Strengthening Simulated Workplace Culture

A Guide for Educators

Simulated Workplace Culture

Simulated Workplace programs are intended to engage and empower students and increase workforce readiness by transforming classrooms into immersive, authentic workplace environments that combine individualized student supports with rigorous training and skill-building.[1]

Central to the vision of the Simulated Workplace program are educaotrs who act as facilitators and a student-led classroom culture in which students' interests, capabilities, and learning styles drive learning.[2]

Purpose of the Guide

On behalf of the West Virginia Department of Education (WVDE), the EdVenture Group administers the annual Simulated Workplace Culture Survey. WVDE, with support from Regional Educational Laboratory (REL) Appalachia @SRI International, has prepared this guide to provide educators with evidence-based practices to strengthen culture both inside the classroom and schoolwide. After reviewing survey results and identifying areas of need, educators can select the appropriate evidence-based practices in this resource guide to enhance their school and classroom culture and plan for next steps to implement these practices.

The five evidence-based practices highlighted in the guide are aligned to one or more of the culture survey's constructs and, at a minimum, demonstrate a rationale for improving student outcomes. The practices fall into two categories: creating a student-centered learning environment and providing individualized student supports in the classroom. We identified the intended audience for each practice as either Simulated Workplace teachers or administrators depending on whether the practice is intended to be implemented at the classroom level or schoolwide to strengthen culture. Educators, however, should not feel limited by these designations when selecting and adapting the practices for use in their own classrooms and schools.

The ***Every Student Succeeds Act (ESSA)*** outlines four levels of evidence to support educators and administrators in choosing and implementing effective approaches, practices, and strategies that improve student outcomes.

The level of evidence tells you whether a practice has been shown to be effective in similar settings.

For an excerpt on levels of evidence from the U.S. Department of Education Non-Regulatory Guidance: Using Evidence to Strengthen Education Investments see Appendix A on page 20.

Roadmap to the Guide

For each practice, we provide a description, identify the target audience, and discuss foundations for strong implementation as well as core components of the practice. To help educators take the practices into the classroom and/or school, we provide concrete next steps to explore whether each practice is a good fit for their school or classroom, implement the practice, and continuously assess and improve implementation. We also provide additional resources to help you learn more, including examples of programs implementing these practices.

West Virginia Department of Education · REL Appalachia Regional Educational Laboratory At SRI International · theEdVentureGroup · Simulated Workplace

Practice 1: Project-Based Learning (PBL)

Defined: An instructional practice where students—with guidance from a teacher—address a specific real-world problem over an extended period while progressing through several broad stages: selecting the problem, planning, executing or producing, and presenting the findings.[3, 4]

Target Audience: Simulated Workplace teachers

Goal: Support students' critical thinking, motivation, and academic achievement by providing opportunities for student collaboration on authentic, real-world challenges relevant to their Simulated Workplace environmental protocols.

ESSA Rating: *Promising evidence*, supported by multiple descriptive studies and at least one well-designed correlational study with statistical controls that show positive student outcomes (such as increased academic performance, collaboration, and 21st century skills as measured by the West Virginia Educational Standards Test 2, the statewide standardized test, and teacher surveys).

Survey Construct Alignment: Student engagement, Student empowerment, Goal-setting, Collaboration, Action planning

For a definition of the survey constructs, please see the Glossary on page 19. For a definition of the ESSA ratings and study design methods, please see Appendix A on page 20.

Simulated Workplace teachers can implement PBL by developing whole-class or small-group projects that involve real-world dilemmas or problems that could arise in a typical workplace setting.[5] Students create plans to address the dilemma and teachers act as facilitators to provide guidance and direction to ensure students are on track to complete the project according to their plan.

PBL is an effective approach to student-centered learning across grades K–12[6, 7, 8] resulting in increased student academic achievement and improved job satisfaction for teachers.[9, 10] Students participating in PBL also demonstrate higher scores than students in traditional classrooms on measures of student motivation, critical thinking, collaboration, and self- reliance.[11]

Some defining features of PBL include the design of long-term projects based on real-world problems, the use of projects as the primary vehicle for content learning and assessment, the use of driving questions that foster student engagement in developing solutions, and teachers who act as facilitators or guides to support students' progress through each stage of the learning approach.[12]

Real-world workplace challenges are good starting points for PBL as they typically require multiple types of worker roles, and provide opportunities for students to collaborate, problem solve, and gain a deeper understanding of the content than traditional classroom instruction would allow.[13] Students experiment with different solutions to the challenge and ideally have an opportunity to present their result or product.

Teachers are critical to the successful implementation of PBL. Teachers must prepare long-term, preferably interdisciplinary, problems that may have multiple solutions. They also need to facilitate students' learning using strategic guidance to ensure the process remains student centered. Teachers who are unaccustomed to acting in the facilitator role may benefit from professional development. Teachers who received extensive professional development in PBL report increased job satisfaction and more time in their classes to promoting 21st Century Skills compared to their peers.[14]

Foundations for strong implementation of PBL[15, 16]

- Teachers who have articulated long-term student learning and knowledge-application goals and good classroom management skills.
- A Simulated Workplace program administrator who supports student-centered instruction.
- Students who have the opportunity to present a "public product" or completed demonstration.

"…students drive the discussions while applying project management techniques, team-building skills and problem-solving processes which in turn contribute to the company's overall productivity and success."

