

Strategies to Prepare Middle School and High School Students for College and Career Readiness

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Abstract: Trends among adolescents continue to be discouraging in terms of career and college readiness based on National Assessment of Educational Progress (NAEP) achievement reports and high school graduation rate data. In response, this article presents five goals and eight strategies we have engaged in during a seven-year research study focused on building college and career readiness among adolescents. During our final year of helping students build college and career readiness, we found associated improvements in their academic-related perceptions, beliefs, and strategies; positive personal achievement and goal orientation; rising perceptions of college; improving trends in academic performance; and stronger perseverance in high school when compared to a control group. Because the students in this study have not completed their high school senior year, we do not have data that predict their college acceptance or career readiness.

Keywords: college readiness, career readiness, college-going culture

Trends among adolescents continue to be discouraging in terms of college readiness. Recent National Assessment of Educational Progress (NAEP) (National Assessment Governing Board n.d.) academic achievement reports present a continuing trend where only about one-third of eighth-grade students rank within the “at or above proficient” category for mathematics, reading, writing, and science, and a significant gap continues to exist where Hispanic and African American groups underachieve in comparison to other groups. Adolescents’ low NAEP scores and the current dropout rates force the question: How many will be ready for college by graduation? Overall, the gap in education preparation among whites, Hispanics, and blacks,

as evident in their scaled scores, results in many minority students being poorly prepared for higher education (Spellings 2006).

Equally disturbing is the news regarding adolescents’ career readiness. Recent high school graduation rate data indicate that nationally about 71 percent of all students graduate from high school on time with a regular diploma, but barely half of African American and Hispanic students earn diplomas with their peers (Sum 2009). Each year approximately 1.2 million students fail to graduate from high school, more than half of whom are categorized as belonging to minority groups (Editorial Projects in Education 2009). Legters and Balfanz (2010) report that the employment market has changed since the early 1980s when most high school dropouts could find a job at a living wage. Today dropouts are more likely to face unemployment, poverty, ill health, incarceration, and dependence on social services.

In response to these concerns we have been engaged in a seven-year research study and program focused on building college and career readiness among adolescents. A distinguishing feature of this program is that it has supported a cohort of young adolescents, starting in their sixth-grade year and continuing through their high school years. In this article we present the goals and strategies that pre-service teachers implemented to build college and career readiness among these students. Our conclusions summarize the positive student outcome that may be associated with pursuing these goals and strategies, and are based on a Goal-setting Worksheet, the Patterns of Academic Learning (PALS) survey, self-report surveys, the school district’s student registration records, and our state’s mandated Texas Assessment of Knowledge and Skills (TAKS) test. Because the students in this study have not completed their high school

senior year, we do not have final data on their college acceptance or career readiness.

Framework

Three of Conley's (2010) key dimensions for building college readiness provide a framework for our strategies and include college knowledge, academic behaviors, and content knowledge. College knowledge, also referred to by Conley (2010) as "contextual skills and awareness," is defined as "the privileged information necessary to understand how college operates as a system and culture" (40). Academic behaviors that generally relate to self-management are the dimension of college readiness that includes a "range of behaviors that reflects greater student self-awareness, self-monitoring, and self-control of a series of processes and behaviors necessary for academic success" (Conley 2010, 39-40). Content knowledge is described as "overarching academic skills," which include reading and writing, and "core academic subjects knowledge and skills," which encompasses English, mathematics, science, social studies, world languages, and the arts (Conley 2010, 35-39).

The Creating a College Culture Project (McClafferty, McDonough, and Nunez 2002), which also provides a framework for our research, emerged from concerns about the declining number of college-bound students from a southern California cluster of 24 schools that are ethnically and racially diverse. The schools had high drop-out rates and low participation by both low-income students and minority students in honors and advanced placement courses. McClafferty recommends that schools should create a "college culture": a school culture that encourages all students to consider college by introducing information about higher education opportunities during early adolescence and in high school. This concept of creating a college culture among diverse adolescents who are considered at risk aligns with Conley, who includes "create and maintain a college-going culture in the school" among his key principles of college and career readiness (McClafferty, McDonough, and Nunez 2002, 105).

Setting

Our strategies were implemented in a school district that is ethnically and racially diverse and enrolls many students who may not graduate from high school. The setting for this recent program is a professional development model for pre-service teacher education.

The participants in our program initially included 100 sixth-grade students with a composition of about 60 percent Hispanic, 30 percent white, and 7 percent African American. With the assistance of school administrators, these students were randomly selected from a pool of about 120 students identified as at risk based on the school district's guidelines for academically and economically at-risk students. Fifty of these students partic-

ipated in the treatment group and were engaged in the strategies presented in this article; the other 50 participated in a control group. The participants also included pre-service teachers, typically college seniors, enrolled in two teacher preparation classes that were taught two days a week in a blended approach on the students' school campus; that is, the pre-service teachers were enrolled in a "professional development model." Each semester a different group of about 30 pre-service teachers mentored the students. During the writing-marathon event, participants in the study also included college professors who hosted the visiting middle school students in the professor's college freshman-level English, math, or science class.

