Goal One of the State Scholars Initiative

Annual Evaluation Report

August 26, 2008–March 31, 2009

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By

Diana L. Robinson
Associate Director
Center for Governmental Studies
Northern Illinois University
148 North 3rd Street
DeKalb, Illinois 60115

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I. Executive Summary

This evaluation addresses how business-education partnerships involved in the national State Scholars Initiative (SSI) administered by the Western Interstate Commission for Higher Education (WICHE) are influencing high school student course-taking. The U.S. Department of Education's Office of Vocational and Adult Education has provided funding since 2002 to 24 states which have involved 545 school districts in SSI.

Evaluation data collected throughout the four years that WICHE has administered SSI point to the positive effect of business-education partnerships on student course-taking and, more broadly, on efforts to strengthen the rigor of high school level education. Five categories of findings associated with this evaluation are summarized below.

A. State Partnership Characteristics

1. Of the 24 states that have received SSI funding to date, 19 or 79% remain active.

2. SSI state partnerships are structured in a variety of ways with leadership provided by K-12, postsecondary, business, and business-education entities.

3. The 19 active SSI state partnerships have engaged 545 school districts in SSI since their inception, with Group B states exceeding the number of required districts by 42% and Group C states more than tripling their minimum.

4. Seven out of 10 employers involved in SSI are private sector with the balance representing not-for-profit, public, and civic or fraternal organizations.

5. The number of employers working with SSI state partnerships is substantial but not quantifiable as many local districts do not report this information to the state partnerships. A recent count of 621 is likely a significant undercount.

B. Program Implementation

1. All of the reporting SSI state partnerships are providing needed staffing, classroom presentations, and student data but few have secured long-term sustainability resources and consider it the most challenging aspect of program implementation.

2. A variety of student recruitment, retention, and recognition activities also occurs at the school and district levels. Variations in the school calendar pose logistical challenges rather than insurmountable hurdles for implementing SSI activities.

3. The local partnership structure for school districts in many SSI states varies with local resources and interests, yet five states are using a systematic approach in structuring their district-level business-education partnerships.

4. A serious disconnect in the SSI program model exists between the two years of federal funding support and the four years needed to collect a full cohort of student data.

5. Guidance counselors play a particularly important role in SSI given their student advising responsibilities and opportunities to support educational improvement efforts.

6. Virtually all of the state partnerships were challenged by the pace and complexity of SSI implementation. Trade-offs identified by the state directors included a lack of time to further develop partner relationships, to seek out effective practices from SSI colleagues, or to support district-level implementation.

7. Other implementation challenges included limited non-SSI resources, turf issues, conflicting education practices and policy, and leadership changes.

C. Funding and Sustainability

1. All but four of the 19 active SSI states were confident that their programs would continue beyond federal funding.

2. Fundraising efforts generally have not generated the results to justify the associated level of effort.

3. Private sector employers view their role as providing expertise and in-kind support rather than financial support.

4. While some level of core funding is needed to support SSI program operations, other strategies leverage existing assets or create broader support mechanisms for SSI.

D. Program Outcomes

1. State directors and employers believe that the personal connection with students is the most effective business role in influencing students to take more rigorous courses.

2. Student enrollment and perception survey data indicate that SSI is influencing student course-taking behavior. Of the 17,731 students completing perception surveys, 94.4% believe that rigorous courses are important to getting a good job and 92.2% believe they are important for entering postsecondary education and training.

3. All reporting SSI state partnerships are connecting with other state and national educational reform initiatives. State directors identified four main education reform successes resulting from SSI: increased rigor, strengthened high school reform coalitions, stronger constituent partnerships, and "legacy" tools and resources.

4. Considerable variation exists within and between state directors and employers in how they define "rigor."

5. Despite the perceived value of integrating SSI with state career and technical education or science, technology, engineering and math initiatives, relatively few states have made significant inroads in these areas.

6. Generally, the longer the SSI program has been in place, the greater the difference federal funding made to state education reform policy.

E. Potential Improvements to the SSI Model

1. Four main improvement areas for the SSI program model were identified by SSI state directors.

2. Stronger alignment with and clearer differentiation from other national education reform initiatives.

3. More opportunities to learn from each other and share effective practices.

4. Further strengthen the SSI Core Course of Study by requiring one or more Career Technical Education (CTE) classes or by demonstrating how CTE content can help address state academic standards.

5. Provide a longer SSI federal funding timeline.

II. Introduction

OVAE funds the Western Interstate Commission for Higher Education (WICHE) to administer the State Scholars Initiative (SSI). The program uses state- and local-level business-education partnerships to encourage students to pursue a more rigorous course of study in high school than they might have otherwise taken. The SSI Core Course of Study consists of four years of English, three years of math (including algebra 1 and 2 and geometry), three years of lab-based sciences (biology, chemistry, and physics), three and one-half years of social sciences (chosen from U.S. and world history, geography, economics, and government), and two years of the same language other than English. As the SSI program administrator, WICHE provides funding and technical assistance, including program monitoring and oversight, to the state-level business-education partnerships.

The Center for Governmental Studies (CGS) of Northern Illinois University (NIU) is one of two external evaluators contracted by WICHE to study different aspects of SSI program implementation. This report focuses on one of three project goals: use business-education partnerships to influence high school student course-taking. CGS is also conducting an evaluation of WICHE's administration of SSI. A separate evaluation conducted by the National Center for Higher Education Management Systems (NCHEMS)[1] is evaluating progress toward the other two SSI program goals:

- Influence high school student course-taking patterns; and

- Influence stakeholders' perceptions regarding high school student course-taking patterns.