– WVDE Simulated Workplace Operational Manual

Core components of PBL[17, 18]

- The use of projects that are focused on content central to the curriculum.
- The use of driving questions to frame the project and enhance student engagement. See Practice 2, Frameworks for Authentic Questioning, for more information on driving questions.
- Projects that follow four stages: problem selection, planning, executing or producing, and presentation of findings.
- Value for student preferences and voice.
- Teacher facilitation of student-centered projects.
- Opportunities for students to give and receive constructive feedback on their approaches to the project.
- Multiple opportunities to assess students' content knowledge and application.

Immediate steps teachers can take to initiate or strengthen PBL in their classrooms

Key

Explore

Implement

Improve

- Visit the websites and reports in the Resources section to learn more about PBL and to locate example projects that align with your program of study.
- Visit other Simulated Workplace classrooms that are using PBL in the same program of study to learn about the projects they are doing and the effect PBL has had on students.
- Identify needed resources (for example, additional training, new materials, common planning time to support an interdisciplinary project) to support PBL implementation and discuss with Simulated Workplace administrators.
- Meet with your Simulated Workplace teaching colleagues and administrator at your school to explore options for implementing or strengthening PBL in your program.
- Adapt your existing lesson plans to align with PBL principles.

- Leverage existing rubrics and self-assessment tools to strengthen your implementation of PBL (see Resources section for rubrics on project design and teaching PBL).
- Collaborate with Simulated Workplace teachers at other schools in your district and schools in other districts to identify real-world problems and develop projects based on these problems to use in your Simulated Workplace programs.
- Find training opportunities that address improving the quality of the PBL classroom experience.
- Develop an evaluation plan to examine whether implementing PBL has a positive relationship to student outcomes. (What evidence will you collect, for example, results from the annual culture survey? How often? Who will be responsible for gathering and analyzing the data?)

Resources

For learning more about PBL:

- Websites: Buck Institute for Education (BIE); You for Youth (Y4Y)
- Reports: Preparing Students for a Project-Based World; Preparing Teachers for a Project-Based World; Preparing to Lead in a Project-Based World
- Video: Five Keys to Project Based Learning Video
- Case study: Columbia Area Career Center Project-Based Learning: A Formula for Rapid Results

Example Programs for Project-Based Learning:

- High Tech High (HTH) K–12 Schools
- New Tech Network
- Southwest Career and Technical Academy (SWCTA)

See Example Programs on page 17 for descriptions of these programs.

For help designing and managing high-quality projects:

- Rubrics: Project Based Teaching Rubric; Project Design Rubric; Project Rubric
- Checklists: Project Planning Review Checklist; Involving Community Partners Checklist; Staff Observation Review Checklist
- Website: PBL-Online
- Articles: Gold Standard PBL: Essential Project Design Elements; Turning Student Groups into Effective Teams

For help finding projects to adapt for your classroom or inspire your own ideas:

- Websites: BIE Project Search; HTH Student Projects; CTE Online

For assessing student performance on key skills nurtured by PBL:

- Blog: How to Use the "4 C's" Rubrics
- Rubrics: 6-12 Creativity & Innovation Rubric; 9-12 Presentation Rubric; 6-12 Collaboration Rubric

Practice 2: Frameworks for Authentic Questioning

Defined: The teacher uses a questioning approach that includes discussion questions to build student knowledge on a subject. Through discussion with students, the teacher responds to students' inquiry with facilitated questions that extend their learning. These authentic questions help students apply knowledge to the world outside of the classroom, deepening their understanding of subject area content and connecting this content to their lives.[19]

Target Audience: Simulated Workplace teachers

Goal: Teachers can use questioning frameworks to broaden students' knowledge, increase student talk, and reduce teacher talk within the classroom. Authentic questioning encourages students' critical thinking and engagement through a series of questions and responses that support student application of new knowledge to the world outside the classroom.

ESSA Rating: *Promising Evidence*, supported by multiple descriptive and correlational studies that show positive associations to student outcomes (academic performance and student engagement as measured by the Collegiate Assessment of Academic Proficiency, student critical thinking appraisals, and classroom transcriptions).

Survey Construct Alignment: Student engagement, Collaboration, and Student empowerment

For a definition of the survey constructs, please see the Glossary on page 19. For a definition of the ESSA ratings and study design methods, please see Appendix A on page 20.

Simulated Workplace environments are designed to be student-led learning spaces in which students are exploring new workplace roles, acquiring the knowledge and skills for each role, and applying the new skills in a workplace environment. Because the learning environment is set up to be student led, teachers need to adapt their questioning to be responsive to student learning needs in the moment, and to support students in group learning and in the application of new knowledge. Authentic questions used meaningfully can support this application. Authentic questions are questions where teachers have not prespecified the answer.[20] They are designed to stimulate deep discussions related to the content being learned.

