

GREAT BAY COMMUNITY COLLEGE

AMPedNH

Online Programs Statewide Assessment & Action Plan

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The AMPed NH Statewide Assessment and Action Plan satisfies the following grant deliverables: (3.1.2) Statewide Assessment of online & virtual platforms and (3.1.3) Statewide Action plan developed for enhancements related to online and virtual programming. This document addresses deliverables, implementation process and recommendations for future use.

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2.3.1: Statewide Industry Mentor Program established.

- Strategy.Activity ID:
2.3.5: Create a statewide industry mentor group to support students enrolled in advanced manufacturing programs.

2.3.2: eMentoring platform developed and in place to support Statewide Industry Mentor Program.

- Strategy.Activity ID:
2.3.5: Create a statewide industry mentor group to support students enrolled in advanced manufacturing programs.

Introduction

“Students who were randomly assigned to a coach were more likely to persist during the one year treatment. Treated students were also more likely to be attending the university one year after the coaching had ended. Coaching is one of the more cost effective ways to improve retention and graduation rates”. [AMPed NH Technical proposal](#) (p 17)

AMPedNH Connect is the online community where eMentoring took place. The online community was hosted on the TurnRight platform, and included a job board, conversations/community feed, mentor and message tool for mentors and mentees, goals tool, and groups tool.

Job Board

Advertising job openings to CCSNH students through the job board meant employers could have access to a supply chain of prospects and groom them before hiring. It could also increase the need and desire for employers to stay involved with CCSNH. The first job was posted in September, 2104. Promotional material was developed and disseminated at job fairs, employer site visits, and through emails.

Student members on AMPedNH Connect had direct access to employer job postings and could apply through the site eliminating the need to go to the employer web site.

Conversations/Community Feed Efforts

In an effort to provide career relevant information and to engage students, the AMPedNH Online team posted questions, tips, event information and historical information weekly.

Goals

Going through the process of setting goals requires students to give serious thought to the steps they will need to take to reach their goals. AMPedNH Online team provided suggested academic and career related goals for students to use.

Groups

Interest groups were created based upon academic majors so students and employers could virtually converse about subjects of interest.

eMentoring is a way for manufacturing students to connect with professionals in the manufacturing world, other manufacturing students, faculty and college staff through an interactive, online platform. Students can learn about different types of manufacturing and companies, receive encouragement and advice to enhance their professional growth, and make connections for internship and employment opportunities. Research suggests that "a mentoring relationship provides collaborative and experiential learning, and may possibly be one of the most developmentally important relationships a person can experience in adulthood". (Bova, 1987)

Virtual mentoring as an alternative to traditional mentoring is easier to manage, less costly, unconstrained by geography or time, faster, and more egalitarian than traditional mentoring. (Bierman & Hill, 2013) Virtual networking and mentoring can require less of a time commitment for participants, and there is no need for child care, transportation or travel expenses. AMPedNH Connect was designed to provide members the choice between connecting one-on-one or with the entire community.

Through AMPedNH Connect, the goal was for students to connect with manufacturing professionals who could provide guidance and advice regarding careers in advanced manufacturing. Potential mentors included on-the-floor technicians and machinists, HR, and upper level management.

Working together, colleges and employers can design effective eMentoring programs. This collaboration can result in a partnership that helps one another to recognize and solve workforce and educational gaps and problems. For example, employers can learn how education is preparing future advanced manufacturing professionals and the combined efforts of education and industry can help to create a motivated and skilled workforce through employer engagement.

AMPed NH Grant Activity

During the winter and spring of 2013, goals and objectives for an AMPed NH student eMentoring program were developed. Research was conducted and the decision to host the AMPed NH eMentoring community on the TurnRight platform was determined then.