The 24 state-level business-education partnerships involved in SSI since 2003 have been grouped into three cohorts based on when they were brought into the SSI network. Fourteen states were selected and funded in 2002 by the Center for State Scholars prior to WICHE's cooperative agreement with OVAE in 2005 to administer SSI. Although all of these "Group A" states have concluded their federally-funded SSI activities, 12 or 86% have participated in SSI activities during the past program year. The "Group B" cohort consists of six state partnerships selected on March 31, 2006. All but one of those states remains active in the network and three of these states are receiving federal SSI funds through a no-cost extension of their contracts. The four "Group C" cohort states were selected on November 28, 2006, and also remain under contract to WICHE through no-cost extensions. All 24 SSI states are listed below by cohort. Five states - Nebraska, New Jersey, New Mexico, Rhode Island, and Washington - have concluded their SSI programs.

Because WICHE's administrative responsibility has focused primarily on Group B and C states, they are the main focus of this evaluation. However, where data are available, the experience of the Group A states is also incorporated into the analysis. This evaluation report covers the period August 26, 2008 through March 31, 2009.

Table 1
SSI States by Cohort

Group A States		Group B States	Group C States
Arizona	Mississippi	Louisiana	Missouri
Arkansas	New Jersey*	Massachusetts	New Hampshire
Connecticut	New Mexico*	Nebraska*	South Dakota
Indiana	Oklahoma	Utah	Wyoming
Kentucky	Rhode Island*	Virginia	
Maryland	Tennessee	West Virginia	
Michigan	Washington*		

*Inactive prior to this evaluation period

1   http://www.wiche.edu/statescholars/research/evaluationReports.aspx

III. Data Sources

Six primary data sources have been used to develop the Year Four evaluation findings for SSI Goal One:

1. Quarterly, annual, and final reports submitted by the SSI state business-education partnerships (states are not required to submit reports after their federal funding has ended).

2. Official SSI documents (e.g., WICHE progress reports to OVAE and monitoring reports).

3. Email correspondence within the SSI network, including information shared among WICHE, OVAE, NCHEMS, and the states actively engaged in the SSI network.

4. Information generated from monthly evaluation conference calls and related topic-specific discussions by WICHE, OVAE, NIU, and/or NCHEMS to discuss program successes, progress, and challenges and to provide activity updates.

5. Information shared in the monthly state directors' conference calls conducted by WICHE.

6. Information obtained through informational interviews conducted between February 24, 2009 and March 16, 2009 by NIU evaluator Diana Robinson with the state directors of 17 SSI programs. (See Attachment A for a list of the interview questions.)

Due to the variation in virtually every partnership characteristic, such as the type and level of support provided to SSI by key partners, the existence of other state-level education reform efforts, and the availability of additional program support, these evaluations have not compared SSI program performance across states. This evaluation continues in that tradition and instead focuses on identifying the experiences and factors that have facilitated or hindered the SSI states in their implementation journey.

IV. Findings

Eleven evaluation questions established at the beginning of the evaluation process have shaped the data collection effort. Several of these questions have been answered definitively and responses to the remaining questions have remained generally consistent throughout the evaluation period. However, as the fourth and final annual evaluation report for SSI Goal 1, this report serves as a summation of the experience to date related to the role of business-education partnerships in influencing student course-taking.

To provide a more integrated set of findings, the areas addressed by the 11 evaluation questions have been consolidated into five groups and are the focus of this report:

1. State Partnership Characteristics—the number, type, and structure of SSI state-level partnerships.

2. Program Implementation—timing and activities.

3. Funding and Sustainability—including federal funding.

4. Program Outcomes—business involvement, relationships with other education reform efforts, partnership effects on student coursetaking, and SSI benefits and drawbacks.

5. Potential Improvements to the SSI Model—including SSI drawbacks and benefits.

A. State Partnership Characteristics

1. **Of the 24 states that have received SSI funding to date, 19 or 79% remain active.**

2. **SSI state partnerships are structured in a variety of ways with leadership provided by K-12, postsecondary, business, and business-education entities.**

3. **The 19 active SSI state partnerships have engaged 545 school districts in SSI since their inception, with Group B states exceeding the number of required districts by 42% and Group C states more than tripling their minimum.**

4. **Seven out of 10 employers involved in SSI are private sector with the balance representing not-for-profit, public, and civic or fraternal organizations.**

5. **The number of employers working with SSI state partnerships is substantial but not quantifiable as many local districts do not report this information to the state partnerships. A recent count of 621 is likely to underrepresent the actual number of participating employers.**

Nineteen or 79% of the 24 states that have received federal SSI funding have active state-level business-education partnerships as of the writing of this report. Of the five states that have concluded their programs, four (New Jersey, New Mexico, Rhode Island, and Washington) are from the A cohort administered by the Center for State Scholars, the first SSI administrator. The fifth state, Nebraska, was in the B cohort.

Each SSI state partnership must be directed by a state-level business-education partnership with demonstrated leadership in education. All SSI states receiving federal funding are expected to have a full-time SSI director, a half-time administrative assistant, and access to adequate additional support personnel.

A variety of structures are supporting the 19 active SSI states:

- Arizona, Arkansas, Kentucky, Oklahoma, New Hampshire, Virginia, and West Virginia are housed in a business-education partnership.

- Utah and Wyoming are sponsored by P-16 councils.

- Connecticut, Louisiana, Maryland, Michigan, Mississippi, and Tennessee are supported by state level business organizations.

- Indiana, Massachusetts, Missouri, and South Dakota are supported by partnerships between separate business and K-12 entities.

The 24 federally-funded SSI states have engaged 545 state partnerships since the program began in 2002. Of these, 445 were in Group A states, 44 in Group B states, and 56 in Group C states. It is important to note that states in the B and C groups funded during WICHE's administration of SSI are required to launch their Scholars programs in at least four districts for data collection purposes, and the current number of school districts exceeds this minimum by 42% among the B states and 211% among the C states.

