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# Secondary Education in the United States

## A Briefing for The Heinz Endowments' Education Program

This briefing report was completed at the request of the Education Program Officers. Its intent is to provide a brief overview of the current state of outcomes from Secondary Education in the US, highlight several critical challenges, summarize research-supported best practices, and offer possibilities for targeted regional improvement efforts given the national and local contexts. It is not intended to be a comprehensive literature review.

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## INTRODUCTION

A well-educated and engaged citizenry is central to the social and economic health, and the stability of a democratic society. Yet, for many Americans the reality of full civic and economic participation in society falls far short of the ideal. This shortfall is especially the case for individuals living in poverty and those from African-American, Latino, Asian, and Native American (ALANA) populations. The issues that surround this dilemma are complex and involve deep-rooted social and economic factors. When one begins to imagine responses, no one sector “owns the problem.” We recognize that comprehensive efforts working across multiple sectors in society (e.g., social, economic, health, education, the home) are needed. That said, current circumstances lead us to understand that, in partnership with powerful family, and community forces, formal education has a crucial role in addressing the goal of broader social participation.

Starting with the early years, the role of schooling has either a positive or negative cumulative effect on the life opportunities of the nation's youth and their capacities to fully partake in the social order. It serves in fundamental ways as a critical gatekeeper for broader social engagement and fulfillment. Solid foundations in the early years are necessary but not sufficient to educational success and full participation. We have seen that good starts can be too easily squandered in middle and secondary years spent in non-challenging, depersonalized environments; where too often expectations differ based upon a student's social and economic circumstances, or ethnic or racial identity; and, where opportunities to engage in culturally responsive, rich, collaborative, educational experiences are limited for the very students that might have the most need for them.

The focus of these brief notes is on secondary education -- the middle and high school years-- and is rooted in the assumption that each stage of the educational process needs to play its part in sustaining educational progress for all students. Put simply, middle and high schools in many communities need to be redesigned in ways that support all students. Further, it is recognized that the challenges are great, and also in many ways different for different levels of the educational enterprise. This means that responses to the challenges need to be tailored to specific social, organizational, and educational factors at work at a given level.

Our goals in this discussion are simultaneously ambitious and very targeted. We hope in a few pages to sketch out key parameters of the problem and to point to a few approaches (that have some evidentiary warrant) to further the goal of setting more students on successful career pathways. These pages cannot do justice to the complexity of the issue nor to the breadth of the responses that are currently being proposed or tested to address the problem at secondary levels. It is hoped that what follows will provide impetus for future deliberation and action.

In the sections below we briefly summarize what is known about important outcomes of secondary education, namely high school completion, post-secondary enrollment and success, and career readiness. Next, we highlight what the literature suggests are the key challenges that result in the observed outcomes. We then briefly summarize what the research tells us are the key dimensions of successful secondary schools. The emphasis here will be on school and classroom level practices, recognizing that to do these well will require systemic policy changes and support. Those issues are not addressed in this briefing. Finally, we identify some factors at national and local levels which suggest that investment in secondary education reform is timely and potentially profitable.

## WHAT IS THE NATURE AND SCOPE OF THE PROBLEM?

The United States is facing an increasing education gap – a widening chasm between the skills and training required for most jobs and the education levels of most students. The gap is widest for urban and poor students who make up an increasing share of the future workforce. A survey by Achieve Inc. found that employers estimate that 45% of high school graduates lack the skills to advance beyond entry-level jobs.<sup>1</sup> As has been widely noted, a high school diploma is no longer sufficient for a secure, middle-class life. An estimated 85% of current jobs now require some kind of post-high school training – not necessarily college, but at least the kind of specialized training acquired through a two-year degree or technical certificate.<sup>2</sup> Too few students get even as far as high school graduation. The most recent data show that only 71% of 9<sup>th</sup> graders graduate on time; this already low figure drops to 58% for Hispanic students and 55% for African Americans.<sup>3</sup> In the nation's 50 largest cities, just over half (53%) of students graduate on time, and there is an 18% urban/suburban graduation gap.<sup>4</sup> In Pittsburgh specifically, a recent RAND analysis using the more lenient standard of graduation within five years calculated a district-wide graduation rate of 64%, with a 59% rate for African-American students.<sup>5</sup>