TurnRight was chosen for several reasons:

- Cost effective – 3 eMentoring platforms were researched, TurnRight was the least expensive
- Technical support
- Implementation planning and support
- Assistance with marketing
- eMentor platform training
- Ability to post jobs and internships
- Students could join through Facebook, LinkedIn or creating an user ID and Password

Curriculum integration suggestions were developed, and professionals who could act as mentors were identified and include members of advisory boards,

Program Coordinators, manufacturing personnel/employers, student advisors, and alumni. The Program Coordinators at each of the seven colleges were appointed the role of Community Managers with the responsibility of promoting activity within the online community by recruiting mentors and mentees, and posting announcements about new academic programming, new equipment purchased, open houses and career fairs, etc.

In early summer, 2013 meetings with Community Managers were held, recruitment initiatives were begun, and invitations were sent to students and employers to participate in a pilot program over the summer.

Creating involvement and awareness

From summer of 2013 until the end of the grant the following marketing initiatives were conducted:

- Attended VPAA meeting to share benefits of the eMentoring program
- Each semester visits to colleges were made to meet with students, faculty and academic advisors to promote eMentoring
- Emails sent to all advanced manufacturing students to create awareness
- Attended job/career fairs
- Attended annual NH Governors Advanced Manufacturing and high Technology Symposium
- Collaborated with College Project Managers/Community Managers to develop ways to promote the site
- Attended college advanced manufacturing advisory board meetings
- Sent promotional material to employers via mail and email
- Made phone calls to employers seeking program input and participation
- Conducted surveys with employers, students and Community Manager
- Information was sent to faculty to include on syllabi

The AMPedNH Online team discovered that face to face workshops built into class time were most effective with students. The students were provided with an overview of the eMentoring Program, all relative promotional material and a tutorial on the use of the online site. Pre-and-post workshop emails were sent to students which included additional support information. Students were also sent email reminders to participate in the eMentoring program.

Assessment of Implementation

A minimum of 2,400 participants were expected to participate in the eMentoring program. As of end of the 2015 first quarter, there were a little over 250 members, or 11% of the expected number. Although students seemed interested in the eMentor program when it was explained to them, few actually joined or if they joined, logged in after their initial sign-up.

Membership data as of 8/2015:

- 252 Total Members
- 135 Students
- 117 Professionals
- 315 Jobs posted
- 16 Job applications completed through AMPedNH Connect

Considerations

The AMPedNH Online team envisioned the eMentor deliverable to be embedded into the curriculum, with minimum requirements for graded student participation.

Recommendations were made for course integration for each advanced manufacturing course. The AMPedNH Online team did not have authority to require faculty to integrate eMentoring into their courses.

In January 2014 per recommendations from stakeholders, the wording "mentoring" was changed to "connecting". The rationale was that mentoring may sound intimidating and time consuming, and connecting better described the goal of building mutually beneficial professional relationships.

Successes

- Student participants from each of the seven colleges
- Students who actively participated benefited from connections made as well as discussions and advice from professionals

Challenges

- Colleges/faculty/PCs expressed that their faculty provide mentoring services face to face, which may be more personalized (both in terms of what the student needs and the connection/relationship between student and faculty)

- Far into the planning and implementation of this initiative, it was brought to the attention of the AMPedNH Online team that CCSNH was pursuing a system wide adoption and promotion of College Central Network, which supported CCSNH consortium job postings (Summer 2014)
- The students don't see their college people (faculty, counselors) on it nor employers and it means little to them.
- One student survey indicated that students would be more motivated to join and participate if there were faculty presence and participation.
- Faculty buy in was possibly influenced by the possibility AMPedNH Connect would end with the grant. The time involved to modify curriculum outweighed the perceived value of the short-term pilot program.
- Lack of student participation/joining
- Lack of interaction between those who have taken the initiative to join, lots of one time logins
- Using social media or anything besides word of mouth to recruit manufacturing employees isn't even in infancy, it hasn't even been conceived yet. AMPED NH Twitter (244 followers), AMPed NH LinkedIn (39 followers), AMPED NH Facebook (231 followers)
- Created Groups for each program of study category, did have some users join groups but very little to no activity within each group took place
- Info from Hezel 2014 Survey: "Several PCs noted that AMPed NH Connect is not used by many students, perhaps due to the fact that they already frequently meet with employers face-to-face. Many employers were aware of AMPed NH Connect and stated that it would be a useful program; however, most did not currently use it.