The use of a questioning framework has been associated with increases in students' critical thinking skills, student engagement, and accuracy in the real-world application of knowledge.[21, 22, 23, 24, 25] Additionally, students' perceptions of their teacher's instructional quality is associated with an increase in critical thinking and cognitive skills when a classroom operates with student-led instruction.[26] Lastly, when teachers allow more student talk and provide strategically placed questions, there is increased interaction among students and an increase in their reasoning skills.[27, 28]

Frameworks that show associations between their use and improved student performance rely on problem-centered, inquiry-based questioning.[29, 30] This type of questioning requires students to solve real-world problems and use cooperative learning strategies to think through solutions. Most of these problems can be presented in the form of a question. The overarching question that focuses students and helps them understand why they are doing the work is called a **driving question**.[31] Once teachers pose a driving question, they rely on higher-order questions that require a student to learn the subject in more depth (for example, after learning about turbines, the teacher asks if there are ways students could make a turbine more efficient) and use strategic open-ended questions that elicit more student talk in the classroom (for example, ask students to think about why a solution or strategy makes sense, encouraging them to process this question as a group).[32, 33, 34]

There are many question types ranging from low level, close-ended questions that require a student

to recall facts, to higher-order questions that require students to have deeper content knowledge, critical thinking skills and the ability to evaluate their own thinking.[35] There are a number of questioning frameworks that apply to subjects such as mathematics, English, literature, science, and nursing education that can help teachers organize the most effective questioning strategies and adapt their instruction to support student engagement.

While each framework is different depending on the subject and approach, they all have similar features that advance student learning in an intentional way by eliciting feedback and extending knowledge. Teachers can use these questions in multiple sequences to support students in reflecting on their learning and deepening their knowledge of the subject-matter. Teachers can use this questioning process throughout any long-term activity regardless of subject-matter.

Foundations for strong implementation of authentic questioning

- Teachers are comfortable with facilitating student discussions in the classroom.
- Teachers have a deep knowledge of their subject-matter and use it to guide open-ended questions for learning.
- Teachers have adequate planning time to develop and refine questions within an authentic framework.
- Simulated Workplace administrators support and model authentic questioning schoolwide.

Core components of authentic questioning[36]

- Teachers allow for peer-to-peer interactions that further students' subject-matter knowledge.
- Teachers prepare questions that strategically extend student learning throughout the lesson.
- Teachers elicit ideas or answers from students and re-present student responses.
- Teachers encourage multiple solutions or ask for conceptual explanations of student solutions.
- Teachers support students' reflection on their learning, helping them generalize findings and understand their own reasoning process.

Immediate steps teachers can take to prepare a framework for authentic questioning

Use the links in the Resources section to learn about authentic questioning.

Visit another Simulated Workplace classroom to observe a teacher implementing authentic questioning.

Use the tool provided in the Resources section to develop driving questions about a real-world problem that students can address in their Simulated Workplace.

Key

Explore

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- Develop a lesson plan that allows students ample time for individual inquiry on the problem, peer-to-peer problem solving, and individual reflection (see PBL practice) and that divides open-ended, in-depth questions to elicit responses from students, facilitate peer-to-peer discussion, and extend content knowledge and application.
- Participate in training on how to develop driving questions and higher-order, open-ended questions.
- Have a colleague assess your use of authentic questioning in the classroom to determine areas for growth.
- Develop a plan for both conducting ongoing assessments of your use of authentic questioning and evaluating whether the use of this type of questioning is related to intended outcomes for students. (What evidence will you collect, for example, exit tickets to check for student understanding, annual culture survey data? How often? Who will be responsible for gathering and analyzing the data?)

Resources

For developing authentic questions:

- Training presentations: How to Craft a Driving Questions Training to Go
- Webinar: Driving Questions
- Blog: How do I create Driving Questions for my projects?
- Rubric: Driving Question Rubric 2.0
- Tool: Crafting Your Driving Question
- Infographic: Qualities of a Good Driving Question
- Articles: Framework for Thinking Through Quality Questioning; Questioning Strategies; Classroom Questioning

Questioning Frameworks and Question Type Descriptions:

- Best Practice Strategies for Effective Use of Questions as a Teaching Tool
- Framing Teacher Moves for Supporting Student Reasoning

For exploring different teacher questioning frameworks:

- Article: Keeping It Complex: Using Rehearsals to Support Novice Teacher Learning
- Book chapter: Framework for Quality Questioning

Practice 3: Career-Focused Mentoring for Students

Defined: A formal relationship in which adults in specific professions or career areas meet with students on a regular basis to support students' career goals and development. Mentor supports include helping the student with career planning and providing guidance on education and training required for student career interests.[37]

Simulated Workplace administrators can support career-focused mentoring or apprenticeships by developing partnerships with local businesses or nonprofit institutions and by engaging school personnel with mentoring or counseling experience to start a program. In cases where partnering with a sufficient number of local mentors is not feasible, administrators may wish to consider virtual mentoring options.

Mentoring programs are associated with positive outcomes for students, such as reduced misconduct in class, increased college attendance, and associated workforce readiness. Mentoring programs are also associated with an increase in students' feelings of competence in the classroom, improved attendance, higher-quality class work, fewer serious discipline incidents that warrant visits to the principal's office, and stronger academic performance.[38, 39]

Studies have shown that both community- and school-based mentoring have positive results for high school students.[40, 41, 42, 43, 44] **Community-based mentoring** entails matching a student to a mentor who currently works in, or has expertise in, the student's current career interest area.[45] The mentor and student develop a close relationship through shared experiences. These experiences could be touring a place of business that interests the student, attending school or community events, or simply hanging out and talking.