Of equal concern, graduation from high school is clearly not equivalent to being prepared for post-secondary education. The National Center for Education Statistics finds that only half of high school graduates are academically prepared for college level work. Among students who enroll in post-secondary education, 28% require remedial courses, a number that rises to 42% at public 2-year institutions.<sup>6</sup> Not surprisingly, remedial course taking is a strong predictor of failure to persist in post-secondary education and earn a degree.<sup>7</sup> Whether they are academically unprepared, face financial obstacles, or experience other problems, less than 60% of students who enter a 4-year college complete a bachelor's degree, and only about 25% of students entering two-year programs attain a degree.<sup>8</sup> At a time when our nation needs more students to be ready for meaningful postsecondary education, "high rates of (college-level) remediation, stagnant rates of college completion, and more time to degree completion"<sup>9</sup> are clear indicators that many students are leaving high school not ready for the next level. The data are particularly troubling for low income populations – some studies estimate that only 21% of these high school graduates are adequately prepared for college-level work.<sup>10</sup> Due to the combination of low high school graduation rates and low post-secondary completion rates, the United States now ranks 10<sup>th</sup> out of 30 countries in college attainment for its 25- to 34-year-old population, down from third in 1991, according to the Organization for Economic Cooperation and Development (OECD).<sup>11</sup> This lack of preparedness for post-secondary education costs the nation approximately \$3.7 billion a year for remedial education and reduced earning potential.<sup>12</sup>

Whether framed as a threat to our nation's economic security or as a crucial issue in the country's ongoing struggle for equity across social and ethnic lines, the importance and value of increasing postsecondary educational attainment for more students is taking center stage in educational policy debates. Secondary schools are a critical focus, as they serve as a gateway to post-secondary education or careers that can make the difference in students' quality of life outcomes. A high school dropout earns about \$15,700 per year less than a high school graduate.<sup>13</sup> Over a career, the difference in earnings can amount to \$700,000. A graduate of a 2-year degree program earns about \$35,000 more per year than a high school dropout. In addition, a number of other negative outcomes are associated with failure to graduate from high school, including unemployment, increased rates of divorce and giving birth outside of marriage, increased use of welfare, increased interactions with the legal system, and poorer health quality. These data on quality of life are

concerning but situating US performance in an international context highlights the extent to which the US is falling behind.

On virtually every international measure of academic proficiency, American secondary school students' performance varies from mediocre to poor. For reading literacy, the US ranked 15<sup>th</sup> out of 29 OECD countries with a score just below the international average.<sup>14</sup> In scientific literacy, the US ranks 21<sup>st</sup> out of 30 OECD countries with a score below the international average. Likewise in mathematics, the US is 25<sup>th</sup> out of 30 countries and in problem solving 24<sup>th</sup> out of 29 countries.<sup>15</sup> Internationally, the one area in which the US ranks high is in inequality—the US has the 4<sup>th</sup> largest gap in achievement between its high socio-economic status (SES) students and low SES students.<sup>16</sup>

Domestically, the National Assessment of Educational Progress (NAEP) trend in reading and math show some progress and gap narrowing in the elementary and middle grades, scores for high school reading and math have been flat for more than 3 decades.<sup>17</sup> Gaps in performance between white, African-American and Hispanic high school students have remained stable or widened since 1998 in reading and math.<sup>18</sup> The inequities are evident in our school funding; Recent analyses by the Education Trust show that high poverty districts spend about \$773 less per student than low poverty districts and high minority districts spend \$1,122 less per student than low minority districts.<sup>19</sup>

Indicators of active citizenship are also alarming. For example, in the 2008 Presidential election, 51.5% of 18-24 year olds did NOT vote (52.3% for White Americans; 44.5% of African-Americans; 61.2% of Hispanics; 59.4% of Asians).<sup>20</sup> Such dismal rates of civic participation raise serious questions about whether our schools are nurturing a sense of ownership and responsibility in students for the future of the nation.

Given all of these data, one must conclude that PK-12 education and, in particular, the middle and high school levels are failing to meet the needs of students and to support them in career and college readiness and citizenship. No doubt the reasons are complex and not solved exclusively by the secondary education sector alone. However, secondary schools do have a clear role to play. In the next section, we highlight a handful of the myriad challenges that face secondary education in supporting students to positive career and college readiness.

