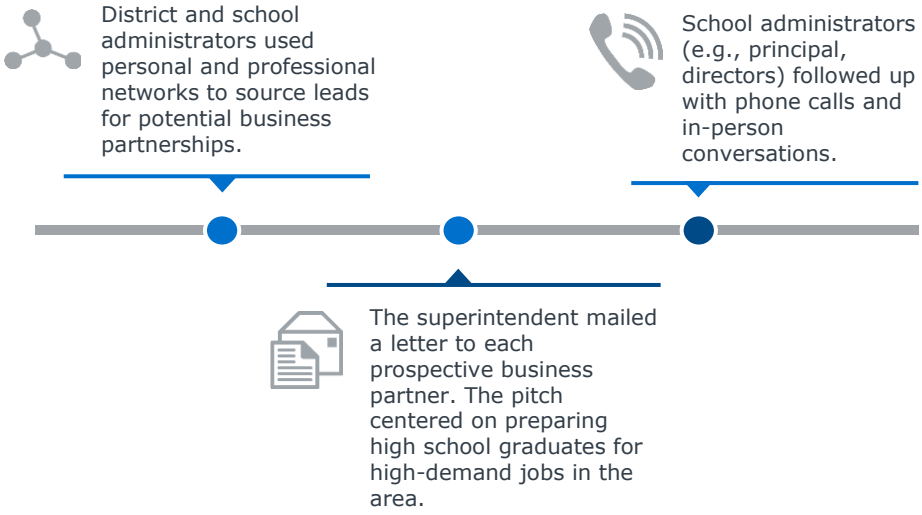
Business Partnerships

Use Existing Community Connections to Create Partnerships with Businesses

Contacts at all profiled institutions recommend that administrators collaborate with representatives from local businesses and organizations to create workforce-aligned magnet programs. Administrators can also use these community partnerships to provide work-based learning opportunities, such as student internships. Through hands-on, experiential learning experiences, students gain valuable workplace skills and industry-specific knowledge.

For example, students in the Health Care program at School D intern at the local assisted-living facilities and with the fire-department paramedics team. To form these partnerships, district and school administrators at School D used the following three-step process.

Multi-Step Process to Establish Business Partnerships at School D



Research suggests that the above approach is common at school districts. In an article on school-business partnerships, Education World notes that principals often write letters, make phone calls, and knock on doors to secure relationships with the local business community. However, in some communities, administrators task the school parent-teacher association or a local organization with this role. For example, at Cedar Heights Junior High School in Washington, the local Kiwanis Club helps the school cultivate partnerships with dozens of businesses.[9] As another option, contacts at School D suggest that administrators hire a dedicated business liaison to forge partnerships with local industries.

Though personal connections can facilitate partnerships, a district's ability to cultivate multiple employer partnerships is often contingent on the number and variety of nearby employers. EAB research demonstrates that many rural schools face logistical

9) "School-Business Partnerships That Work: Success Stories from Schools of All Sizes." Education World. Accessed October 30, 2019. https://www.educationworld.com/a_admin/admin/admin323.shtml.

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challenges in access to a professional network and high-demand industries.[10] For example, Cross Country High School—which is not a magnet school but serves a rural town of 600 people in Arkansas—initially struggled to provide work-based learning opportunities to students due to the shortage of nearby employers and industries.[11] To overcome geographical limitations, administrators asked district teachers to submit business contacts who worked in different industries across the U.S. Administrators then reached out to these contacts to create a virtual internship program that connects students and employers.

Strategies to Establish Virtual Career Matches at Cross Country High School[12]

1. **Identify Career Interests**
   Teachers compile lists of in-demand industries based on student interest surveys.
2. **Assemble the Network**
   All teachers submit a minimum of five professional contacts (e.g., family members, friends, previous employers) from varying backgrounds.
3. **Secure Commitment**
   The vice principal emails professionals seeking participation using a standardized template.
4. **Master the Match**
   Professionals are paired with students based on career interest using Google Forms.

Consider Implementing Virtual Internship Programs to Expand Students' Access to Various Industries

Administrators at rural schools should consider establishing virtual internships to expand magnet students' access to a diversity of industries. EAB's research profiles how administrators and teachers at Cross Country High School match students and employer volunteers based on shared industry interest. Students and employers communicate via email and video conferencing throughout the virtual internship.[13]

10) Shaw, Siska, P Talbot, M Rolfes, A Bruce, R Richards, M Wahlstrom. "Meeting the Career Readiness Imperative." Pages 45-48. EAB, 2018. https://eab.com/research/district-leadership/study/meeting-the-career-readiness-imperative/.
11) Ibid.
12) Ibid.
13) Ibid.