An analysis of the type of employer involved in SSI was conducted in the Year Two evaluation and revealed that 70.7% were private sector, 10.0% were public agencies (including various units of government, educational institutions, and utilities), 7.6% were civic and fraternal organizations (including chambers of commerce and leadership councils), and 11.7% were not-for-profit concerns (including foundations, associations, churches, and other community-based organizations).

The number of businesses involved in SSI activities is substantial but the exact number is not known. Many of the SSI state partnerships do not receive information from their local school districts about the number of employers with whom they work. During the previous evaluation period, 621 businesses and related organizations were listed on WICHE's SSI Web site for active SSI states. This number most likely does not capture all of the business partners working with local schools in SSI states, but the magnitude of the undercount is unknown.
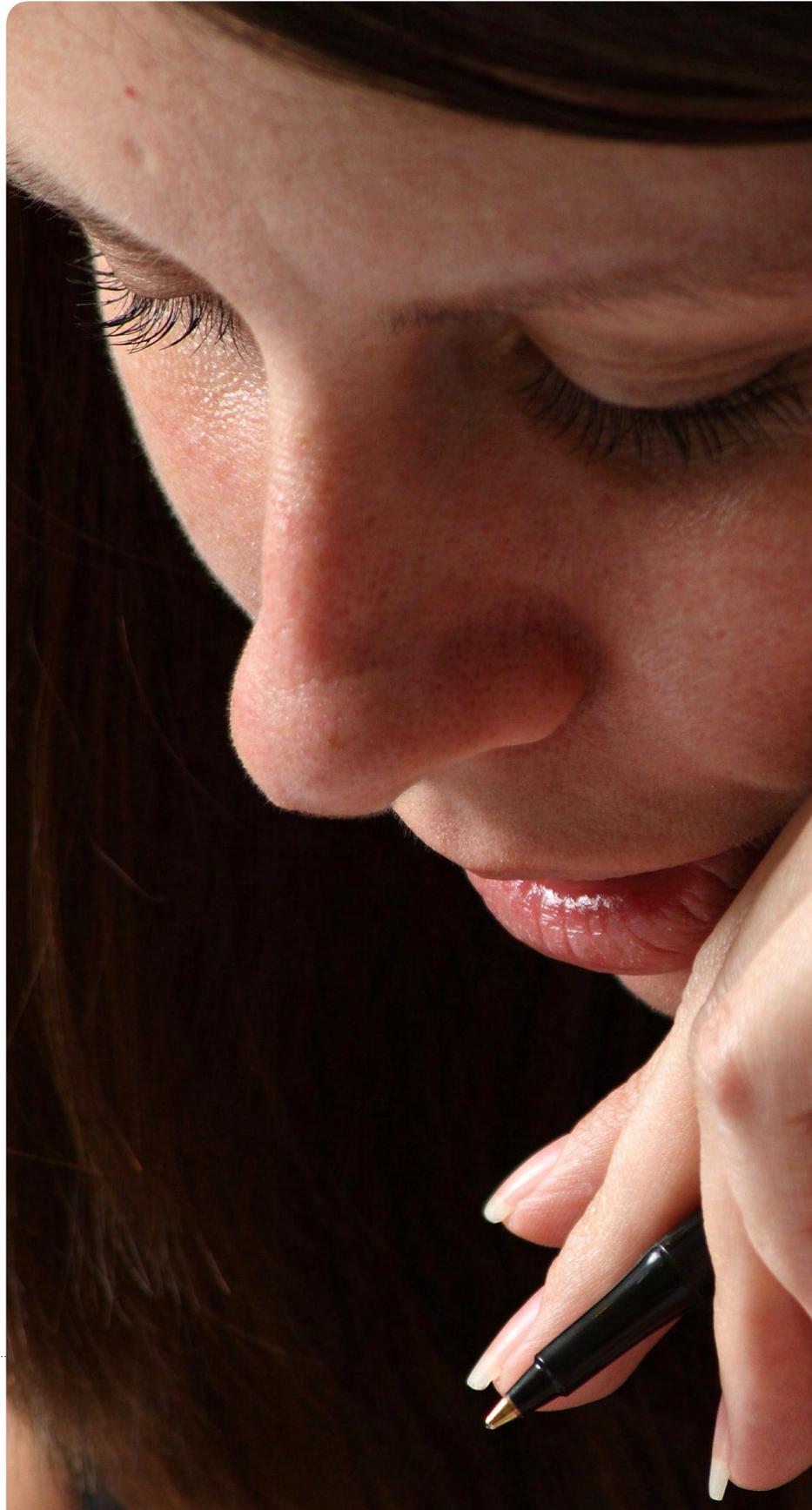
B. Program Implementation

1. **All of the reporting SSI state partnerships are providing needed staffing, classroom presentations, and student data. However, few state directors have been able to pursue long-term sustainability resources and consider it the most challenging aspect of program implementation.**

2. **A variety of student recruitment, retention, and recognition activities also occurs at the school and district levels. Variations in the school calendar pose logistical challenges rather than insurmountable hurdles for implementing SSI activities.**

3. **Although the local partnership structure for school districts in many SSI states varies with local resources and interests, five states are using a systematic approach in structuring their local business-education partnerships.**

4. **An important disconnect exists in the SSI program model between the two years of federal funding support and the four years needed to collect a full cohort of student data.**

5. **Guidance counselors play a particularly important role in SSI given their student advising responsibilities and opportunities to support educational improvement efforts.**

6. **Virtually all of the state partnerships were challenged by the pace and complexity of SSI implementation. Trade-offs identified by the state directors included a lack of time to further develop partner relationships, to seek out effective practices from SSI colleagues, or to support district-level implementation.**

7. **Other implementation challenges included limited non-SSI resources, turf issues, conflicting education practices and policy, and leadership changes.**

Partnership Success.