## WHAT ARE SOME OF THE CRITICAL CHALLENGES?

It is beyond the scope of these notes to undertake a comprehensive review of the challenges that confront serious secondary reform in America. We will briefly point to three fundamentally different types as suggestive of the range and size of issues that are at play.

### Poverty

For starters, individuals living in poverty in the United States are disproportionately African American, Latino, and Native American.<sup>21</sup> Poverty status and racial identity are intertwined in the United States. The negative effects of poverty on an individual's prospects are well-documented. Poverty "is associated with a number of adverse outcomes for individuals, such as poor health, crime, and reduced labor market participation."<sup>22</sup> Of particular salience here is the interaction between poverty and schooling. Just to play out one kind of scenario, children living in poverty often come to school with less "social capital" (e.g., exposure to out of school educational

environments, parents who know how to support them in learning to read) than their middle class peers, and therefore are often in need of more educational supports from educators in schools. Yet, schools serving high proportions of children in poverty (and therefore higher proportions of African American, Latino, and Native American students) have less experienced and less effective teachers, greater turnover in teachers, and fewer resources. In today's environment of high stakes accountability, lower achievement rates for schools serving students with high rates of poverty tend to raise the emphasis on making Adequate Yearly Progress (AYP). This pressure can have the effect of narrowing the curriculum, as educators carve out more time to improve test scores in math and literacy. The students with less social capital have fewer opportunities to engage in the kind of learning activities that stimulate higher order thinking skills, have connections to issues relevant in the lives of the students, and prepare them for collaboration and team work. These themes have particular manifestations in secondary settings. In "comprehensive high schools" students are exposed to multiple teachers who typically have a more content-focused rather than "child-focused" approach to education. The depersonalized secondary school environment that may suffice for middle-class students with high social capital is less welcoming and efficacious for students coming from low-income communities. The emphasis on test results can diminish student engagement, which, in turn, decreases the student's interest in school. The high dropout rates in high poverty schools are, in part, a manifestation of these trends. For poor students from ALANA communities, the difficulties are often confounded by the mismatch in cultural alignment between their homes and the institution of schooling.

### Outcome frames poorly aligned with career and college readiness

The outcomes toward which secondary schools work are largely defined by the assessment systems to which schools are held accountable. These assessments functionally are the No Child Left Behind AYP measures. As a result, the vast majority of schools are primarily focused on the math and reading fundamentals that are central to state assessments. Although highly variable, these assessments generally do not assess a large segment of the skills, dispositions, and knowledge that have been identified as necessary for career and college success. The American Diploma Project has tracked the progress of state policies in bringing high school curriculum standards, assessment systems, and graduation requirements into alignment with the demands of both college and careers. Their goal is for a high school diploma to be a meaningful credential that guarantees students the widest range of educational and career options. In their most recent "Closing the Expectations Gap" report they found that 23 states had aligned high school standards with college and workplace expectations and 20 had aligned graduation requirements. Pennsylvania was not among those states.<sup>23</sup> No state had a comprehensive college- and career-ready accountability system, and little progress has been observed over the past 5 years. Even these efforts to support the development of standards, graduation requirements, assessments, P-20 (the education system from Pre Kindergarten to Bachelor's degree) data and accountability systems fail to include all of the aspects of college and career readiness that are discussed in the research literature (such as ability to collaborate, take initiative, understand norms and expectations in college or career settings and the like). Without a clear outcomes framework that is well-aligned with the verified demands of current jobs and post-secondary education settings, secondary schools cannot be organized and implemented with intentionality toward those goals.

## Difficult transitions

A student's progress through typical secondary school structures is marked by 3 critical transitions: from the elementary to middle school environment; from the middle school to high school environment; and, from high school to the world of work or post-secondary education. <sup>a</sup> These transitions are critical moments that often become high-risk moments for disengagement, failure, or dropping out. Typically, the challenges associated with such transitions are more intense for populations living in poverty.