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Industry-Matched Mentors Connect Students to Business Challenges at Cross Country High School[14]

For more information on Cross Country High School's virtual work-based learning program, including examples of students' virtual projects, review **pages 45-48** of the EAB study **Meeting the Career Readiness Imperative**.

Mentor Responsibilities

- Supplies an engaging and current business problem to tackle with student
- Spends six hours over six weeks video conferencing with student
- Provides feedback on project quality and professionalism

Student Responsibilities

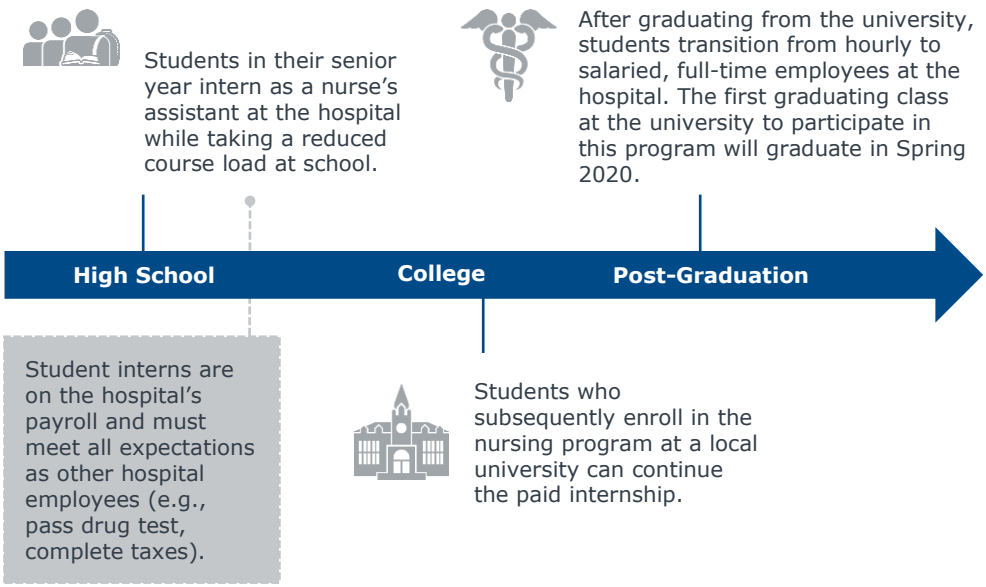
- Conceives of creative solutions to mentor's business challenge
- Spends an additional 1.5 hours each week engaging in hands-on work
- Presents finished product to both mentor and a panel of administrators

Cross Country High School's virtual work-based learning program has connected almost every junior to a professional mentor. In addition, 75 percent of participating students report that the mentorship helped clarify their career interests.

Build the Talent Pipeline in the Community by Connecting Students to Partner Universities and Local Employers

Administrators at School C partner with a local hospital to provide internships for magnet students and build the hospital's talent pipeline. The partnership opportunity surfaced when local hospital administrators approached school administrators with high employee turnover concerns. Together, school and hospital administrators decided that offering high school student internships at the hospital could contribute to the talent pipeline—effectively meeting community needs.

Paid Hospital Internship Structure for School C's Students in the Exercise Science Program



14) Shaw, Siska, P Talbot, M Rolfes, A Bruce, R Richards, M Wahlstrom. "Meeting the Career Readiness Imperative." Pages 45-48. EAB, 2018. https://eab.com/research/district-leadership/study/meeting-the-career-readiness-imperative/.

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Contacts note that a school administrator's personal and professional connections to the university (e.g., earned degrees from the university, currently serves on its education advisory board) were essential to securing the partnership. Contacts add that several of the university professors' children attend School C, which also helps facilitate the partnership between the university and high school. This example from School C demonstrates how administrators can source potential partnerships with institutions of higher education from school staff's existing connections to these institutions.