At the start of the high school phase of our study, after the students had completed eighth grade, a change in school boundaries led to some student attrition, resulting in about 40 treatment-group participants. During the next three years, a few of our high school participants withdrew from the school district, resulting in 31 treatment-group students at the end of the 2011 academic year.

Goals and Strategies for Building College and Career Readiness

Following are the five goals that are the foundation for the eight strategies used to help secondary students become college-ready and develop a college-going culture: The student will (1) understand the nature of college, (2) recognize that a college education may be important to his or her future success, (3) gain positive perceptions and aspirations about college, (4) prepare academically for college admission, and (5) set short- and long-term goals that support becoming college-ready. Table 1 lists the eight recommended strategies for helping secondary students become college-ready and a recommended schedule for implementing these strategies.

Students Create Digital Stories

While students are in middle school we recommend that pre-service teachers coach them in creating three digital stories that may help them become college-ready. The topics of these three stories are "my positive school experience," "my future career and how to prepare for it," and "how to be successful in middle school." Collectively, engaging students in creating these three stories may support three of our goals (goals 2, 4, and 5). Digital stories are from two- to three-minute multimedia movies that combine photographs, sound, music, text, and a narrative voice. Digital stories are used as an expressive medium for the young adolescents to respond to the three topics that engage them in reflecting about their past, current, and future academic preparation. Literature supports the use of digital stories in the classroom. Bull and Kajder (2004) describe digital storytelling in language arts class; Hull and Nelson (2005)

TABLE 1. Strategies to Build College and Career Readiness and Grade Implementation Schedule.

Strategy	Implementation Schedule
1. Create three digital stories: a. "my positive school experience" b. "my future career and how to prepare for it" c. "how to be successful in middle school"	7th–8th grades
2. Visit university and community college campuses.	7th–11th grades
3. Use a writing-marathon approach during college visits.	7th–9th grades
4. Participate in academic tutoring.	8th–9th grades
5. Attend presentations by college students about the attractions of attending college.	9th–11th grades
6. Attend presentations by college representatives about getting admitted into college and obtaining financial aid.	9th–11th grades
7. Plan school-related goals that help prepare for college readiness.	10th–12th grades
8. Collaborate with college students on college entrance tasks, including visit a college resource room at school, select a favored college, respond to the state's college admissions site, and complete the Free Application for Federal Student Aid (FAFSA) application.	11th–12th grades

discuss the expressive power of digital storytelling; Kajder, Bull, and Albaugh (2005) explain the nature of digital stories; and Salpeter (2005) describes the growing popularity of this technology-based strategy.

The approach for coaching young adolescents in creating a digital story includes the nine steps presented in Table 2. Necessary resources include a computer lab, PowerPoint software, microphone input capability, computer scanning equipment, and access to the Internet.

Visit University and Community College Campuses

In order to help adolescents become college-ready, we recommend that pre-service teachers lead them on university campus tours starting when they are in seventh grade. Careful organization and scheduling of all aspects of the tour are essential to meeting three of our

goals (goals 1, 2, and 3). We recommend scheduling a school bus to transfer adolescents to the university campus, arriving at 9:00 A.M., when they are greeted by pre-service teachers. Small groups of six persons each are formed that include two pre-service teachers and four visiting adolescents. The pre-service teachers, who have planned their own walking routes, escort their young visitors around campus. Half of the groups immediately begin their tours, incorporating a writing-marathon approach. The other half goes directly to underclassman-level college classes, such as biology or creative writing, where they observe and may be invited to participate. An hour later, the two large groups switch agendas. At noon, all persons converge at a university dining hall where they sit together, talk about their tours, and enjoy lunch. As lunchtime ends, staff from the campus admissions office and financial aid office give presentations on college application procedures.

Use a Writing-Marathon Approach during College Visits

We suggest incorporating a writing-marathon (Radcliffe and Stephens 2009; Stephens, Radcliffe, and Schaefer 2007) into the university tours because it supports the three goals of the previously described tour. Richard Louth (2002), of the Southeastern Louisiana Writing Project, describes a writing-marathon as a visit to an engaging and new setting where a small group of writers walk and explore, stop to write about what they are experiencing, and then share their writing. They repeat this cycle a small number of times. Marathoners write freely and spontaneously; their writing becomes a response to the exploration of the context that the writers are experiencing. The sharing period is important but brief, and no particular response is requested from the listeners other than a simple "thank you" or "I

TABLE 2. Steps for Coaching Students to Create a Digital Story.