The transition from 5<sup>th</sup> to 6<sup>th</sup> grades is generally noteworthy for several negative shifts. Middle grade education, as compared to elementary education, tends to:<sup>24</sup>

- Have greater emphasis on teacher control and discipline with fewer opportunities for student decision-making, choice, and self-management;
- Have less personal and positive teacher/student relationships;
- More frequently use practices such as whole class task organization, between classroom ability grouping, and public evaluation of the correctness of work;
- Use higher standards in judging students' competence and in grading student performance; and,
- Have teachers who feel they are less effective teachers, especially for low ability students, than their elementary counterparts.

Taken together, these are significant and often abrupt changes for students that result in a more impersonal, critical, and passive environment. The middle years often see significant declines in student interest in and motivation for schoolwork such as reading and writing.

The 8<sup>th</sup> to 9<sup>th</sup> grade transition is particularly important because failure to successfully navigate this change is a strong predictor of dropping out of high school. About 1/3 of all drop outs do so in or immediately after 9<sup>th</sup> grade.<sup>25</sup> Research on drop outs suggest that anonymity or social estrangement, apathy or lack of purpose, school failure, and personal problems such as drugs or pregnancy are the leading reasons for leaving school. <sup>26</sup> Some researchers have examined the ninth grade transition and found that, especially for poor students (who are disproportionately African American, Latino, and Native American), the comprehensive high school model exacerbates their experience of depersonalization and irrelevance and often results in student checking out, literally (dropping out) or figuratively (coming to school but giving up).

The transition from 12<sup>th</sup> grade to a work or post-secondary setting is qualitatively different from the other two major transitions. Successful navigation of this transition is dependent upon specific planning and activity in the earlier grades. For example, a graduate's ability to experience successful transition to post-secondary education is dependent upon the transcript that she has built throughout the high school career, the appropriate identification, narrowing, selection, and application to possible post-secondary schools, the taking of admissions exams, lining up adequate funding, and a host of other tasks that must be accomplished in advance of the actual transition. High schools often do not see it as their role to provide hands-on support for managing this transition beyond getting students signed up for admissions tests and furnishing transcripts.

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<sup>a</sup> Some school structures reduce or eliminate these overt transitions from one building to another or even in terms of the patterns and routines of the school days, but research suggests that transitions still occur.

Indeed, this may be one of the most difficult transitions as students are moving into an entirely new role of adulthood in addition to new environments, people, expectations, and cultural norms.

We have highlighted 3 critical challenges to secondary education; we would have no difficulty identifying a host of equally pressing issues (e.g., English Language Learners, teacher recruitment and retention, bullying/violence, etc.). But, for the purposes of this briefing, we spend more time on what the research suggests are important practices to have in place for successful post-secondary experiences to meet the challenges that are present in our schools, whatever they may be. We turn to this in the following section.

## WHAT DO SUCCESSFUL SECONDARY SCHOOL ENVIRONMENTS LOOK LIKE?

### What are secondary schools trying to achieve?

As noted earlier, the work of secondary schools can be disproportionately driven by assessments for state and federal accountability systems. These systems are generally narrow in focus and poorly aligned with more broadly-cast college and career-ready outcomes. A careful review of what is known about successful secondary environments must begin by clearly defining what is meant by “success.” What are the targeted outcomes that help us to evaluate whether we are doing right by the students we serve? Here success is taken to mean finishing high school on a productive “career-ready” path. Being on a career-ready path may mean being prepared for further education or being workforce ready with the required capacities to take a contributing place in society. Whether the immediate post-secondary step is more education or workforce entry on target for high-paying careers, the needed skills and capacities are remarkably similar. So, what does the research say are the key competencies for graduates to succeed in the world of work or in a college setting? There is no consensus on one particular set of knowledge domains or skills, but there is some recent agreement that the division between the skills, knowledge, and dispositions needed for well-paying careers and for post-secondary education have diminished or disappeared.<sup>27</sup>

Numerous researchers and programs offer critical readiness characteristics, some specific to college readiness, most applicable across career and college sectors. Generally, they include domains such as:<sup>28</sup>

1. Mastery of academic content (e.g., four years of challenging math and English, content of the level that is assessed on admissions exams such as ACT or SAT, advanced writing)
2. 21<sup>st</sup> Century skills (e.g., problem solving, evaluating credibility of information, teaming/collaboration)
3. Soft skills and dispositions (e.g., taking initiative, organization, ability to take criticism, study skills)
4. Career maturity (e.g., identification of possible fields, career pathway analysis, labor market understanding)
5. Contextual awareness (e.g., understanding the cultural norms and expectations in work or post-secondary settings)

If the foregoing are the targets of secondary education, what do we know about getting there? We discuss this in the following section.