Similarly, at District A, administrators recently established the opportunity for students in the Education Academy to attend a nearby partner university and gain immediate employment upon graduation. Students can elect to earn their associate degree while in high school and complete a bachelor's degree in Elementary Education or Exceptional Student Education (ESE) at a local university. When these students graduate from the university, administrators at District A plan to offer conditioning teaching contracts to qualified candidates. By establishing this pathway for students, administrators expect to build the teacher pipeline in the district. Administrators chose to partner with the university for its proximity to the county—contacts additionally note that the local community college does not offer a bachelor's degree in Elementary or ESE Education.

Industry Certifications

Provide Students With Opportunities to Earn Industry Certifications to Boost Career Readiness

At District A, students in each Academy can choose to earn industry certifications to help them gain the skillsets needed to pursue successful careers in the area of study.

Industry Certifications Offered in Information Technology Pathways at District A

Game, Simulation, and Animation Programming

- Adobe Photoshop
- Adobe Animate
- **Toon Boom Storyboard Pro**
- **Toon Boom Harmony**

Mobile Application Development

- Adobe Photoshop
- Adobe Animate
- **CIW Internet Business Associate**
- Apple **Swift**

At School D, students can participate full-time in the magnet program or elect to attend three, two-week long courses. In both types of program participation, students earn industry certifications and/or gain hands-on experience in the field (students who participate in two-week long courses receive elective course credit at their school of attendance). By offering short-turnaround courses, administrators at School D

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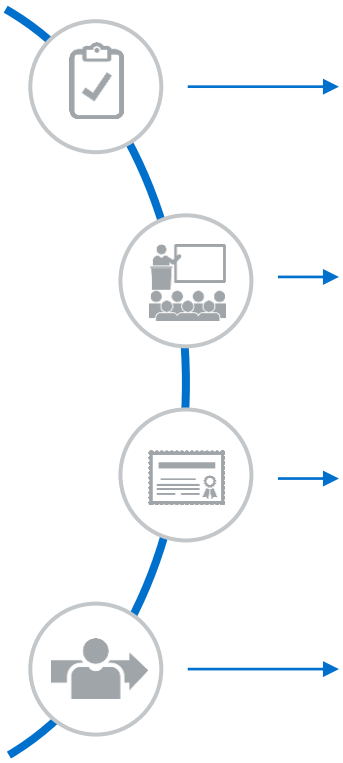
increase program flexibility and expand all students' access to courses that increase workforce readiness. Out of the approximately 40 students currently enrolled in magnet program courses, half chose to enroll in short-term courses.

Short-Term, Industry-Specific Course Structure at School D



Preparation

Prior to students' arrival, the principal at School D calls the principals at students' home schools to gauge interest in specific magnet programs.

Phase One: Introduction

Students complete preliminary courses. For example:

- **Health Care:** Students learn about different careers within the industry. Students obtain First Aid and CPR certification.
- **Education:** Students take an Introduction to Education course.

Phase Two: Hands-On Experiences

Students earn additional industry-specific certifications and/or complete individual projects.

- **Health Care:** Students undergo emergency, trauma, and healthcare technician training.
- **Education:** Students practice implementing a lesson plan and shadow an elementary or secondary teacher.

Phase Three: Field Placement

- Administrators match students with industry-specific mentors in assigned field placements.
- **Health Care:** Students volunteer at the local assisted-living facilities.
- **Education:** Students create, implement, and receive feedback on a lesson in an elementary classroom. Students also participate in state and national competitions through the organization **Educators Rising**.

In addition, students in the Culinary Arts program—either as full-time magnet students or as participants in the two-week-long courses—earn the **ServSafe Food Handler** certification and volunteer as cooks at a local mining camp. Contacts note that the purpose of these short-term courses is two-fold—the courses provide students in the district with opportunities for career exploration and recruit students for the full-time magnet program. Contacts add that half of full-time magnet program students first take a short-term course.

Learning Communities

Create Small Learning Communities to Improve Student Engagement and Outcomes

Administrators at School C and School D dedicate specific academic wings to house the magnet programs—to create small learning environments within the larger high school. Contacts report that administrators establish these small learning environments to boost student outcomes. Research confirms the positive impact of small school environments on student test scores, grades, attendance, graduation rates, and school safety.[15]

15)"An Overview of Smaller Learning Communities in High Schools" (page 4). U.S. Department of Education, 2001. Accessed October 28, 2019. https://www2.ed.gov/offices/OVAE/HS/SLCP/slchighschools_research_09_01.doc.