1. Show an example of a digital story.
2. Determine the topic for the assigned digital story.
3. Ask probing questions to help students develop ideas for the story.
4. Describe the format for the story, specifically the number of slides, guidelines for inserting images, the amount of text, background music, and how to record voice-over.
5. Help student develop a project timeline.
6. Discuss images to use and sources.
7. Guide the student in sketching a story line to create a storyboard.
8. Help the student write text and secure images.
9. Help the student assemble the digital story.

TABLE 3. Steps for Tutoring a Student in One Content Area.

1. Pre-service teacher talks with student's content-area teacher to determine the student's motivation and/or learning needs and tips for helping the student.
2. Pre-service teacher and content teacher agree on a tutoring plan.
3. Pre-service teacher documents the plan.
4. Student(s) and pre-service teacher meet twice weekly for tutoring in a location such as a classroom, cafeteria, or library.
5. Four times per semester, as part of tutoring, the pre-service teacher presents a short lesson on a topic using a real-world problem.

enjoyed hearing that." The writing-marathon is facilitated by the pre-service teachers, who should choose stopping points based on the availability of a comfortable place and the potential for responses to a particularly rich segment of the tour, such as an art gallery.

Participate in Academic Tutoring

Achieving high grades in academic courses is important to adolescents' progress toward becoming college-ready and supports two of our goals (goals 4 and 5). We recommend that pre-service teachers tutor students twice a week, starting when students are in middle school and based on the structure described in Table 3. Initially, pre-service teachers are matched up to one or two students based on content areas where students most need to improve their achievement and are also consistent with the pre-service teacher's area of content strength, such as mathematics or language arts.

Attend Presentations by College Students About the Attractions of Attending College

Starting when students are in high school, we recommend that college students and pre-service teachers present information to adolescents about college that includes telling their own stories about deciding to attend college, preparing for college admission, gaining financial aid, attending college classes, participating in campus life, and explaining the expected benefits of a college degree. Such presentations support all five of our program goals.

Planning presentations by college students to high school students involves determining topics that college students would be willing to discuss that would interest adolescents and that would also support building college readiness. For example, in our program we discovered that high school students held a strong interest in participating in collegiate sports. In response, our pre-service teachers hosted a panel of college athletes who talked about collegiate sports. Two other examples

of presentations that we hosted include a talk by the editor of the university's student paper who had overcome many challenges to attend college and a talk by a senior-rank college student who had, in her words, "worked the scholarship system to get a full ride." We suggest hosting these presentations at the students' high school and also during their college tours.

Attend Presentations by College Representatives About Getting Admitted into College and Obtaining Financial Aid

The college-readiness goals of our program, including helping students gain an understanding of college, give students the opportunity to appreciate the potential benefits, develop positive perceptions, and prepare for college admission. Some students may come from families where postsecondary education is unfamiliar and adult family members may lack information about the nature of college, how to apply to college, how to access financial resources, and how to guide their teenager through the complexities of enrolling in college. We recommend that, starting in high school, the university tours feature detailed presentations about college entrance requirements, tuition, and financial aid. We found it convenient to host these presentations during the college tours when all participants were having lunch in a reserved section of a university dining hall. To help adolescents understand this complex information, we suggest presenting essentially the same information each time they complete a campus tour.

Plan School-Related Goals That Help Prepare for College Readiness

We recommend that pre-service teachers help adolescents set and work toward goals that prepare them for college through a mentoring approach that merges an emphasis on both goal setting and building relationships. As summarized by Karcher and Nakkula (2010), two constructs for characterizing a "mentoring match" are the developmental style and the instrumental style. The developmental pattern of interactions includes both goal-directed and relational interactions. Emphasis is initially placed on building the relationship and then shifts into goal-oriented interactions. Mentors who adopt an instrumental style enter the relationship with an agenda that is predominantly goal-oriented. However, like the developmental style, there is a hybrid of relational and goal-oriented interactions. The strength of the relationship increases over time as the dyad collaborates on the focus, purpose, and manner of accomplishing goals. For high school students, we recommend an instrumental mentoring style to help them set and work toward goals. Although students in our study focused on setting goals for high school, we suggest that goal setting be extended to include life goals over the next 10–20 years.

Larose, Cyreene, Garceau, Brodeur, and Tarabulsky (2010), who address mentoring older adolescents, support a goal-directed approach while meaningfully responding to mentees' needs, displaying authoritarian and directive guidance as necessary, and focusing on conventional purposes, such as future academic success. During goal-planning sessions we suggest that mentors regularly direct their mentees' attention to question prompts for goal setting and engage them in reviewing previously set plans that support the mentees' academic success.

