



RESEARCH, INNOVATION, AND TALENT

WORKING GROUP DELIVERABLE

The **Research, Innovation, and Talent Working Group** will focus on creating stronger ties between businesses and higher education by promoting industry-academic partnerships, experiential learning opportunities, and programs to meet market needs. In particular, the group will be charged with:

- ➔ **Identifying strategies and best practices to increase research, development, and commercialization activities by our state's research universities.**
- ➔ **Developing effective industry-academic research and workforce development partnerships that lead to more research and employment opportunities for students.**
- ➔ **Highlighting successful practices that expand the number of students, especially women and underrepresented minorities, who participate in research and obtain STEM degrees.**
- ➔ **Determining effective methods for attracting and supporting diverse faculty and staff.**

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OVERVIEW

The state plan for higher education, **Where Opportunity Meets Innovation**, emphasizes the importance of cultivating research, innovation, and talent to deepen and recapture our role as a leader in the innovation economy and effectively prepare students for success after college. This is described in more detail in the plan within a vision for a student bill of rights. The fourth element states, “Every student in New Jersey should have the opportunity to work with an employer, conduct meaningful research supervised by a faculty member, or access some other form of experiential learning before graduation.” The eighth element states, “Every student in New Jersey should have high-quality, career-relevant academic programs that will prepare them to succeed in the global economy.” The plan further argues that Colleges and Universities drive innovation, they are centers of research and development for new industry clusters, birthplaces for new ideas and companies, and provide rich environments for start-ups and creativity. “Knowledge creation is a fundamental aspect of colleges and university activity that supports commercialization, drives innovation, and ultimately strengthens the state’s economy as a whole.”

In furtherance of making this vision a reality, the **Research, Innovation, and Talent Working Group** was charged creating stronger ties between businesses and higher education by promoting industry-academic partnerships, experiential learning opportunities, and programs to meet market needs. In particular, the group will be charged with:

1. Identifying strategies and best practices to increase research, development, and commercialization activities by our state’s research universities.
2. Developing effective industry-academic research and workforce development partnerships that lead to more research and employment opportunities for students.
3. Highlighting successful practices that expand the number of students, especially women and underrepresented minorities, who participate in research and obtain STEM degrees.
4. Determining effective methods for attracting and supporting diverse faculty and staff.

The group met six times in person from June 2019 through November 2019, where each meeting lasted for two hours each. Two chairs were appointed by Governor Phil Murphy to lead the working group, and they met regularly with OSHE and EDA staff in between meetings to further the work of the group. The larger working group broke up into four subgroups organized around each of the four charges stated above. Each subgroup met via conference call, in-person, and/or on-line meeting to further the work in between each of the plenary full working group sessions. Each subgroup first identified its final deliverable and created an action plan to reach that deliverable. The group was originally provided with an opening Power Point presentation provided by OSHE staff that provided a set of data/facts around each of the four charges in addition to handing out a full copy of the State Plan document to each member so that all members could have an initial starting point for discussion and deliberation around answering the charges. Each subgroup approached their work slightly differently but all ended up completing narrative deliverables that attempt to provide a resource for institutions and the State on how to further research, innovation, and talent development in the State of New Jersey and more specifically at its colleges and universities

Higher Education Experiential Learning Platform Needs Assessment

Disclaimer:

The views expressed in this document belong to the Working Group and do not necessarily reflect the official policy of the State of New Jersey. The content provided is intended to serve as a resource to help develop strategies to increase support for students at New Jersey's colleges and is provided in good faith. Due to time constraints, the Working Group notes the information may not be comprehensive and readers should take into account context for how the deliverable is used as well as further research that may be available after publication.

Executive Summary

It is imperative that students are given increased exposure to career pathways and opportunities for experiential learning. Experiential learning is the process of learning through experience. The personal nature of experiential learning engages the students' emotions, as well as enhancing their knowledge and skills. As student engagement increases through these processes, learning accelerates and retention improves.

Career guidance and career pathways need increased public promotion and must be introduced at a younger age, in order for students to explore their potential career options. New Jersey needs to enhance and promote existing, as well as create new internship programs, job training opportunities, research & development opportunities and apprenticeship programs.

To do so, New Jersey must enhance collaboration and partnership efforts between and among Government agencies, employers, industry leaders, nonprofits, and educational institutions (high schools and higher education) to ensure the State is preparing its students for successful careers, as well as retaining the next generation workforce in New Jersey.

Over the past 5 years, numerous efforts have been underway statewide to address the need for experiential learning and the benefits experiential learning can provide to overall career preparedness. Some examples include; Career Pathways Task Force with SETC; Future Ready Schools; New Jersey Department of Labor and Workforce Development's Next Gen Sector Partnerships Academy, 65 by 25; Many Paths, One Future, NJSBA report; Educational Opportunities for the Non-College Bound Learner; NJBIA Post-Secondary Taskforce Report; Junior Achievement of NJ; Workplace and Career Readiness Pathways and Opportunity New Jersey.

In response to the research and significant input from stakeholders through these initiatives and beyond, one thing is clear: *There is a need for a platform upon which the relationships between academia and business can be easily made and connections to opportunities for experiential learning accessed.*

As we learned through our research, the use of the right technology platform can enable this opportunity with efficiency and expediency. While sample platforms already exist in other states, New Jersey can model its platform after those that are recognized as good performing platforms, while also learning from some of the difficulties they have experienced.