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In addition, administrators and teachers at School C frame these smaller learning environments as "learning communities" by tailoring core content instruction to align with magnet program themes. Research literature describes learning communities as "curricular structures that link together several existing courses—or actually restructure the curricular material entirely—so that students have opportunities for deeper understanding and integration of the material they are learning, and more interaction with one another and their teachers as fellow participants in the learning enterprise."[16] Specifically, administrators at School C restructure curricular material by including magnet theme-specific content in all core classes.

Sports Drinks Dilemma: Sample AP Biology Lesson Adapted to Exercise Science Curriculum at School C[17]

Standards

- Use mathematics appropriately.
- Plan and implement data collection strategies in regards to a specific scientific question.
- Perform data analysis and evaluation of evidence.

Lesson Objectives

- Understand how to use different indicators to identify proteins, lipids, and carbohydrates.
- Use probeware to measure liquid conductivity.
- Calculate the concentration of carbohydrates and voltage of electrolytes in liquids.
- Analyze results to determine the best sports drink for athletes.

Lesson Plan

- Students watch a video of a school coach presenting the challenge of determining the best sports drink for athletes to sustain energy throughout a game. The teacher explains that effective sports drinks replace lost electrolytes.
- Students conduct a chemical analysis of control samples.
- Students conduct a chemical analysis of sports drink samples.
- Students write an official report of their sports drink recommendation, drawing upon lab results as justification.

Connection of Lesson to Magnet Theme

- Students study macromolecules from an athletic standpoint by evaluating the nutrient needs of athletes.

16) Kellogg, Karen. "Learning Communities." ERIC Digest, 1999. Accessed November 1, 2019. https://eric.ed.gov/?id=ED430512.
17) School C, provided September 24, 2019.

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Rhetoric in the NFL: Sample English 1 Honors Lesson Adapted to Exercise Science Curriculum at School C[18]

Lesson Objectives

- Determine the central idea of a text (specifically its persuasive purpose) and understand how that central idea is shaped and developed over the course of a text through rhetorical devices.
- Analyze how word choice, text features, and structures shape meaning and tone.

Introduction

- Students share how they feel about the NFL to reveal any initial bias.

Activity 1

- Students watch three different videos (one from the 1980s) advertising the NFL and analyze what the videos reveal about the targeted audience.

Activity 2

- Students watch a video of an NFL player who raises money for breast cancer awareness.
- Students read a *Sports Illustrated* article about the NFL's fundraising initiatives to raise breast cancer awareness.
- Students compare how the video and article use different rhetorical devices to deliver a persuasive stance.

Activity 3

- Students watch a documentary and read an article about chronic traumatic encephalopathy (CTE).
- Students identify and compare the various rhetorical devices used in these mediums.

Conclusion

- Students discuss what they believe to be their own personal bias. They evaluate how and when they feel most strongly persuaded.

Connection between Lesson and Magnet Theme

- Students analyze how sports—particularly football—use rhetoric to convince people to either play or watch the sport.
- Students study major issues in this field and cultivate awareness of persuasion in different contexts.

By delivering all core instruction through the lens of the magnet program, teachers promote a sense of common purpose and community among students, ultimately boosting student engagement and academic outcomes.[19] Contacts report that magnet students consistently score higher than their peers on standardized tests (i.e., SAT, ACT) and demonstrate a higher Advanced Placement (AP) pass rate.

18) School C, provided September 24, 2019.
19) Kellogg, Karen. "Learning Communities." ERIC Digest, 1999. Accessed November 1, 2019. https://eric.ed.gov/?id=ED430512.

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4) Enrollment and Marketing

Enrollment

Establish an Open Lottery to Prioritize Equity in Access to Magnet Programs

Administrators at School C prioritize equity in access to their magnet programs through an open lottery approach. A 2017 study by the Civil Rights Project at the University of California, Los Angeles (UCLA) notes that nearly all federally funded magnet programs (in the last two grant cycles) use a lottery approach instead of competitive admissions criteria (e.g., grade point average (GPA)). The study reports that competitive admissions can pose barriers to traditionally underrepresented students (e.g., students of color, low-income students, English language learners). In contrast, a lottery approach can better promote desegregation and increase equity.[20] Administrators at School C also provide free transportation for students attending the magnet program. The same study by the Civil Rights Project emphasizes the link between free transportation to and from the magnet school and a diverse student body.[21]

The study also acknowledges that providing transportation can represent a financial and logistical challenge for some districts.[22] Because District A is significantly large (i.e., the size of Rhode Island), contacts note the challenge of securing funding for bus transportation. Thus, administrators require students to provide their own transportation to the Academies. However, administrators at District A do not implement an enrollment cap—they allow any interested student to attend the Academy. Contacts note that this approach helps promote access for all students in the district.