## What does recent research tell us about effective secondary education practices?

Research on effective practices at the secondary level tends to bifurcate along grade level lines, with solid empirical research being much more prevalent on high school practices. However recent work in both domains is quite helpful in identifying practices that make a difference on the important student outcomes discussed in the previous section. We provide brief overviews of these for both middle and high schools below. As we have noted, our focus will be on practices at school and classroom levels – basically an “inside-out” take on reform, though we fully recognize getting there will require action across entire systems and complementary “outside-in” approaches to realize effective change.<sup>29</sup> We say more about this duality at the end of this section.

### The Middle Grades: What Works?

The middle grades are the last, best chance to identify students at risk of academic failure and get them back on track in time to succeed in high school. Moreover, success in key subjects in the middle grades is a prerequisite to being able to enter high school academically prepared for a college-and career-ready path<sup>30</sup>

In recent decades we have seen numerous reports and statements by educators, researchers, and advocacy associations asserting the importance of the middle years and touting generalized practices that were thought to be valuable for meeting the needs of middle grade students.<sup>31</sup> However, relatively few studies examine practices in terms of documented student outcomes. Such a study was recently published under the title of *“Gaining ground in the middle grades: Why some schools do better.”*<sup>32</sup>

The “Gaining ground ...” study documents a wide range of middle grade policies and practices in 303 middle schools in California serving both middle and low-income students. The practices were categorized in to ten domains concerning: safe, engaging environments, a school-wide focus on academic outcomes linked to systematic, school-wide use of time and instruction, coherent and aligned standards-based instruction and curricula, the use of data to improve instruction and student learning, early and proactive academic interventions, attention to student transitions, a focus on teacher competencies, evaluation, and support, principal leadership and competencies, and superintendent leadership and district support.

The researchers operationalized each of the domains with a number of associated specific policies and practices. The domains were then linked to student performance data on seven California Standardize Tests (CSTs). One can certainly argue (and the researchers recognize) that such tests leave out the measurement of crucial skills that attend student engagement with learning and the development of a range of 21<sup>st</sup> Century skills and dispositions that are critical to future success. Nevertheless, they are predictive of school success and are certainly relevant to assessing student growth in the domains that are tested.

One domain emerged with the greatest strength in predicting positive student outcomes – *“An intense, school-wide focus on improving academic outcomes.”* Practices in this domain broadly included:

- Setting measurable goals for improved student outcomes
- Having a shared mission to prepare students academically for the future
- Holding adults accountable and responsible for student outcomes
- Expecting that parents and students will share responsibility for student learning

The study usefully provides detailed descriptions of specific practices that operationalize these broad areas of emphasis. Other domains found to be powerful pertained to:

- Standards-based instruction and curricula (e.g., implementation of standards-based curricula and instructional practice is tight and coherent, cohesive policies and strategies are implemented to further strengthen student learning of ELA and math in 7<sup>th</sup> and 8<sup>th</sup> grades)
- Extensive use of data with proactive academic interventions (e.g., district leads in provision and use of data, principal and faculty use data to plan instruction school improvement, use of data signals shift to emphasis on student outcomes);
- Proactive academic interventions (e.g., emphasis on early identification, frequent monitoring of individual student progress, comprehensive range of intervention strategies);
- Teacher competencies, evaluation and support (e.g., ability to use data for instructional decision making, linking teacher evaluation in part to student outcomes,)
- Principal leadership and competencies (e.g., serves as a linchpin between district and faculty, supports use of data, provides focused professional development, signals importance of high expectations);
- Superintendent leadership/district support (e.g., emphasis placed on achievement, were evaluated in part by middle grade results, supported a range of actions [professional development, technology & curricular decisions] that underscore focus on performance)<sup>33</sup>

The researchers also examined the impact of grade organization. Interestingly, in this study there were no significant effects associated with a particular grade configuration. Other studies do find a positive correlation with the K-8 configuration in terms of being more amenable to the implementation of critical practices in the middle grades.<sup>34</sup>

### High Schools: What Works?

Significant research has been conducted over the last decade on effective (and ineffective) high schools. This research has taken a variety of approaches and focused on a myriad of practices. The list below briefly highlights the nine most prevalent and well-researched high school practices that support students graduating well-prepared for work and college.