As such, it is recommended that a New Jersey-focused experiential learning (i.e., internships, research and development opportunities, apprenticeships, co-ops, etc.) matchmaking site/platform be created.

Introduction

The following information will assist in establishing the framework for a New Jersey-focused experiential learning matchmaking site. The site should include the following:

- Toolkits to educate students and employers on how to develop these relationships;
- Postings by employers who have available opportunities;
- An upload area for students to post their resumes and the type of opportunities they are looking for;
- Information sections for educators (faculty, counselors, advisors, administrators, boards) to infuse experiential learning concepts into curriculum; and
- Information for parents, guidance counselors and others who may be assisting students in their career planning.

While the development and funding of this site will take time beyond the work of this committee, the following outline is meant to frame the prototype. Further, NJBIA has been exploring the possibility of lifting such a platform at a regional level and their continued work may be of benefit to a final statewide product. It should be noted that members of the work group are receptive to continuing their collective work in order to be of assistance in moving this much-needed platform forward.

Taking Inventory to Develop the Platform

The following three (3) state solutions were identified and evaluated:

1. Cal State Employer Internship Toolkit
2. North Carolina Apprenticeship Site
3. Texas Employer Pitch Pack

The working group conducted informational interviews with a set of questions to learn about the above three tools. Key takeaways from interviews included:

- Third party vendor(s) should be considered. While the three states interviewed started out somewhat differently, each eventually worked with a third party vendor during the implementation process. NJ should give consideration to working out the process with a professional group experienced in this work;
- Work scope, associated budget and funding source(s) should be clear as early as possible. States received either public funds or foundation monies to pursue their respective efforts. Understanding the potential scope and associated costs may make it easier for the buy-in of stakeholders and provide clarity for funding and development purposes. Similarly, design elements requested from funding sources should be clear and should ensure continued portal support, and;
- User testing by all stakeholders should be considered during the portal build. Challenges for the various user populations (e.g. students, schools, employers, educators) were noted.

Appendix A includes the full results of the interviews. The results of those interviews were then incorporated into the following SWOT analysis in order to inform the workgroup on the key issues of development, funding, content and sustainability.

SWOT Analysis

<p>Strengths</p> <ul style="list-style-type: none"> ● Single interface for multiple stakeholders ● One location to access talent and opportunities ● Building more cohesive network within NJ ● Keeps talent from potentially leaving NJ 	<p>Weaknesses</p> <ul style="list-style-type: none"> ● Ease of system (portal) use ● Not getting all stakeholders (e.g., employers) engaged early ● Limited 4-year college involvement ● Lack of commitment
<p>Opportunities</p> <ul style="list-style-type: none"> ● Potential for NJ platform to be recognized nationally (appears to be significant opportunity for improvement) ● Potential grant funding - Federal, Gates ● Employer funding ● Early engagement of multiple stakeholders ● Identification core development/ implementation team and champions from all sectors 	<p>Threats</p> <ul style="list-style-type: none"> ● Cost of system build and maintenance ● Getting employers engaged in portal ● Timely implementation of functional portal/platform ● Securing a single, long-term owner of the portal/platform

Recommendations

1. Identify a small and nimble team(s) to develop tactical plan that will capture the core elements bulleted below.
 2. Before beginning, further investigation is required to more thoroughly dissect the Cal State, North Carolina and Texas systems/platforms, as well as others (e.g., San Diego State University), including the process by which Federal funding and Gates Foundation funding was obtained and the timeframe in which it was obtained.
 3. Investigate alternative potential funding sources to the ones above, e.g., contributions from State, academia and industry (employers).
 4. Conduct thorough RFP process for an appropriate third party vendor.
 5. Consider whether utilizing student team(s) from NJ Colleges/Universities under the guidance of expert industry advisors would be effective in order to carry out the implementation and/or next generation of one or multiple system activities with the potential for the students to obtain internship credit hours, mentorship/networking, etc.
- Portal content

- Define required specifications for different site features including specific information on the positions available, tool kits, resources, etc.
 - Survey participating institutions and other stakeholders, i.e. business, for wants, needs and desires for the site
- Identify third party system provider(s) to assist with user-friendly interfaces and functions, along with ease of navigation
- Portal Plan for portal build, implementation and sustainability
 - Identify hosting/ownership of the platform/system
 - Identify the cost associated with the portal and its maintenance
 - Identify funding for the portal (e.g., grants versus employers versus state)
- Portal implementation
 - Conduct 'Portal Pilot' study to test portal functionality before full implementation statewide
 - Evaluate feasibility/functionality of portal and correct, as needed, before marketing
- Portal training/technical assistance plan
 - Develop training materials and/or program(s)
 - Deliver training materials and/or program(s)
 - Update training materials and/or program(s) as changes occur
- Portal marketing plan
 - Develop strategic and tactical plans for promoting the system to all potential stakeholders
 - "Pitch pack", "what's in it for me" (WIIFM) and onboarding
 - Identify champions from state government, academia, private industry, non-profits, trade associations to assist with outreach and promotion