Suggested Action Plan

The following are suggestions for continuing or initiating an eMentoring program. Each suggestion requires support and collaboration from within the college and/or CCSNH from administrators, faculty, staff, and other stakeholders. "Launching a mentoring program without simultaneously creating a mentoring culture reduces long-term impact and sustainability and decreases the likelihood that a program or programs will grow and thrive over time. Mentoring programs in the absence of a mentoring culture often enjoy short-term success but then disappear". (Zachary, 2007)

According to the Project Coordinators at the colleges, there is no funding to support an external eMentoring platform. A CCSNH group on [LinkedIn](#) or [Facebook](#) would be a viable resource for continued online networking at no cost to either the student or colleges. Both of these social media platforms are already in use by many students, and populated with content. Faculty and students may find the following a helpful resource: <https://www.linkedin.com/pulse/how-find-sales-mentor-linkedin-chris-spurvey>

Faculty and advisors should encourage the use of the no-cost networking resources such as Facebook or Linked In. Including participation as an assignment would at the very least, expose students to the eMentoring resource and potentially show the benefits of connecting with others with the same career interests.

Introducing students to networking and the value of it could be the responsibility of faculty, staff, student ambassadors, alumni, and employers.

Not all students are tech savvy and workshops on how to navigate the chosen site would be beneficial.

AMPed NH Connect Available resources (products developed by AMPed NH)

Student/mentee supports developed:

- Objectives & Expectations Guide
- Handbook
- FAQ Sheet
- Listing of employer members

Employer/mentor supports developed:

- Objectives & Expectations Guide
- Handbook
- FAQ Sheet
- Benefits of mentoring

In addition, a Community Managers Handbook, a Benefits for Mentors and Mentees brochure was created, and two online needs assessments were sent with the purpose of learning how to improve the eMentoring experience for both mentee and mentor.

Benefits of Continued eMentoring

- Student to employer networking
- Faculty to employer networking
- Faculty to student networking
- Colleges can market programs and events
- Industry input as to the changing needs for curriculum
- Job opportunity announcements

References

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2.3.4: Smarthinking eTutoring piloted at multiple locations.

- Strategy.Activity ID:
2.3.1: Offer online eTutoring services (Smarthinking) for technical courses.

Introduction

In an effort to “[provide] student services that improve retention”ⁱ, AMPed NH grant funds were used to add seats to existing online tutoring and learning software applications. Plato and Smarthinking are eTutoring and online learning applications that provide content in the subject matters identified as “Workforce Skill Gaps” in the [AMPed NH Technical proposal](#) (p6).

Identified Workforce Skills Gaps	Smarthinking Subjects	Plato Subjects
Math	Basic algebra, liberal arts math, geometry, trigonometry, calculus, statistics	Accuplacer prep, developmental math, pre-algebra, algebra, geometry, pre-calculus, probability and statistics, Workkeys Applied Math
Communications (writing and verbal)	Tutoring Available	
Reading	Tutoring Available	Self Paced Tutoring Available
Basic Computer Skills	MS Office Tutoring Available	

Smarthinking also offered eTutoring in science (biology, anatomy and physiology, general chemistry, physics, and organic chemistry), and Plato offered self-paced tutorials in science (biology, chemistry, physics). The availability of science subjects is relevant as some of the AMPed NH course programs required science course(s) as part of the curriculum.

Plato

Between August 2013-November 2014, grant funds were used to add 10 additional Plato seats so all advanced manufacturing students would have access to Plato, regardless of their college's participation in the CCSNH Plato license program.