School-based mentoring matches students to mentors in a similar way to community-based mentoring, but the majority of activities take place during the school day on school property. The mentor and student still share experiences such as talking about career or postsecondary goals, attending school events, or completing homework assignments.[46]

Target Audience: Simulated Workplace Administrators

Goal: Support student success through ongoing relationships with adults that are outside of the school's Simulated Workplace environments. These relationships increase student engagement, efficacy, and career readiness.

ESSA Rating: *Strong evidence*, supported by two experimental studies on career- and school-based mentoring, demonstrated improved student outcomes (academic performance as measured by grade level and postsecondary enrollment, higher quality class work as measured by teacher report, and fewer discipline incidents as measured by principal office visits).

Survey Construct Alignment: Student engagement, Student empowerment, and Goal-setting

For a definition of the survey constructs, please see the *Glossary on page 19**. For a definition of the ESSA ratings and study design methods, please see* *Appendix A on page 20**.*

What makes mentoring successful is the close relationship that the student and mentor form. Therefore, mentors and students need to be matched based on common interests. In the case of Simulated Workplace, this could be a match based on the job skills a student wants to learn or a role the student wants to occupy in a business.

Foundations for strong implementation of a career-focused mentoring program[47, 48, 49]

- Staff support the program logistics, including matching students to mentors and keeping accurate records.
- Individuals at the school and/or in the community who are willing and have the capacity to serve as mentors.
- Mentors are trained on the program tasks and intervention.
- Formal agreements are established, including a memorandum of understanding between school and mentor and a mentoring agreement between mentors and students.

Core components of a career-focused mentoring program

- Students are matched to mentors based on common career interests.
- Mentors and students co-develop a list of goals for the relationship.
- Mentors and students meet regularly over the course of at least one school year.
- Mentoring program leaders regularly check in with mentors.

Immediate steps administrators can take to start a mentoring program

Key

Explore

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Review the resources below to familiarize yourself with different mentoring programs and procedures.

Learn more about different types of mentoring programs from the National Mentoring Resource Center (NMRC), The National Mentoring Partnership (MENTOR), and the Center for Evidence-based Mentoring.

Discuss the idea of a mentoring program with school leaders and colleagues, including the Simulated Workplace business advisory group, to ensure that you will have buy-in and support for the program. You may consider starting with one sector to pilot the program.

Network with other schools and districts in your area to identify mentoring programs nearby that you might learn from.

Contact local businesses or volunteer organizations to inquire about interest in mentoring.

Identify a leadership or advisory team to provide support in developing policies and procedures for program operation and to address any potential legal issues. Be sure to include students and members from the business community on this team.

Develop a policy manual for your mentoring program, including a memorandum of understanding that can be signed by participating businesses to formalize the partnership and mentoring agreements to be signed by students and mentors. See the Generic Mentoring Program Policy and Procedure Manual in the Resource section.

- Develop a training program (or module) for mentors who will be participating in your program.
- Recruit a pool of mentors. Consider starting with a smaller pilot program in the first year.
- Match your students with mentors. The mentor and mentee surveys and interview samples in the Generic Mentoring Program Policy and Procedure Manual in the Resource section should be helpful at this step.
- Support local community-based mentoring programs and encourage students to explore them as mentoring options if your school is unable to implement a school-based program.
- Develop an evaluation plan to examine the relationship between your mentoring program and student outcomes. (What evidence will you collect, for example results from annual culture survey? How often? Who will be responsible for gathering and analyzing the data?)
  - The National Mentoring Resource Center has created a Measurement Guidance Toolkit for Mentoring Programs that may assist you in developing a plan.

Resources

For learning more about mentoring programs:

- Webinars: Career-focused Mentoring: A Pathway for 21st Century Opportunities, Mentoring in the Age of Technology
- Reports: Mentoring: at the crossroads of education, business and community; The Mentoring Effect: Young People's Perspectives on the Outcomes and Availability of Mentoring, E-mentoring: National Mentoring Resource Center Model Review

Example Programs for Mentoring:

- Big Picture Learning
- The Career Academy

See Example Programs on page 17 for descriptions of these programs.

For establishing a mentoring program:

- Webinar: Create an Effective Team to Drive Your Program's Success
- Online training: Starting a Youth Mentoring Program
- Toolkit: How to Build a Successful Mentoring Program Using the Elements of Effective Practice for Mentoring
- Policy and Procedure manual: Generic Mentoring Program Policy and Procedure Manual

For implementing a mentoring program in your community:

- Webinars: Mentoring in Rural Communities: Traveling the Distance; Strategies for Creating Ongoing Mentoring Training
- Training manual: Ongoing Training for Mentors
- Excel tool: Tools to Strengthen Match Support and Closure
- Toolkit: Measurement Guidance Toolkit for Mentoring Programs

Practice 4: Building Strong Student-Teacher Relationships

Defined: A relationship characterized by interpersonal trust in which the student feels that the teacher cares about his or her wellbeing, both academically and socially. In classrooms with strong student-teacher relationships, the student benefits from social-emotional support, personalized learning, and a positive classroom culture, which can lead to increased attendance and higher academic performance.[50, 51, 52]

Target Audience: Simulated Workplace teachers

Goal: Support student success by adopting classroom strategies that promote strong student-teacher relationships. Strategies include emphasizing and reinforcing high expectations for students, creating classroom norms, adopting a shared culture and demonstrating concern for individual student well-being.