Magnet Program Enrollment Models at School C and District A

Enrollment Model	Institution Example
Open lottery	• Administrators at School C use an open lottery to select interested students. Administrators do not set academic and/or behavioral criteria for eligibility. • To increase access to the magnet programs, administrators provide bus transportation to all students within the district. • Administrators cap the number of students per grade level at 300.
Open access	• Administrators at District A allow any student in the district to attend an Academy. Administrators do not set academic and/or behavioral criteria (e.g., GPA, attendance) for eligibility. • Students must provide their own transportation. • Administrators do not cap enrollment—instead, they increase staffing to accommodate higher enrollment. Contacts report that each Academy enrolls 100 students on average.

20) Ayscue, Jennifer, R Levy, G Siegel-Hawley, B Woodward. "Choices Worth Making: Creating, Sustaining, and Expanding Diverse Magnet Schools." The Civil Rights Project, 2017. Accessed November 1, 2019. https://www.civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/choices-worth-making-creating-sustaining-and-expanding-diverse-magnet-schools/UCLA_Magnet_Manual_Design_Final_For_Web.pdf.
21) Ibid.
22) Ibid.

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In contrast, administrators at School B use merit-based admissions—required of all middle school magnet programs in the district—to select students for the magnet program. First, administrators give enrollment priority to students zoned to attend the middle school. Next, administrators use academic merit to select incoming sixth grade students (i.e., from other elementary schools in the district) to fill the remainder of the 100 spots. District administrators use the following academic criteria for enrollment.

Academic Criteria for Enrollment at School B's Magnet Program

- ☑ State standardized test scores (i.e., reading, math)
- ☑ Grades in core classes (i.e., English, math, science, social studies)
- ☑ Teacher recommendation
- ☑ Performance during an interview day, which consists of a conversation with two teachers, a group activity, and a writing exercise

Contacts hypothesize that district administrators established merit-based admissions to meet the expectations of parents—many of whom consider enrolling their students in academically rigorous charter schools or magnet schools outside of the district. Thus, magnet programs with merit-based admissions may appeal to these parents.

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Host School Tours and Use Word-of-Mouth Strategies to Recruit New Students

Administrators at School B, School C, and School D organize school tours for prospective students and their families and use word-of-mouth strategies to recruit students.

Magnet Program Recruitment Strategies at Profiled Institutions

Administrators and Staff

Host School Tours

For Prospective Families and Students

- At School C, the principal sends "VIP" invitations to all rising eighth grade students in the district to participate in small-group (i.e., no more than 10 families) tours of the magnet program. The principal leads tours both during and after school. Contacts note that small-group tours help facilitate personal connections.
- As part of the tour, the principal explains the vision and accomplishments of the magnet program through a PowerPoint presentation and answers questions from students and parents.
- The principal also emphasizes that the teachers at School C are highly ranked nationwide according to Niche.com, which contacts highlight as an effective marketing strategy.
- Contacts emphasize that tasking a single point person (e.g., the principal) to manage the entire recruiting process ensures consistency of message.

Use Word-of-Mouth

By Cultivating Strong Family Relationships

- Administrators and teachers at School D prioritize building strong relationships with current students and parents. For example, the principal regularly communicates student and school updates to parents by phone.
- At School B, administrators require teachers to invite parents to the school for classroom observations at least once a semester.
- Strong relationships with current parents contribute to the word-of-mouth effect, in which current parents tell prospective families about the school. For example, contacts at School D note that one parent of a current student singlehandedly recruited five students from her community.

Contacts at School D note that the word-of-mouth approach served as a stronger recruitment tactic than other strategies attempted by administrators, including conducting visits to school sites in the district, publicizing the magnet program on the local radio, and placing advertisements in local movie theaters.

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Build a Strong Magnet Program Brand to Facilitate the Recruitment Process

At School B, administrators and teachers use multiple strategies to build magnet program brand across the district. By creating a strong brand, administrators can generate prospective student and family interest in the magnet program.