For purposes of this evaluation, successful SSI state-level business-education partnerships are defined as delivering on four program requirements:

1. Providing needed staffing and resources to implement SSI.

2. Providing classroom presentations to targeted students in the SSI schools.

3. Meeting SSI data collection requirements.

4. Securing resources needed to sustain the program beyond the federally-funded grant period.

All nine active B and C states reporting during this evaluation period have addressed the first three criteria. However, few state directors have had the time to focus on securing resources to sustain their SSI programs. This is due in large part to the many competing implementation priorities, such as building relationships with the pilot schools, recruiting and training business volunteers, developing or refining state-specific marketing materials, presenting to various stakeholder groups about SSI, supporting school activities, and providing program reporting and data collection. The states that received their funding awards in the middle of the school year were particularly challenged in implementing their programs as they had less time to recruit and prepare business volunteers for the 8th grade presentations that typically occurred early in the calendar year.

Program Activities.

The SSI program guidelines are structured so that SSI implementation activities are very similar across state partnerships. Implementation is aligned with the school year, which drives business volunteer recruitment and training and student recruitment and recognition events. Aspects of the school calendar that affect program implementation include variations in the dates for school registration and the start of classes, block scheduling (which affects the reporting of student course-taking data and the opportunity to take required courses), and various standardized testing schedules. These factors posed logistical challenges rather than insurmountable hurdles.

SSI student activities fall into three categories: recruitment efforts that invite students to consider enrolling in SSI; retention activities that encourage students to remain in SSI to completion; and recognition events that reward outstanding effort or completion of an SSI program. Examples of each of these activities are provided below.

Recruitment activities:

- Pizza parties for first-year students.

- Breakfast for SSI-eligible students making the honor roll.

- Luncheons with SSI-eligible students who meet various goals.

- Offer by a local bank of a special savings account for State Scholars.

Retention activities:

- Congratulatory sticker on envelope in which grades are mailed.

- Awards banquet for 10th graders.

- Tickets to sports events or local attractions for students who sign a State Scholars contract.

- Students participating in kick-off activities received signed photo from the Governor.

- Monthly recognition of Junior Reserve Officers' Training Corps (JROTC) students.

Recognition events:

- Senior recognition at graduation or special awards programs.

- Awarding of medallions.

- Certificate seals.

- Special diplomas at graduation.

- Congratulatory letters sent to high school graduates meeting SSI requirements.

- Monetary awards and scholarships.

Local Partnership Structures.

Eight of the 13 SSI states reporting this information have local or district-level partnership structures that allow for individual variation depending on local resources and interest. For example, Virginia developed five models within the SSI framework that built on a particular partner or compatible existing program: GEAR-UP, High Schools that Work, community colleges, the Reality Store, and the Appalachian Regional Commission. The five remaining SSI states use the same approach in each participating SSI district.

- Maryland uses partners and coordinators in every school district to closely manage SSI.

- Massachusetts established a school-business roundtable consisting of the school team (principal, assistant principal, guidance counselor, and a data person) and key business contacts. The roundtable met at least twice a year.

- Missouri worked through its local chambers, although other civic groups may need to be found for smaller school districts.

- Tennessee uses a step-by-step process to ensure that all of the key partners are at the table and understand the roles and responsibilities associated with SSI involvement.

- Wyoming used Professional Learning Committees that have already been established in each school district and are usually headed by a high school counselor.

Disconnect between Funding and Student Data.

Many state directors expressed concern with the disconnect between the two years of federal funding support and the minimum of 4.5 years needed to collect a full cohort of student data. The importance of generating at least one full cohort of SSI student data was discussed at the April 2008 SSI Advisory Board meeting. There was general agreement that this was a valid concern and several Board members indicated their willingness to provide assistance in pursuing additional resources to complete at least one cohort of data. However, as of the writing of this report, none of the avenues suggested by the Board or additional funding opportunities identified by WICHE have provided the needed resources.

Key Role of Guidance Counselors.

Six state directors described the important role that guidance counselors play in student course-taking and supporting educational improvement in their schools. Most directors expressed their interest in working more closely with counselors, particularly at the beginning of program implementation. Tying into counselor networks was described as a particularly efficient way to do this.

Pace of Implementation.

Four state directors believed that the rapid pace of SSI implementation and working with multiple school districts simultaneously proved to be major challenges. This did not allow them to spend as much time as they would have liked in developing relationships with school districts and other partners, in seeking out practices that would best serve further program expansion, or in supporting districts as they were implementing their Scholars programs. SSI implementation also stretched available human resources, particularly in the larger states with a broad geographic region.

Other Implementation Challenges.

State directors were asked to identify obstacles they encountered since they began implementing SSI in their state. Four obstacles were identified by two or more state directors:

- **Limited non-SSI resources.** Too few qualified math and science teachers, budget cuts affecting physics and language classes, and insufficient federal workforce development funds to support summer youth activities all constrained the directors' ability to implement SSI as planned.

- **Turf issues.** Competing educational agendas between career and technical education programs and SSI in some states prevented effective integration of these offerings.

- **Conflicting education practices and policy.** Despite SSI's emphasis on readiness for college, post-secondary institutions in a number of SSI states are accepting high school graduates who are not prepared for college level courses and offer remedial education. One example of conflicting policy is awarding college scholarships based only on grade point average rather than taking a rigorous curriculum, resulting in students taking less challenging courses to improve their GPA.