ESSA Rating: *Demonstrates a rationale*, supported by multiple descriptive studies that show positive student outcomes (student engagement as measured by school attendance, student achievement as measured by test scores).

Survey Construct Alignment: Student engagement, Student empowerment, Goal-setting, Action planning, and Assessing attitude

For a definition of the survey constructs, please see the Glossary on page 19. For a definition of the ESSA ratings and study design methods, please see Appendix A on page 20.

Research suggests that social-emotional support (that is, relationship skills, social awareness), a sense of community, and a culture of high expectations are critical components for successful student-teacher relationships.[53] Simulated Workplace teachers can develop strong relationships with their students by adopting strategies that build rapport and mutual respect. Strategies for the whole classroom include building an inclusive classroom community for all students with established norms and expectations for students and using individual praise while teaching.[54] These strategies can create a learning environment where students feel safe to participate in decision-making and classroom activities.

For many students, an educator is the primary nonparent adult in their life. A supportive, inspirational teacher can be an important contributor to student success.[55, 56, 57, 58, 59] Strong student-teacher relationships are positively associated with students' attendance, academic performance, persistence, graduation rates, and perceived support.[60] Students who have a positive relationship with their teacher also report having a greater sense of belonging in the classroom and in the broader school environment.[61] Additionally, strong relationships between students and teachers can promote student self-efficacy, resiliency, and perceptions of equity in the classroom.[62] In contrast, students who report a lack of belonging in schools demonstrate an increased likelihood of psychological problems, behavioral issues, stress, and dropping out.[63]

Teachers can foster relationships with students through small changes in content delivery. For instance, a teacher can set high expectations for student work and behavior in the classroom and praise students for their effort rather than focusing on the "right answer."[64] They can also demonstrate they care about their students by inquiring about their overall wellbeing as well as their academic progress.[65] For instance, teachers can promote their students' academic and nonacademic development by encouraging hard work and effort, praising individual work, or asking students how extra-curricular activities are going.

Finally, establishing an advisory program can be an effective strategy for building positive student-teacher relationships. Advisories are typically small groups of students that meet regularly with an advisor or advocate, usually a classroom teacher or other instructional staff member, who works with them throughout their four years of high school.

Foundations for strong implementation of positive student-teacher relationships[66, 67]

- Teachers outline clear and fair expectations for student conduct.
- Simulated Workplace program administrators promote shared language between teachers and students.

Core components of positive student-teacher relationships[68, 69, 70, 71, 72, 73]

- Teachers establish a learning environment that empowers students to make decisions.
- Teachers establish norms and a sense of professionalism within the classroom.
- Students perceive that the teacher knows them as a person.
- Teachers provide opportunities during class time for student reflection and feedback.
- Teachers use instructional strategies that ensure all students are engaged in class work.
- Teachers foster an inclusive and fair classroom community for all students.

Immediate steps teachers can take to develop or strengthen their relationships with students[74]

Review the Resources section for strategies that promote student-teacher relationships.

Visit other Simulated Workplace classrooms to observe teacher-student relationships for promising practices (see Resources section for classroom practices).

Take stock of your current relationships with students. You may wish to use a self-assessment tool or ask a colleague to observe your instruction using an observation checklist (see Resources section).

Develop a plan for increasing the use of instructional practices that build relationships.

Work with your teaching colleagues and administrators to determine if setting up an advisory program makes sense for your school. This work may include:

- Learning about the benefits and challenges of advisory programs.
- Visiting schools near you with successful advisory programs and learning about how their programs work, what the benefits and challenges have been in operating the program, what curricula they use, and what training teachers received to prepare them as advisors.
- Identifying existing advisory program curricula to adopt or adapt for your school.

Key

Explore

Implement

Improve

- Providing training to teachers who will be serving as advisors.
- Restructuring the school schedule to allow for a daily advisory period during which each advisor meets with a small group of advisees.

Develop and implement an evaluation plan to assess whether stronger student-teacher relationships have a positive relationship to student outcomes. (What evidence will you collect, for example results from the annual culture survey? How often? Who will be responsible for gathering and analyzing the data?)

Resources

To learn more about equitable instructional practices and tools:

- Articles: Structure Matters: Twenty-One Teaching Strategies to Promote Student Engagement and Cultivate Classroom Equity; Closing the Gap: Creating Equity in the Classroom
- Guide: A Resource for Equitable Classroom Practices 2010
- Checklist: Equitable Classroom Practices Observation Checklist

To learn more about growth mindset:

- Article: ASCA Mindsets & Behaviors for Student Success
- Blog post: CTE Teachers Can Help to Create Positive Learning Mindsets
- Websites: Mindset Scholars Network; Growth Mindset Teaching Practices

To learn more about high school advisory programs:

- Articles: The Role of Advisory in Personalizing the Secondary Experience; Career Pathways Through High School Advisor-Advisee Programming, Core & More: Guiding and Personalizing College & Career Readiness
- Website: American Student Achievement Institute's Designing and Implementing Your Advisor-Advisee Program

Example Programs for Mentoring:

- Big Picture Learning
- The Career Academy

See Example Programs on page 17 for descriptions of these programs.