Approach to Magnet Program Branding at Profiled Institutions

Showcase Student Learning Through Multiple Mediums

- Administrators at School B spotlight student accomplishments in the classroom and during program events (e.g., field trips) via Instagram and Twitter, as well as the school website, blog, and regular newsletters.
- Students showcase their knowledge by presenting "TED-style" talks to parents.

Establish Traditions to Build School Spirit

- Administrators at School C host a highly publicized acceptance night to celebrate all incoming ninth grade students who will start at the magnet program. Administrators arrange student club activities and sell school apparel.
- Contacts note that the event both creates momentum and excitement for the upcoming school year and strengthens the school's brand in the district.

Highlight How Curriculum Prepares Students for Postsecondary Pathways

- Administrators at School B meet with parents at the beginning of the school year to explicitly review how the school's strategic plan and curriculum connect to college and career readiness metrics set by the state.

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5) Implementation

Funding

Profiled Institutions Use Different Funding Strategies to Cover Costs of Magnet Programs

Contacts at profiled institutions cite different approaches to covering the costs of their respective magnet programs. Administrators at School B require an annual $25 fee from magnet students to fund extended learning days and field trips. Administrators from School C elected to forgo their own music and athletics programs—which contacts note can often be expensive to maintain—to offset costs incurred by the magnet program. (Students who attend School C are eligible to participate in athletic programs at their zoned high schools.)

In contrast, administrators at School D used state grants, in addition to per-pupil funding, to cover costs associated with implementing four magnet programs in 2014. Because students in the district are spread across a significantly large area (i.e., the size of Indiana), administrators transport students between their respective communities and the school at the start and end of the program. (Both full-time magnet students and students in the two-week-long courses receive accommodation at the school.) Administrators receive state reimbursement for transportation costs.

Addressing Implementation Challenges

Consider a Multiple-Step Hiring Process to Increase Teacher Fit for the Magnet Program

Contacts at profiled institutions note that it can be challenging to identify teachers who fit well with magnet program culture and requirements during magnet program implementation. Through a selective, multiple-step interview process, administrators can better assess teacher fit with magnet programs and ultimately increase teacher retention. For example, administrators at School C began using a multiple-step interview process—in which department members follow up on initial interviews with a more focused conversation to ensure teacher fit—during the 2014-2015 school year.

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Multiple-Step Teacher Hiring Process at School C

1. District administrators review all candidate applications and send the most promising candidates (e.g., two for each open position) to the School C hiring committee (i.e., principal, vice principal, department chairs).
2. The hiring committee interviews these candidates. After all first-round interviews, the committee selects top candidates to proceed to second-round interviews.
3. Department members, without administration present, conduct second-round interviews with these candidates to assess teacher fit. Department members ask behavioral questions (e.g., How do you work in a team atmosphere at your current school?) and gauge each candidate's content knowledge (e.g., the math teacher candidate is asked to explain how they would walk students through a sample math problem).
4. Department members individually give feedback—via a rubric—on the candidates to the interview committee.
5. The interview committee considers results and feedback from the first- and second-round interviews and makes final hiring decisions.

Contacts state that the multiple-step interview process ensures stronger teacher fit for the school, which leads to higher satisfaction at work—ultimately increasing teacher retention. From 2015-2016 to 2017-2018, teacher retention rates at School C increased from 83 percent to over 88 percent.

Establish Incremental Implementation of the Magnet Programs to Build a Strong Foundation

Contacts at profiled districts recommend that administrators implement a gradual rollout of the magnet program to account for unexpected challenges that may arise during implementation. Incremental implementation allows administrators more time to establish a strong program foundation and build the program's brand.

For example, administrators at School B did not have sufficient funding to hire the number of teachers (i.e., 12) required to staff all three grades of the magnet program during the first year of implementation. Thus, administrators began with sixth grade in the first year of implementation, added seventh grade the second year, and eighth grade the third. Administrators gradually increased teaching staff across the three years. Because administrators could focus implementation efforts entirely on one grade each year, they could dedicate more time to developing the magnet program brand in the community and cultivating student and parent interest in the program.

Similarly, administrators at School C began the magnet program with freshmen and sophomores the first year, then added juniors and seniors in the following two years. Contacts at profiled institutions note that smaller-scale implementation increases administrators' capacity to respond to challenges in real-time (e.g., make program changes) to ultimately build a strong program foundation.