#### 1. *Rigorous teaching and learning*

A number of national organizations (e.g., the National Governors Association, Achieve's American Diploma Project), and state governments advocate that many more students take what used to be thought of as a "college prep" curriculum. Beyond defining the sequence of courses (four years of academic English and Math, three of lab science and social studies, and two of a foreign language), there is a growing push to articulate the content and skills behind those course titles that will truly prepare students for college level work.<sup>35</sup> Several states have made courses aligned with the admissions requirements for the state's public college system the default option for students,

meaning students have to actively opt out if they do not want to be on the college track. This is a far cry from the historic norm of the college prep track being reserved for a carefully selected minority. The trend is also seen in the push to open up AP, honors, and other advanced courses to more students. Most definitions of the level of rigor necessary focus on cross-cutting skills such as analytical thinking, problem-solving, and writing, and some researchers specifically advise that schools use more active and inquiry-based teaching and learning to foster higher level thinking.<sup>36</sup>

### *2. Explicit emphasis on cross-curricular and 21<sup>st</sup> Century skills*

The literature on post-secondary and workforce preparedness makes it very clear that not all the skills students need to succeed after high school are contained in traditional curriculum subjects. This research points to the importance of two distinct but related sets of cross-curricular skills, often described as 21<sup>st</sup> century skills and soft skills. 21<sup>st</sup> century skills are usually defined as those needed to succeed in a fast-changing, technology-driven knowledge economy. Most lists encompass such capacities as creativity, problem-solving, collaboration, and technology and information literacy.<sup>37</sup> The underlying premise is that while specific content may quickly become outdated, students with these capacities will be prepared to adapt. Soft skills are sometimes folded into the idea of 21<sup>st</sup> Century skills, but are more fundamental attributes that support success in almost any school or work task, including organization, responsibility, initiative, and persistence. Current definitions of post-secondary readiness emphasize that mastery of academic content must be supported by the development of the kinds of soft skills students need to succeed in the much more independent post-secondary environment, including time management, organization, and study skills (note taking, outlining, summarizing, etc).<sup>38</sup> Explicit attention to these skills and habits (also described as self-management skills<sup>39</sup>) is one of the supports that can help students succeed in a rigorous high school curriculum and beyond.

### *3. Culture of high expectations for all students*

Research on the link between high school characteristics and college access and success strongly emphasizes the importance of school culture, specifically the maintenance of a college-going culture with the pervasive expectation that all students will go on to some kind of post-secondary education.<sup>40</sup> High schools with such a culture see their ultimate goal as preparing students for college, and that goal is well understood by teachers, students, and parents.<sup>41</sup> A recent large scale study in Chicago found that teachers and school culture had more influence on whether students went to a four-year college than parents did, a finding that is particularly relevant in other contexts where many students are in the first generation of their family to go to college.<sup>42</sup> Crucially, this work showed that these cultural factors make the biggest difference for students with the lowest levels of qualifications and outside-school social capital. This Chicago research study reveals that many urban students who are academically qualified for higher education fail to apply and attend because of gaps in social capital such as norms for college going and information about how to select and apply to college (see below). This research identifies other elements of school culture that are strongly correlated to post-secondary readiness, including the existence of trust between teachers and students, and classroom teachers who see it as part of their job (not just the counselors') to help students get into post-secondary education.

#### 4. *Well-articulated system to guide students through transition from high school to post-secondary or career*

For many students, particularly those with weak social support and/or few connections to people who have navigated the post-secondary maze, logistical obstacles to post-secondary attendance are as daunting as academic demands.<sup>43</sup> Getting through admissions testing, applications, and financial aid forms is stressful and confusing for families at all income and education levels, as demonstrated by the existence of a booming profession of private college counselors. Most poor and urban students simply do not have the information, resources and support necessary to navigate this complex system effectively. Researchers and policy advocates emphasize that high schools must see it as part of their mission to ensure that all students take the steps necessary to graduate from high school with a viable plan for the future. This new role in post-secondary preparation must be both more active and more systematic, reaching out to all students.<sup>44</sup> For those students entering the workforce directly, help with preparing resumes, ensuring that they have employer-desired experiences, completing applications and preparing for interviews are critical steps in landing a well-paying job.