- **Leadership changes.** Turnover in key leadership positions such as state legislators, district superintendents, and other state-level SSI champions can disrupt implementation plans and necessitate building new relationships and understandings.
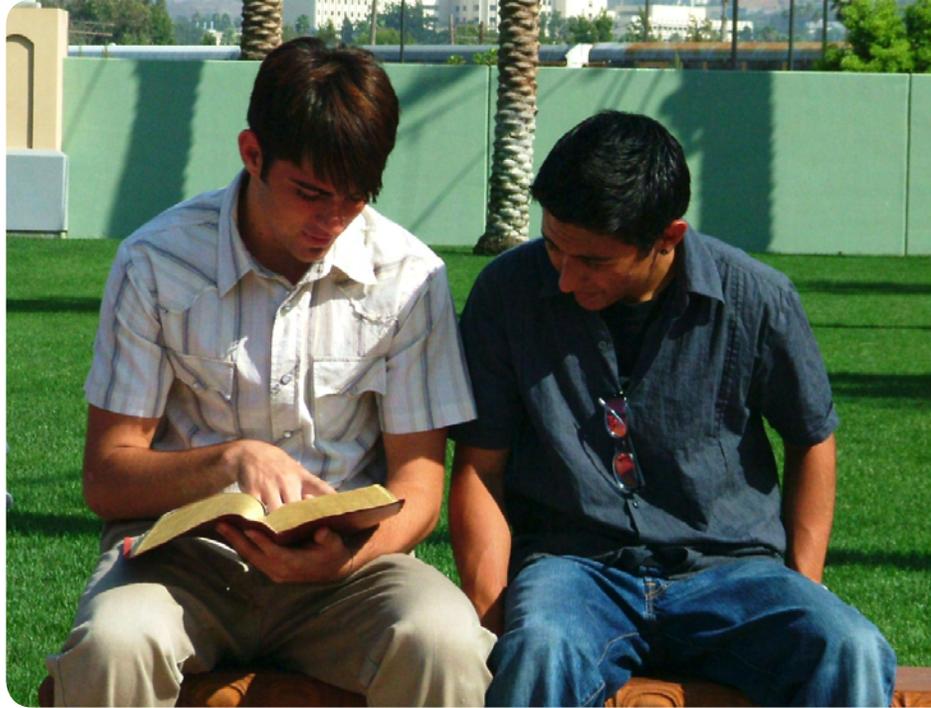
C. Funding and Sustainability

1. **All but four of the 19 active SSI states were confident that their programs would continue beyond federal funding.**

2. **Fundraising efforts generally have not generated the results to justify the associated level of effort.**

3. **Private sector employers view their role as providing expertise and in-kind support rather than financial support.**

4. **While some level of core funding is needed to support SSI program operations, other strategies leverage existing assets or create broader support mechanisms for SSI.**

As of the end of this evaluation period, all but four of the 19 active SSI states were confident that their programs would continue. Two of the four states describing an uncertain future nonetheless considered their SSI program a success in that SSI played an important role in strengthening their states' graduation requirements. As one director observed, "Sustaining SSI wasn't the goal, it was making sure that every kid got exposure to the core content."

Fundraising Activities.

SSI state directors have sought resources to sustain program operation beyond federal funding from varied sources including state legislatures, state business organizations, foundations, corporations, and individual businesses. These funding efforts have, with few exceptions, yielded significant results. Even when successful these efforts yield relatively small grants that tend to be for very limited uses. For example, several partnerships described local businesses that are willing to support a State Scholars program in their school district. Virginia obtained a small grant from the Appalachian Regional Commission that has proven a valuable capacity-building resource. Federal College Access Challenge Grants and state-level public sector fundraising efforts generally have resulted in the largest returns, both financially and in positioning SSI as an influential educational initiative.

Private Sector Role. The relative lack of success in generating financial support for SSI from employers is explained in part by information provided in an employer survey conducted in late 2007. Employers involved locally with SSI indicated that they are least likely to provide financial or political support and reported their role as delivering the classroom presentation, sharing workforce needs with school personnel, and conveying the message of rigor and relevance to the broader community. In reflecting back on her own state's sustainability efforts, one state director observed in early 2009 that educators are often limited in how they view the business community. Educators see the business community's value in financial terms instead of the "give and take and learning from one another" that characterizes strong partnerships. Despite this, 89% of surveyed SSI employers involved at the local level indicated that they are likely to continue their involvement with SSI.

Other Sustainability Strategies. The SSI experience with respect to fundraising suggests that time-intensive proposal development efforts do not yield significant results and the opportunity costs are high. A number of other strategies have been described by the state directors to position SSI for long-term success. Among the most promising are:

- Creating bi-partisan support for SSI within the state legislature and the governor's office.

- Creating SSI fundraising committees and engaging board members in leveraging statewide networks and contacts.

- Working at the state and local levels to encourage the institutionalization of SSI by education, business, or business-education partners.

- Completing as many program materials as possible with a useful life extending well beyond federal SSI funding, such as on-line resources and volunteer training presentations.

- Establishing funding for an SSI scholarship or other major student incentives.

- Aligning SSI with other similar state or local initiatives focused on increasing rigor and relevance to share resources.

- Building strong relationships with key state and local partners, such as state chambers, human resource organizations, and postsecondary institutions.

- Building capacity at the local level to manage their own SSI programs.