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Track Student Performance and Outcomes Data to Ensure Magnet Program Success

Administrators at profiled institutions monitor different student academic and behavioral metrics to gauge the success of their magnet programs. Though contacts at profiled institutions have not yet compiled outcomes data related to all program metrics, they highlight the following benefits associated with magnet programs.

Sample Student Academic and Behavioral Metrics and Outcomes Tracked by Profiled Institutions

Metrics

Secondary

Profiled Institutions

- **District A**: number of industry certifications awarded, internships completed, program completions, student retention from one year to the next
- **School B**: scores on state college- and career-readiness exams for English Language Arts (ELA) and math
- **School C**: standardized test scores (i.e., SAT, ACT), AP pass rate, graduation rates, number of students who complete at least one college application

Post-Secondary

Profiled Institutions

- **District A**: number of students who receive full-time jobs in the program area after graduating
- **School D**: college-going rates, employment outcomes, number of students who continue with technical training (e.g., at local technical center) after the program

Outcomes

Secondary

Profiled Institutions

- **School B:** When administrators first implemented the magnet program, honors student who were not in the magnet program outperformed magnet students. Now, magnet students outperform their peers in both ELA and math.
- **School C:** Magnet students outperform their peers on standardized tests and demonstrate higher AP pass rates and graduation rates. 90 percent of the first graduating class from the magnet programs completed at least one college application.

Post-Secondary

Profiled Institutions

- **School D:** Contacts note that some students in the Health Care program successfully earned the Certified Nursing Assistant (CNA) certification and became practicing nursing assistants.

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Create an Advisory Council of Local Business Representatives and District Staff to Ensure Ongoing Relevancy of Magnet Program Curricula

Administrators at District A established business advisory councils to ensure that magnet program curricula continue to align with evolving industry needs and secure business support for program initiatives (e.g., career expos, field trips). Council meetings allow district administrators and Academy teachers to meet regularly with local industry representatives. Administrators established one advisory council for each of the six academy themes.

Role of Business Advisory Councils at District A

- ☑ Analyze curricula offerings within specific Academies to ensure lessons teach skills relevant to evolving industry needs
- ☑ Confirm that Academies offer the most up-to-date industry certifications
- ☑ Arrange guest speakers for the school
- ☑ Plan industry-relevant field trips for students
- ☑ Organize career expos and networking events for students
- ☑ Assist with grant application process to secure funding for Academies

Business advisory councils formally meet twice a year. Contacts note that administrators have improved meeting logistics and productivity each year since they first established the business advisory councils in 2017.

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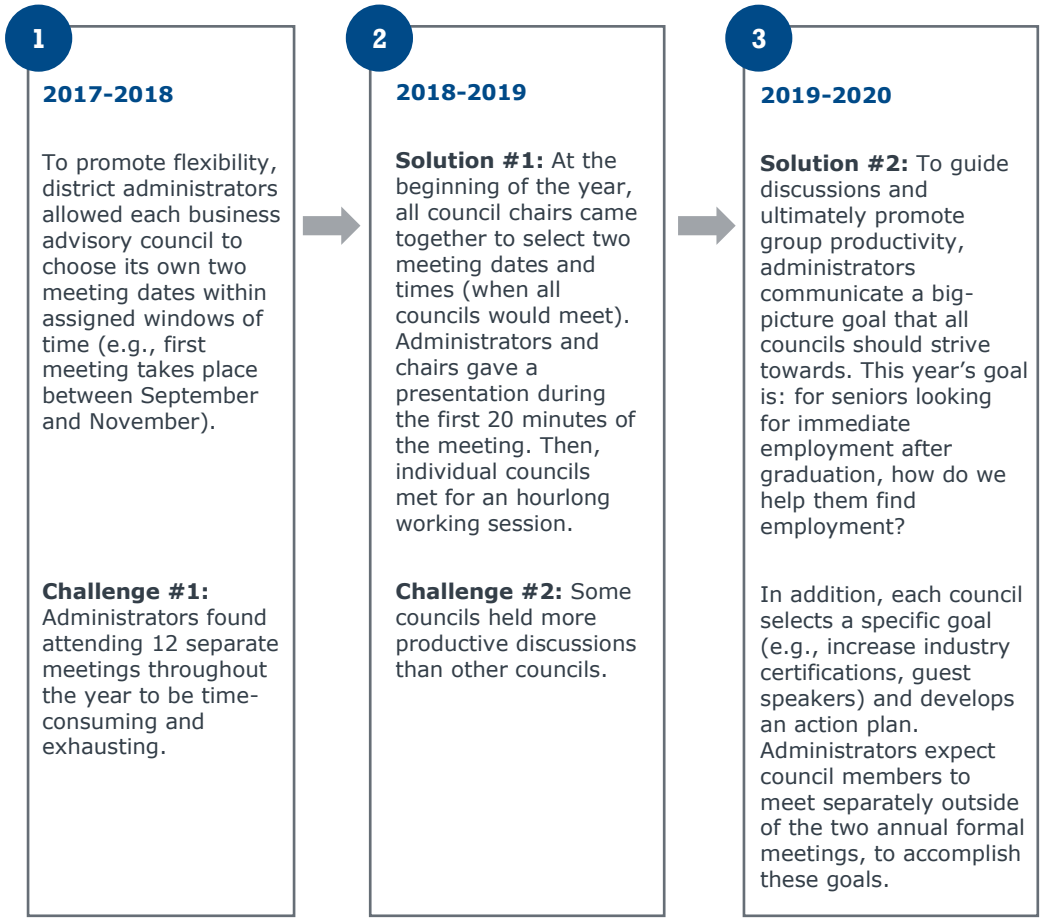
Administrators at District A Improved Business Advisory Council Meeting Logistics Each Year