We recommend that during the pre-service teacher's and student's first mentoring meeting each semester, the mentors focus on learning about their new mentees, including their shared interests, hobbies, families, music, friends, college interests, and goals. In general, the mentors and mentees share their stories. However, quickly and early in the semester, the mentoring approach shifts to working together to engage the mentee in writing specific college-readiness goals for the upcoming semester, discussing obstacles they may encounter, planning how to cope with foreseen difficulties, and reviewing progress. Over the course of the semester and multiple meetings it is hoped that the dyad will develop a trusting and positive working relationship.

Specifically, we suggest that pre-service teachers use a goal-setting worksheet that includes 15 question prompts encouraging mentees' open-ended responses that describe personal goals, plans, and steps to achieve goals, "pros and cons associated with each plan or strategy," and other considerations related to achieving goals. The source for these questions is the Hope Worksheet adapted from Lopez, Floyd, Ulven, and Snyder (2000, 147-8). The mentors guide their mentees to handwrite goal-planning responses on the worksheet, answer questions to help the mentees understand the prompts, and sometimes elaborate on the prompts.

Collaborate with College Students on College Entrance Tasks

We suggest engaging students and their mentoring pre-service teachers in collaborating on college entrance tasks, including a visit to the high school's college resources room, select favored colleges, apply on a state-wide college admissions site, and initiate the Free Application for Federal Student Aid (FAFSA) application. These tasks support all five of our goals.

We recommend that pre-service teachers guide their mentees in a visit to their high school's college resource room. In preparation, we suggest collaborating with the high school counseling department to schedule use of the room and to arrange for the high school's college resources specialist to orient the pre-service teachers about the nature and location of resources. After pre-service teachers become knowledgeable about these resources they can schedule a time to meet with, guide, and sup-

port their mentee in a search for useful college information. We recommend that discussions about favored colleges, which develop while visiting the college resource room, be continued during the dyad's subsequent goal-planning meetings. We encourage pre-service teachers to guide their mentee to consider colleges that best match the area of study that interests the mentee and to select several favored colleges to apply to. Some states, including Texas, offer a universal application website (called ApplyTexas), which allows college applicants to apply to many universities in the state. Pre-service teachers, who may have recently used this site for their own applications, can sit at a computer with their mentee and guide completion of this application process. Similarly, pre-service teachers are likely experienced with the FAFSA, a source of federal aid for college expenses. Because the FAFSA application requires much information, we recommend that pre-service teachers describe to high school students the types of information that they will need before they enter the FAFSA site. We suggest that pre-service teachers and their mentees sit at a computer, enter some information together, and discuss the additional information that the student must collect and enter later, often with a parent's assistance.

Conclusion

During our study we collected student data using a variety of tools including the Goal-setting Worksheet, the PALS survey, and mentees' self report surveys. School records were a source for students' scores on the state mandated TAKS test. School records also allowed us to track students' annual registration in the school district, an indicator of attendance and drop-out trends. As we enter the final year of helping our students build college and career readiness, we find associated improvements in their academic-related perceptions and strategies, positive personal achievement and goal orientation, and rising perceptions of college. When compared with the control group, the students engaged in this study's strategies demonstrated a stronger rate of improvement in their academic performance based on the state-mandated TAKS test and stronger perseverance in high school.

An analysis of students' Goal-setting Worksheets, which were administered three times during high school, identified the types of goals that students are setting, plans to attain these goals, perceived barriers, and their predictions for successful attainment of the goals. Almost two-thirds of the students set going to college as their major goal with most students also stating an associated career goal such as becoming a nurse, graphic organizer, or social worker. Similarly, about two-thirds of the survey respondents described academic strategies such as "study hard," "get good grades," "pass all classes," or "do my best in school" as their major goal-attainment plan. The results of the PALS survey, which

was administered three times during high school and evaluated using paired *t*-test analysis ($p < .05$), reveal statistically significant student gains in the assessment's scales including the Academically Related Perceptions and Strategies category and the Personal Achievement and Goal Orientation category. As determined by a self-report written survey administered four times between students' seventh and tenth grades, students' perceptions about college became more positive after being involved in this study's strategies (statistically significant at $p < .05$). These survey responses were analyzed using a paired-samples approach and were based on survey mean scores.

We expect that these factors will contribute to improving these students' likelihood of attending college. Although our reported outcomes are positive, the strength of these findings is limited by the relatively small number of participants in the study. As we continue this longitudinal study, following and supporting this group of students through their senior year in high school, we will collect additional information and publish our findings regarding how to build college and career readiness among adolescents who were identified in their sixth-grade year as at risk in succeeding in school.

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