In the absence of successful independent fundraising, most of the Group B and C states have conserved their federal funds so they stretch over a longer period of time. The judicious expenditure of these resources has provided added time for the partnerships to establish and strengthen their SSI programs.
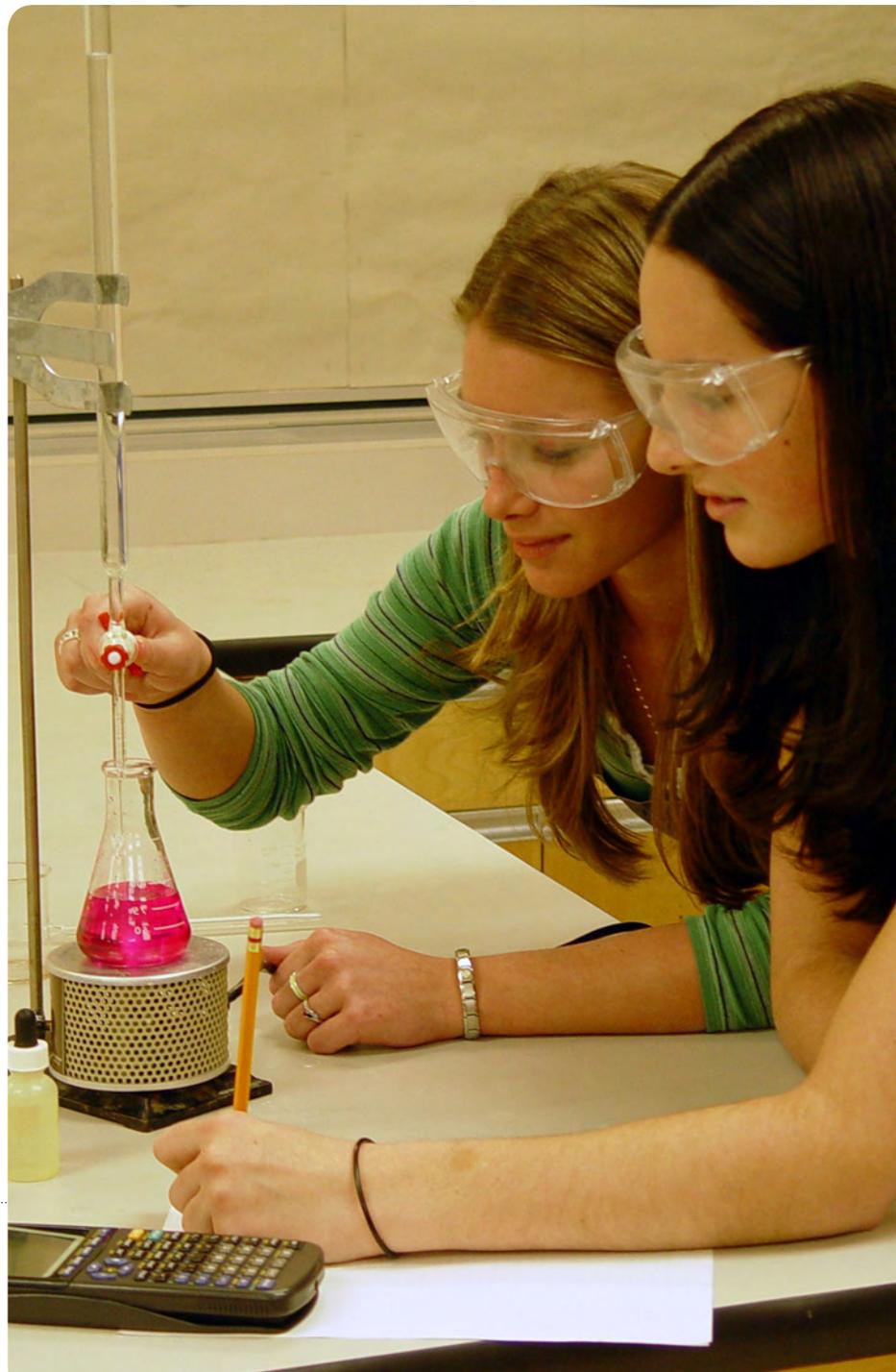
D. Program Outcomes

1. **State directors and employers believe that the personal connection with students is the most effective business role in influencing students to take more rigorous courses.**

2. **Student enrollment and perception survey data indicate that SSI is influencing student course-taking behavior. Of the 17,731 students completing perception surveys, 94.4% believe that rigorous courses are important to getting a good job and 92.2% believe they are important for entering postsecondary education and training.**

3. **All reporting SSI state partnerships are connecting with other state and national educational reform initiatives, mostly involving default curricula and state graduation requirements.**

4. **State directors identified four main education reform successes resulting from SSI: increased rigor, strengthened high school reform coalitions, stronger constituent partnerships, and "legacy" tools and resources to support educational improvement.**

5. **Considerable variation exists within and between state directors and employers in how they define "rigor."**

6. **Despite the perceived value of integrating SSI with state career and technical education or science, technology, engineering and math initiatives, relatively few states have made significant inroads in these areas.**

7. **Generally, the longer the SSI program has been in place, the greater the difference federal funding made to state education reform policy.**

SSI Positively Affects Student Course-Taking.

SSI state directors and employers concur that connecting personally with students is the most effective role for the business community in influencing students to take more rigorous courses. The employer voice is different from that of the teachers, parents, counselors, and administrators, and it is viewed as a respected and credible authority.

These views are validated in the evaluation data collected and analyzed by NCHEMS. Their fourth year evaluation report draws from data on over 1,458,724 student enrollments and perception surveys from 18,691 high school students. These data indicate that students are changing their course-taking patterns by taking rigorous courses in high school and that SSI is, in part, responsible for these changes. Of the 18,691 students completing perception surveys, 94.4% believed that rigorous courses were important to getting a well-paying job and 92.2% believed that such courses were important for postsecondary education and training. The reader is encouraged to review the NCHEMS reports for additional findings (http://www.wiche.edu/statescholars/research/evaluationReports.aspx).