Practice 5: Individualized Career Planning

Defined: A process in which students work one-on-one with school counselors to develop individualized plans that define how their career goals and postsecondary plans align with their high school courses and activities.[75]

Target Audience: Counselors and Simulated Workplace administrators

Goal: Support students in exploring and identifying career and postsecondary options through self-assessment and an evaluation of their strengths and weaknesses with guidance from a school counselor. Developing an ICP using this information may promote student empowerment and engagement by giving students a sense of ownership over their career and academic aspirations.

ESSA Rating: *Promising Evidence*, supported by at least one well-implemented correlational study with statistical controls that resulted in positive outcomes (student engagement, motivation, and goal setting as measured by career development questionnaires and student report).

Survey Construct Alignment: Student engagement, Student empowerment, Goal-setting, Action planning, and Assessing attitude

For a definition of the survey constructs, please see the Glossary on page 19. For a definition of the ESSA ratings and study design methods, please see Appendix A on page 20.

Simulated Workplace administrators can promote individualized student support by ensuring that school counselors have the necessary time, resources, and knowledge to work individually with students to develop an individualized career plan (ICP), sometimes referred to as an individualized learning plan. Students and counselors cooperatively develop the ICP by defining students' career goals and postsecondary plans and ensuring that high school coursework and activities align with those goals and plans. The development and maintenance of career planning documents should be ongoing processes for students throughout high school as one component of a larger career or postsecondary preparation program which may include individualized graduation or learning plans.

Simulated Workplace administrators can support career planning by ensuring that each student has an assigned counselor, ensuring that counselors have adequate training and resources to support ICP development, and monitoring the extent to which counselors and students are meeting the expectations for developing, monitoring, and regularly updating their ICPs.

High school students who receive individualized career planning, specifically one-on-one collaboration with school counselors and the development of ICPs, demonstrate higher academic achievement, have more clearly developed career goals, and are better prepared to enter postsecondary settings than students who do not receive them.[76, 77] Individualized student support is associated with increased student engagement and feelings of academic and career self-efficacy, which may increase students' motivation to complete school, their interest in and willingness to take more challenging courses, and their sense of preparedness to pursue college and future work.[78, 79, 80]

Guidance that focuses on career success is essential for counselors to effectively convey information regarding available high school career pathways to students and engage parents in their children's academic course and career planning.[81, 82] It is critical that students and counselors partner to develop and maintain ICPs using an iterative process that ensures the plan is up to date and aligned with students' developing or changing goals. Furthermore, for students to benefit, counselors must support them to complete the courses and related activities in the plan. School counselors need to have the training, knowledge, and resources to meet students' needs.

If you do not have counseling staff, or your school counseling staff does not have the capacity to take on ICPs, you might consider whether Simulated Workplace teachers could be trained to support students in career planning and documentation.

Foundations for strong implementation of individualized career planning[83, 84]

- Appropriate student-to-counselor ratio and allocation of counselor time. (The American School Counselor Association recommends a ratio of 250:1 and that counselors spend 80 percent or more of their time providing direct and indirect services to students.)
- A designated counselor for each student.
- Trained school counselors who can confidently and effectively work with students to develop and maintain ICPs that help them achieve their goals.
- Counselors who are knowledgeable about support services and local/regional postsecondary opportunities within their school and community that can facilitate successful post-high school transitions.
- An administrative team with capacity to monitor whether counselors partner with students to develop and implement ICPs effectively.

Core components of individualized career planning[85, 86, 87, 88]

- Yearly meetings, at minimum, of counselors and students to develop and refine ICPs that involve student self-exploration, goal establishment, plan development, assessment of progress, and revision of goals or plans.
- Parent/guardian involvement in the career/postsecondary planning process.
- Students' ability to access and reference their ICPs.
- Schoolwide buy-in and support for effective career planning implementation for each student.

Immediate steps administrators can take to initiate individualized career planning[89]

Key

Explore

Implement

Improve

Use the resources provided to learn about the use of career planning and ICPs to help students plan for their future careers.

Determine your school's readiness to implement individualized plans by using a site assessment and/or reflection questions (see Resources section).

Take stock of your school's current academic/career advisory process and the capacity of your team. If there are not enough school counselors available for your students, consider recruiting Simulated Workplace teachers who are willing to implement ICPs.

Consider whether your counselors are assigned to students in a way that supports the implementation of ICPs. Consider assigning a designated counselor for each student and assigning counselors by Simulated Workplace career cluster so they can develop expertise in the college and career pathways for specific industry sectors.

Develop an implementation plan for incorporating ICPs as part of your school's career-focused counseling, which includes defining roles and responsibilities of administrators, counselors, teachers, students, and family and community members.

Provide training on developing and revising ICPs to counselors and teachers.

Develop an evaluation plan to examine the relationship between providing individualized career planning and student outcomes. (What evidence will you collect, for example results from the annual culture survey? How often? Who will be responsible for gathering and analyzing the data?)

Resources

For learning more about individualized career planning and ICPs:

- Guide and webinars: Promoting Quality Individualized Learning Plans Throughout the Lifespan: A Revised and Updated "ILP How To Guide 2.0"; Statewide Support for Individual Learning Plans: Research, Successes, and Challenges
- Research reports: Use of Individualized Learning Plans: A Promising Practice for Driving College and Career Efforts; Individual Learning Plans for College and Career Readiness: State Policies and School-based Practices

For sample tools, site assessments, and information on exemplar sites:

- Website: Arizona Department of Public Instruction's Education and Career Action Plan site
- Website and tools: Colorado Department of Education's Individual Career and Academic Plan (ICAP) Resources site, including ICAP Toolkit
- Website and tools: Wisconsin Department of Public Instruction's Academic & Career Planning (ACP) site

Example Programs for Individualized Learning Plans:

- Pewaukee School District
- San Luis High School

See Example Programs on page 17 for descriptions of these programs.