#### 5. *Integrated approach to planning for career and post-secondary education*

In a rapidly changing economy, the traditional lines of vocational and college prep education are blurring. Almost any well-paid job requires at least some post-secondary training, and traditionally manual professions now require higher level technology and math skills.<sup>45</sup> In addition, students can expect to change jobs and even careers far more frequently, putting a premium on the kinds of analytical, communication, and collaborative skills that are valued across a broad range of careers. In this context, training some students for specific jobs that may change significantly in a decade doesn't make sense, nor does focusing other students solely on traditional college prep academics with no concern for the world of work writ large. In this context, being career ready implies both that students should graduate from high school with career aspirations that are informed by research and grounded in reality and should be ready to succeed in whatever further education or training is needed to reach those aspirations. Research on high poverty schools that do well in preparing their students for post-secondary education emphasizes that they provide their students with ample opportunities for career exploration (making the connection between today's academics and tomorrow's aspirations) and that they focus on preparing them for life, not just for graduation.<sup>46</sup>

#### 6. *Personalism*

Personalism refers to the extent to which learners in a school feel known and supported as individuals. This is qualitatively different from the other categories of interventions that seem to make a difference for post-secondary preparedness and workforce readiness. We use here the definition of personalism first described by Anthony Bryk and colleagues in work on Catholic schools, where they noted that "personalism calls for humaneness in the myriad of mundane social interactions that make up daily life. Crucial to advancing personalism is an extended role for teachers that encourages staff to care about both the kind of people students become as well as the facts, skills, and knowledge they acquire."<sup>47</sup>

Bryk and his colleagues at the Chicago Consortium on School Research (CCSR) have continued to include personalism in their models of school effectiveness and have demonstrated its relationship

to a number of valued student outcomes ranging from engagement to attendance to college-going.<sup>48</sup> In probing the mechanism by which personalism has such a powerful impact, they conclude that it is critical in “fostering academic motivation, building confidence, making academic achievement attainable, and providing psychological comfort that allows students to take risks, admit errors, ask for help and experience failure along the way to educational success.”<sup>49</sup> As described in the most recent CCSR survey manual, “Classroom Personalism gauges whether students perceive that their classroom teachers give them individual attention and show personal concern for them. Academic achievement is more likely in classrooms that combine personalism with a strong press toward academic work.”<sup>50</sup>

### *7. Academic support*

The literature emphasizes that when schools institute a rigorous curriculum, they must also have in place the necessary supports (including tutoring, double-blocked classes, and more individualized learning environments) to enable more students – particularly those with poor preparation and/or weak home support – to succeed. High expectations and rigorous teaching and learning can only result in success if students are afforded adequate scaffolds to help them master the challenging work. Bryk and colleagues conceive of academic support as highly intertwined with the extent to which students are known well by the adults in the building.

### *8. Safe and orderly climate*

Secondary schools must be a physically and emotionally safe place in which procedures and routines support learning. Bullying, violence, vandalism, and high frequency of disciplinary incidents interfere with the culture of learning and individual students’ ability to focus on the work of schooling. Safe and orderly climates result in more time on task and permit the emergence of a peer culture that supports class participation and academic achievement.

### *9. Relevance*

When the work of the school is disconnected from students’ real lives and interests, engagement and motivation become a struggle for all but the most academically-oriented students. The content of courses should be clearly connected to the real world and students’ lives beyond middle and high school. Schools that are high on relevance tend to use projects and internships that are driven by student interests and career plans as core instructional components. Students have choice in activities and assignments and academic content is taught in meaningful/authentic contexts. Some work in this area goes as far as encouraging schools to actively support the development of student voice through leadership and activism as a developmentally appropriate tool for engagement with the school and managing turbulence.<sup>51</sup> With such an approach students serve as active participants in, and sometimes co-constructors of, assessment of their learning and progress. Assessment serves as a means to develop buy-in and as a tool for further learning, which supports self-reflection and internalization of the goals of the work.<sup>52</sup>

These research-supported practices for effective middle and high schools require significant changes to school culture, structures, policies, human resources, and in some cases, finances. For example, attempts to implement middle and high school environments that do indeed create a sense of personalism might require structural changes (e.g., longer instructional periods to increase contact, use of looping to extend and deepen teacher/student relationships), cultural changes (e.g.,

teachers taking ownership of students and caring deeply about their ultimate success), policies (e.g., how students are assigned to teachers), and redesigned use of human resources (e.g., modifying criteria by which teachers are recruited, supported, evaluated, and promoted).