SSI is Advancing State Education Reform Efforts.

In the telephone interviews conducted by the NIU evaluator in the spring of 2009, state directors described four main education reform successes resulting from their SSI programs.

- **Increased rigor.** Increased high school level rigor was one of two education reform outcomes that were mentioned most often by SSI directors. Seven directors described strengthened graduation requirements, alignment with a more rigorous state curriculum, and increased advanced placement course-taking as the most important education reform outcomes associated with SSI in their states.

- **Strengthened high school reform coalition.** Seven SSI directors also described improved collaboration with other education reform efforts in their states. Six of these directors did not also describe increased rigor as an outcome, so building strong education reform coalitions could be viewed as an important step along the path to strengthened curricular rigor. Other education reform efforts with which SSI was aligning included state default curriculum initiatives as well as:

- Career cluster efforts.

- National Math and Science Initiative or related science, technology, engineering, and math efforts.

- Partnership for 21st Century Skills.

- American Diploma Project.

- Gaining Awareness and Readiness for Undergraduate Programs (GEAR UP).

- Upward Bound.

- Achievement Counts.

- National Governors Association high school reform efforts.

- **Stronger constituent partnerships.** Three additional state directors described stronger relationships with employers, schools, and the broader community as a major success of their SSI programs. Building stronger relationships among key partners may be seen as an antecedent to forming or strengthening high school reform coalitions.

- **"Legacy" tools and resources to support educational improvement.** Six state directors described a number of SSI products that will be used to continue to support their SSI programs and are likely to also benefit other state efforts to promote rigor. These included Web sites, collateral materials such as electronic presentations and brochures, a math lab, summer math academies, an ACT preparation boot camp, an online volunteer management database, new school recruitment packages, course comparison charts to help students transition from high school to college level classes, a personal learning plan tool and related counseling document, and scholarships.

Variations in Defining "Rigor".

State directors varied considerably in their definitions of "rigor" in telephone interviews conducted in late 2007. Business partner surveys also conducted in late 2007 similarly revealed that many employers did not believe that the business community agreed on a definition of educational rigor. This variation in how rigor is defined was a main focus of the SSI National Summit on Academic Rigor and Relevance. Both the white paper, "Education Beyond the Rhetoric: Making 'Rigor' Something Real" and WICHE president David Longanecker's presentation, "Myth or Reality: Serious Questions about Rigor and Relevance," focused on rigor. In addition, one of the suggested discussion questions for the state team meetings during the Summit addressed how the state defined rigor.

Integrating SSI with Career and Technical Education and STEM.

Many SSI states have identified integration with career and technical education (CTE) and science, technology, engineering, and math (STEM) efforts as a major opportunity for their SSI programs. Such efforts have been encouraged by both OVAE and WICHE, and are also believed by employers to advance rigor. Of the SSI employers surveyed in late 2007, 100% agreed with statements that

- A rigorous course of study is important to success in the workplace and postsecondary education.

- Science, technology, engineering, and math (STEM) is important to rigor.

- Career and technical education plays a role in integrating rigor and relevance.

However, in early 2009, few SSI state directors were able to point to major successes in integrating with either CTE or STEM. Only South Dakota and Tennessee reported a strong linkage with CTE as one of their top successes, and Arizona reported that in 2013 they will be adding two credits of either CTE or fine arts to their state graduation requirements. New Hampshire, South Dakota, and Tennessee are also using the 16 career clusters developed by the States Career Clusters Initiative supported by OVAE, and Utah is using a state-developed career pathways framework. Three additional states reported that they have strong and rigorous CTE programs, but that alignment with SSI hasn't occurred. Despite these successes, six state directors described a persistent belief in their states that "technical" or career-related education is not rigorous and that gaps exist in the level of preparation needed for college- and career-bound students.

Even less integration is occurring between SSI and STEM. Although most state directors acknowledged the importance of making such connections and some described SSI as the "ground floor" for STEM efforts due to the science requirements in the SSI core, only four states have had any success. Three of these, Maryland, Missouri, and Tennessee, have SSI leadership directly involved in statewide STEM efforts. Utah has articulated SSI with STEM in early college. Two state directors suggested that an additional year of mathematics be added to the core SSI program of study to further strengthen students' academic preparation for college and career.

Value of Federal Funding.

SSI state directors were asked in telephone interviews conducted in late 2007 what difference federal funding of SSI made, and the results vary by state cohort. Group A state directors described SSI as playing a significant role in state-level education reform policy discussions:

- It made a "huge difference" in that it gave the state a model, tools, and statistics to show that the link to postsecondary education is key and to show that students need a rigorous academic background.

- SSI funding helped create a mindset around rigorous course-taking for all students.

- SSI funding has "significantly stepped up and elevated the conversation and increased awareness about math and science coursework for kids."

- SSI served as the model for the default curriculum and strengthened career and technical education by requiring two CTE classes in the SSI Core Course of Study.

- Because of SSI, many students feel that they can take a rigorous course of study and succeed. "We're not asking that they get an A, just that they do their best."

The effect of SSI funding for the Group B and C states is more mixed. Two of the Group B state directors reported that federal funding of SSI significantly influenced state-level curriculum discussions, and another described the effect as more modest but as adding credibility and momentum. One other Group B director stated that SSI funding underscored the connection between education and workforce readiness. The two remaining Group B directors said that SSI has had little effect to date on their statewide education reform landscape.

Of the four Group C state directors, three said that it was too soon to know, with the fourth crediting SSI funding with providing the push that coalesced their P-16 initiative.