Similarly, administrators at School D plan to reconvene the planning committee to evaluate the four magnet programs they launched in 2014, to ensure that program curricula still align with current industry needs.

Parent Advisory Council at School B Helps Ensure Continuous Improvement of the Magnet Program

Administrators at School B established a parent advisory council (i.e., facilitated by the vice principal) to maintain ongoing success of the Leadership Academy. Administrators selected parent volunteers who expressed interest—in response to a school-wide email—in serving on the advisory council. The advisory council meets once a semester to discuss implementation successes, challenges, and new initiatives in the Leadership Academy. For example, the vice principal suggested—per administrator and teacher request—that the program invite community guest speakers for a "Leadership Summit" to discuss leadership skills with students in the Academy. Parent advisory council members then used their personal and professional networks to source guest speakers from the community.

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Consider Using External Criteria to Evaluate Magnet Program Success

To ensure that current CTE programs remain relevant with changing job demand and industry trends, administrators at District A evaluate program effectiveness using an external model. Administrators purchased the **Linking Economic and Academic Development (LEAD) tool** from the Whetstone Group, an organization that helps communities and businesses develop the local workforce. The LEAD tool provides 13 standards of high-quality workforce development programs (e.g., CTE), by which administrators at District A will evaluate Academy effectiveness. Contacts note that these standards are similar to the national standards of practice for Career Academies, defined by groups such as the Association for Career and Technical Education, the National Academy Foundation, and the National Career Academy Coalition.

These standards—some of which administrators can use to evaluate magnet program effectiveness—include a well-defined mission and goals; appropriate selection of faculty and staff; professional development and continuous learning; employer and civic community involvement; and improved student achievement. By regularly evaluating magnet programs, administrators ensure ongoing success for these programs.

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5) Research Methodology

Project Challenges

Leadership at a member district approached the Forum with the following questions:

- What motivated contact schools to develop a magnet program?
- Why did contact schools select the magnet theme?
- How did contact schools ensure alignment of magnet theme with the local labor market?
- How did contact schools determine community needs and interests when selecting the magnet theme?
- What enrollment approach do contact schools use? What were the motivations behind the approach?
- How did contact schools fund magnet school implementation?
- How did contact schools establish partnerships with organizations?
- What implementation decisions did contact schools make that they would recommend?
- How did contact schools address challenges encountered during magnet program implementation?
- How did contact schools rebrand and market the school to students following magnet program implementation?
- How do contact schools measure success of the magnet program?
- What changes, if any, have contact schools observed in student outcomes since launching the magnet program?

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Research Parameters

The Forum interviewed school and district-level administrators.

A Guide to Institutions Profiled in this Brief

Institution	Region	Approximate Enrollment
District A	South	43,000 (approximately 100 students per Career Academy)
School B	South	1,000
School C	South	1,000
School D	Pacific West	300

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