Example Programs

This section provides an overview of programs from across the United States that have demonstrated exemplary implementation of the practices highlighted in this guide and have a positive association with student outcomes of interest. These programs may be of interest or helpful in your efforts to implement new practices at your school. This list is not intended to be exhaustive but rather to illustrate programs of interest for Simulated Workplace administrators and teachers to explore further and decide if any components within the programs might work within their unique Simulated Workplace context.

- Project-Based Learning: **High Tech High (HTH) K–12 Schools'** mission is to develop and support innovative public schools where all students develop the academic, workplace, and citizenship skills for postsecondary success. All HTH schools use the model's design principles of personalization, adult world connection, common intellectual mission, and teacher as designer. HTH began as a small, public charter school serving approximately 450 students and has grown to a network of 14 charter schools serving approximately 5,350 students in grades K–12 across four campuses. To learn more about the HTH model, visit https://www.highttechhigh.org.

- Project-Based Learning: **New Tech Network** partners with public high schools to develop learning environments centered on a strong culture of trust, respect, and responsibility. The goal of New Tech Network is for every graduate of a New Tech school to leave aware, eligible, and prepared to pursue postsecondary education or training. To learn more about the New Tech Network, services they provide to Network schools, and free resources, visit https://newtechnetwork.org.

- Project-Based Learning: **Southwest Career and Technical Academy** (SWCTA) is recognized as one of the best schools in Nevada. SWCTA is a magnet high school that offers 10 distinct programs of study, including automotive technology, engineering, culinary/hospitality, fashion design, dental assisting, interior design, digital game design, nursing, web design, and respiratory therapy. Rigorous coursework, PBL, job shadowing, and internships give students real-world experience. Honors, Jumpstart, and Advanced Placement classes are offered to maximize potential and ensure students are college and career ready. To learn more about SWTCA, visit http://swcta.net.

- Project-Based Learning: **Buck Institute for Education** (BIE) is a nonprofit organization that prioritizes helping teachers prepare students for successful lives by showing teachers how to use PBL in all grade levels and subject areas. BIE offers professional development on how to design, assess, and manage projects that engage and motivate students. To learn more about resources and trainings BIE provides, see www.bie.org.

- Student-Teacher Relationship: **SciGirls Strategies: Gender Equitable Teaching Practices in Career and Technical Education (CTE) Pathways for High School Girls** is a three-year professional development initiative developed by Twin Cities Public Television to help CTE educators and guidance counselors recruit more girls into science, technology, engineering, and math (STEM) pathways, specifically in technology and engineering. It includes a media-rich hybrid short-course for CTE teachers and guidance counselors on the use of gender equitable and culturally responsive teaching and advising strategies. Participants are connected to female STEM role models during the course and are required to incorporate role models into their classes or school events. The role models are trained on research-based practices for role models and effective strategies for encouraging girls in STEM. The National Science Foundation's Division of Research on Learning currently funds this program. To learn more about SciGirls Strategies, visit https://www.tpt.org/scigirls/about-scigirls-2/.

- **Student-Teacher Relationship & Mentoring: Big Picture Learning** began as a school design model established in 1995 with the mission of putting students directly at the center of their own learning. In this school model, students are part of a small learning community of 15 students called an advisory. Each advisory is led by an advisor, a teacher who works closely with a group of students and develops personalized relationships while helping each student identify interests and personalize learning. Each student also participates in an internship and works with a work-based mentor, learning in a real-world setting. Parents and families are involved in helping to plan their student's learning plan and may serve as resources to the school community. Currently there are more than 65 Big Picture network schools in the United States. To learn more about the Big Picture Learning model and schedule a visit to a Big Picture School, visit www.bigpicture.org.

- **Mentoring: The Career Academy** approach is focused on fostering academic and labor market success of participating students. The approach is distinguished by three core features: (1) organized as a school within a school in which a small contingent of students stays with a group of 3 to 5 teachers over the 3 or 4 years of high school; (2) offers students a combination of vocational and academic curricula and uses a career theme to integrate the two; and (3) develops partnerships with local employers in an effort to build connections between school and work to provide students with a range of career development and work-based learning opportunities. Career development and work-based learning opportunities can include mentoring programs with adults who can provide career guidance, job shadowing, and field trips in which students are exposed to various work environments. Students may also have the opportunity to work for employers who partner with the school.[90] To learn more about Career Academies, see the National Career Academy Coalition website.

- **Individualized Career Planning: Pewaukee School District** has been recognized for its use of a K–12 Academic & Career Planning (ACP) program for all students that includes career awareness, exploration, and planning curricula for all grades and the use of ICPs with students in grades 6–12. To learn more about Pewaukee School District's ACP program and resources, visit https://sites.google.com/a/pewaukeeschools.org/acp/home.

- **Individualized Career Planning: San Luis High School** has been recognized by the Arizona Department of Education as an Education and Career Action Plan Exemplar School for its implementation of the state's career counseling program. For more information on San Luis High School's best practices, results, and implementation plan, visit http://www.azed.gov/ecap/ecap-education-and-career-action-plan/implementation-survey/san-luis-high-school-ecap-exemplar-school/.