Other factors presented difficulties for the state directors. Three of the Group B states (Louisiana, Massachusetts, and West Virginia) and two of the Group C states (South Dakota and Wyoming) reported conflicts with other education reform initiatives that were in place or under discussion. These conflicts resulted in confusion about the difference between SSI and other state diplomas or endorsements, lack of interest in SSI by some key partners, or a competitive disadvantage for SSI when another reform initiative was connected to a financial incentive, such as a scholarship.

E. Potential Improvements to the SSI Model.

Four main improvement areas for the SSI program model were identified by the 17 SSI state directors:

1. **Stronger alignment with and clearer differentiation from other national education reform initiatives.**

2. **More opportunities to learn from each other and share effective practices.**

3. **Further strengthen the SSI Core Course of Study by either requiring one or more CTE classes or by demonstrating how CTE content can help address state academic standards.**

4. **Provide a longer SSI federal funding timeline.**

Table 2
SSI State Directors' Perceived Program Drawbacks and Benefits*

Benefits	Drawbacks
Group A States (Five) • Increased awareness of need for rigor, high school reform • Seeing students get the message	**Group A States (Four)** • Limited federal funding • Administrative requirements
Group B States (Six) • A national network • Message about the importance of rigorous academic preparation	**Group B States (Six)** • Excessive administrative requirements
Group C States (Three) • More students taking rigorous courses	**Group C States (Four)** • Lack of flexibility in course of study

*Only items identified by at least two state directors are included

In late 2007, SSI state directors shared their opinions about the drawbacks and benefits associated with participation in SSI. Overall, the benefits outweighed the drawbacks and included increased awareness about the importance of rigorous academic preparation, overall school improvement, and the SSI national network. Drawbacks included limited federal funding, administrative requirements (i.e., reporting and paperwork that was described as excessive), and what was perceived by some directors as a lack of flexibility in the prescribed SSI Core Course of Study. These are summarized in the table below.

A little more than one year later, SSI state directors were asked to reflect on the entire SSI implementation experience to reveal the lessons learned about piloting educational improvement programs. These insights were collected with the intent of further strengthening SSI in the many SSI states planning to continue their programs and by all who have a stake in meaningful, cost-effective, and sustainable education reform.

Four main areas were identified and are described below.

1. SSI's National Positioning. State directors called for both better alignment with and clearer differentiation from other national education reform initiatives. Three suggested the development of one or more national demonstrations to model how multiple education reform efforts could be collaboratively implemented. It was also suggested that SSI have a stronger national brand presence that could be used for marketing, recruitment, and fundraising.

2. Exchange Forum. Seven directors described the value of building relationships with each other for exchanging effective practice information and learning how other SSI states are implementing their programs. The monthly directors' calls were described as very helpful in this regard as was WICHE's assistance in directing them to other states that may have useful information to share.

3. Curriculum. Five state directors described the need to strengthen the SSI by either requiring one or more CTE classes or by demonstrating how CTE content can help address state academic standards. Several of these directors emphasized that CTE and STEM should be key components of any rigorous core curriculum. Two types of potential changes that related to the SSI Core Course of Study were described by SSI state directors. The most often described change was to further strengthen the SSI core by allowing for flexibility in the SSI Core Course of Study.

4. Funding. During the state director interviews conducted in the first quarter of 2009, five states specifically described the need for a longer funding timeline for SSI. One director stated that SSI is "only now becoming part of the language" and another compared SSI to the recent federal school-to-work initiative which provided five years of support. Three to five years was described as the ideal timeframe for a pilot to become established in the state educational fabric. While most SSI states have stretched their two years of funding into three through no-cost extensions of their contracts, it still falls short of the time needed to document the impact of SSI on participating students.

V. Conclusion

Evaluation data collected throughout the four years that WICHE has administered the State Scholars Initiative points to the positive effect of business-education partnerships on student course-taking and more broadly on efforts to strengthen the rigor of high school level education. Much has been learned about which program design and implementation strategies work in various settings, as well as what could be strengthened. The fact that 19 of the original 24 SSI states have continued or are likely to continue their SSI programs beyond federal funding is perhaps the strongest testament to its value.

A final summative evaluation report integrates the findings and lessons learned of the NIU and NCHEMS studies. The resulting insights could further strengthen SSI in those states with active programs and by all who have a stake in meaningful, cost-effective, and sustainable education reform.

Attachment A

*Interview Questions
for SSI Directors—Year 4*

Collaboration with Other Education Reform Initiatives

1. Where have you had your greatest success in collaborating with other state or national level education reform initiatives? What were the factors that contributed to this success?

2. Where have you been stymied in your efforts to collaborate? What barriers did you encounter?

3. If SSI were to be redesigned, what changes would you recommend to improve the likelihood of successful collaboration with other education reform efforts?

Relationship with State Career and Technical Education (CTE) and Science, Technology, Engineering and Math (STEM)

4. Where have you had your greatest success in aligning SSI with CTE? Were you able to make any connections with Perkins-funded Career Cluster programs of study or STEM initiatives? What were the factors that contributed to this success?

5. Where have you been stymied in your efforts to align these SSI with CTE, Career Clusters, or STEM? What barriers did you encounter?

6. If SSI were to be redesigned, what changes would you recommend to strengthen its alignment with CTE, Career Clusters, or STEM?

Sustainability

7. Where have you had your greatest success in sustaining SSI at the state level? What were the factors that contributed to this success?

8. Where have you been stymied in your state-level sustainability efforts? What barriers did you encounter?

9. If SSI were to be redesigned, what changes would you recommend to improve its prospects for sustainability at the state-level? At the local or district level?

Lessons Learned

10. Reflecting back on your entire involvement with SSI, what would you have done differently in program implementation and why? Overall, what would you say are your top three successes?