A significant body of educational research has converged on the finding that teacher quality is the most powerful in-school variable in determining student success.<sup>53</sup> Given that, one must recognize that for any of these practices to be implemented well, significant investments in teacher effectiveness are central. This said, the real challenge to realizing effective secondary school environments finally comes down to figuring out ways to implement such research-supported practices comprehensively, consistently, and to scale. There is significant literature about comprehensive high school reform efforts and no emergent “silver bullets.”

## WHY WORK ON SECONDARY EDUCATION NOW?

A strong case can be made that this is a particularly opportune time to work on secondary education reform. At the national level, there is a growing recognition of the need to enhance graduation rates and post-secondary educational attainment for all students. At the same time, while the record of outcomes is deeply troubling, especially for students living in poverty and ALANA students, there are signs that we know what can work to alter current patterns even if it is not clear how to get those practices into place at scale. As we have noted, there are tangible policies and practices that have been shown to make a difference on outcomes that matter.

The national momentum regarding secondary reform is mirrored by important local developments. First, the need is urgent. As we have observed, key outcomes for students in the region largely reflect national trends. On the positive side, the emergence of the Pittsburgh Promise in 2008 has put pressure on local educators, and for that matter students and parents, regarding the setting and attainment of positive post-secondary education outcomes. By offering substantial financial incentives for students to make the grade, graduate, apply, and enroll in a post-secondary institution, the Promise not only supports students in these goals, it sets the stage for a careful assessment of current patterns in these areas – what is working well and what is not, and what needs to be done in schools to grow the number of students set on successful career-oriented pathways. Partially ahead of the Promise, but certainly intensified by it, the PPS is currently immersed in a series of reform efforts. Many of these focus directly on secondary education – curriculum redesign, grade reconfiguration (6-12), the new 9<sup>th</sup> Grade Nation, and school choice options (e.g., University Prep, Science and Technology High School) are just a few of the more prominent target areas of secondary reform. The 6-12 grade reconfiguration work is particularly interesting in that it seeks to directly address some of the persistent concerns regarding transitions and traditional grade configurations that have been identified as being special challenges for students. The extent to which the Promise can serve as a catalyst for substantive school and classrooms reform is an interesting regional manifestation of an issue of national import.

Beyond city boundaries, under a school choice banner, interesting efforts are being crafted to address a variety of disparities related to access to rigorous curriculum and exposure to advanced technologies that exist among school districts in the region. For example, the Regional Choice Initiative (RCI) in Beaver County, now in its third year of development, seeks to develop functional links across 14 school districts to explore how the sharing of resources can enhance the educational experiences of their students.

The point here is that there is both need and momentum for secondary work. Strategic use of the Endowments' resources can make a difference when targeted to policies and practices that have a track record of success. So what might be some promising areas to focus investments of energy, intellect, and dollars in secondary education locally? We list a few that can serve as a springboard for broader discussion.

- Supporting effective teaching at the secondary level in parallel to or in conjunction with the PPS Gates initiative on teacher quality (targeting issues specific to secondary education, disparities due to poverty and/or race);
- Building on/expanding/deepening existing efforts to engage students in meaningful and authentic leadership and activism (perhaps through 9<sup>th</sup> Grade Nation; infusion into curriculum, or other out-of-school efforts);
- Exploring the local/regional need for dropout recovery or re-enrollment (an often overlooked and under-funded area);
- Identifying existing schools in the region with high poverty rates who are bucking the achievement trend (documenting the mechanisms for success and creating real, hands-on pathways for educators and policy-makers to learn with from those experiences);<sup>54</sup>
- Building on any recent local successes in elementary grades and extending support mechanisms into the middle and high school grades.

The list is by no means exhaustive and additional needs assessments locally might yield promising opportunities. However, given the literature on secondary education these appear to be both interesting and potentially viable options.

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