Glossary

Survey Constructs[91, 92]

Student empowerment is conceptualized as a form of motivation that can exist as either a state or a trait that is influenced by four dimensions: meaningfulness, competence, impact, and choice.

Student engagement refers to the level of students' interaction and ownership in their personal learning and in classroom activities. Engaged students are motivated, responsible, active, and excited about the activities that are taking place in their classrooms and school.

Collaboration is the process of school leaders and teachers working together to determine and prioritize challenges and opportunities within the school. Collaboration is teamwork with a voice for all members of the organization.

Goal-Setting is the process of identifying something that you want to accomplish and establishing measurable goals and a timeframe for completion.

Action Planning is the ability of a group to plan strategies as a team to collectively meet goals and advance the overall efforts of the school.

Assessing Attitude refers to the review of an individual's way of thinking or feeling about their work, school, and students, typically one that is reflected in a person's behavior.

Engage Openness refers to an individual's willingness to try new things, provide input on issues, embrace change, and step out of one's comfort zone.

Appendix A: Excerpt from U.S. Department of Education Non-Regulatory Guidance: Using Evidence to Strengthen Education Investments

ESSA Levels of Evidence and Design Methods[93]

The following definitions for the ESSA levels of evidence and design methods were excerpted directly from non-regulatory guidance disseminated by the U.S. Department of Education. The purpose of the guidance document is to provide state and local education agencies with guidance in choosing and implementing evidence-based practices. To read the full document, visit: https://www2.ed.gov/policy/elsec/leg/essa/guidanceuseseinvestment.pdf.

Levels of Evidence

Strong Evidence. To be supported by *strong evidence*, there must be at least one well- designed and well-implemented experimental study (e.g., a randomized control trial) on the intervention. The Department considers an experimental study to be "well-designed and well-implemented" if it meets *WWC Evidence Standards without reservations* or is of the equivalent quality for making *causal inferences*. Additionally, to provide strong evidence, the study should:

1) Show a statistically significant and positive (i.e., favorable) effect of the intervention on a student outcome or other relevant outcome;

2) Not be overridden by statistically significant and negative (i.e., unfavorable) evidence on the same intervention in other studies that meet *WWC Evidence Standards* with or without reservations or are the equivalent quality for making *causal inferences*;

3) Have a large *sample and a multi-site sample*; and

4) Have a sample that overlaps with the populations (i.e., the types of students served) AND settings (e.g., rural, urban) proposed to receive the intervention.

Moderate Evidence. To be supported by *moderate evidence*, there must be at least one well-designed and well-implemented quasi-experimental study on the intervention. The Department considers a quasi-experimental study to be "well-designed and well-implemented" if it meets *WWC Evidence Standards with reservations* or is of the equivalent quality for making causal inferences. Additionally, to provide *moderate evidence*, the study should:

1) Show a statistically significant and positive (i.e., favorable) effect of the intervention on a student outcome or other relevant outcome;

2) Not be overridden by statistically significant and negative (i.e., unfavorable) evidence on that intervention from other findings in studies that meet *WWC Evidence Standards* with or without reservations or are the equivalent quality for making *causal inferences*;

3) Have a *large sample and a multi-site sample*; and

4) Have a sample that overlaps with the populations (i.e., the types of students served) OR settings (e.g., rural, urban) proposed to receive the intervention."

Promising Evidence. To be supported by *promising evidence*, there must be at least one well-designed and well-implemented correlational study with statistical controls for selection bias on the intervention. The Department considers a correlational study to be "well- designed and well-implemented" if it uses sampling and/or analytic methods to reduce or account for differences between the intervention group and a comparison group. Additionally, to provide *promising evidence*, the study should:

1) Show a statistically significant and positive (i.e., favorable) effect of the intervention on a student outcome or other *relevant outcome*; and

2) Not be overridden by statistically significant and negative (i.e., unfavorable) evidence on that intervention from findings in studies that meet *WWC Evidence Standards* with or without reservationsor are the equivalent quality for making causal inferences."

Demonstrates a Rationale. To *demonstrate a rationale*, the intervention should include:

1. A well-specified *logic model* that is informed by research or an evaluation that suggests how the intervention is likely to improve relevant outcomes; and

2. An effort to study the effects of the intervention, ideally producing promising evidence or higher, that will happen as part of the intervention or is underway elsewhere (e.g., this could mean another SEA, LEA, or research organization is studying the intervention elsewhere), to inform stakeholders about the success of that intervention.

Design Methods

Correlational study: a study with statistical controls for selection bias and is designed to examine the strength of the relationship (not the causal relationship) between an intervention and a student outcome by comparing two similar groups.

Descriptive study: a study that describes characteristics or attributes of the intervention and its effects on specific groups. These types of studies do not have a comparison group which means that they do not allow for inferences to be drawn about associations, casual or otherwise.

Quasi-experimental design: a study using a design that attempts to approximate an experimental design by identifying a comparison group that is similar to the treatment group in important respects such as demographics or prior achievement.

Randomized controlled trial: a study that employs random assignment of, for example, students, teachers, classrooms, schools, or districts to receive the intervention being evaluated (the treatment group) or not to receive the intervention (the control group).

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