Plato provides adaptive, self-paced, and interactive learning softwareⁱⁱ to help students refresh and prepare for upcoming coursework and/or succeed in the courses they were enrolled in.

Smarthinking

[Smarthinking](#)ⁱⁱⁱ is an online tutoring service that is available at no cost to CCSNH students. Smarthinking provides live tutoring sessions in a variety of subjects and is available 24 hours a day, 7 days a week. eTutoring solutions can support the diverse needs of students and address the limitation of remediation programs and support

services (AMPed NH Technical Proposal, p10). From September 2012 through August 2013, AMPed NH contributed to the CCSNH Smarthinking account as during this time Smarthinking was only available to 100% online students. Paying for subscriptions opened it up to manufacturing students, regardless of learning environment. Beginning in September 2013, the CCSNH opened up Smarthinking to all students, thus grant funds were no longer necessary.

AMPed NH Grant Activity

- September 2012-August 2013: Smarthinking minutes were purchased with grant funds.
- August 2013-November 2014: 10 additional Plato seats were purchased with grant funds to increase access for advanced manufacturing students whose colleges did not participate in the CCSNH system wide Plato purchase and accommodate for TAACCCT participant enrollments.
- Student awareness was created through posters and flyers, syllabi addendum, and face to face workshops.

Assessment of Implementation

Students were provided access to Plato based on self-referral. A link to the Plato Request form was available for students to complete online, and once a request was received by the AMPedNH Online Advisor team, an account with Plato courses based on the student's interests was created and the student was emailed account log in and access information. During the implementation period, there were 16 students who requested Plato access.

Students accessed Smarthinking through Blackboard. Once logged into Blackboard, students could select a link that would open the Smarthinking start page.

eTutoring Suggested Action Plan

Plato

Create student awareness on campus, during advising and face-to-face tutoring sessions, and possibly use as an Accuplacer prep.

Smarthinking

The CCSNH already plans to provide Smarthinking through December 31, 2015. The AMPedNH Online Advisor team recommends that Smarthinking continue; eTutoring is a flexible, online solution that provides learners with support when they need it, which is often after the college is closed.

Staff Involvement

- Central person in the CCSNH Distance Learning office to coordinate eTutoring services and contracts among the 7 colleges.

- Local person at each college to refer and support eTutoring services within the college as well as represent their college on the system wide Plato committee is necessary.
- Subject matter expert to assist in the implementation of eTutoring, including how to spread awareness and how to build eTutoring services into existing curriculum and student support services.

Student Support Needs

- If Plato will be continued, an individual at each college should be responsible for creating and managing individual accounts.

Benefits of Continued implementation:

- Smarthinking provides students with 24/7 access to qualified tutors who provide learning support in a variety of topics. The platform is easy to use and navigate.

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3.1.1: Faculty from all 7 consortium colleges trained in online/virtual/hybrid development and delivery.

- Strategy.Activity ID:
3.1.12: Train faculty in eDesign within Blackboard distance learning platform to create and deliver online coursework using common design elements.

Introduction

In the CCSNH DOL TAACCCT Grant Proposal, the consortium identified a roadblock affecting student success and retention: "Programs lack flexibility in scheduling, a leading contributor to poor outcomes," (9). To address the "insurmountable barriers" students face (work, parenting, finances, and transportation) the TAACCCT NH grant proposed to develop and strengthen online and technology enabled courses and offer "many courses... online" (13). The proposal detailed plans to "develop and deliver online and hybrid advanced manufacturing curriculum" to increase accessibility and flexibility of advanced manufacturing programs and serve the diverse participant community.

Completed actions and challenges

No notes or activity were recorded, although ePortfolio webinars were offered to faculty in January 2014.

This deliverable and activity were not met for several reasons. (1) Online curriculum was purchased and training was provided by the vendor; (2) colleges utilized in-house distance learning support personnel, so no statewide training effort was developed; (3) lack of original, 100% online courses developed during the grant period.

Assessment of Implementation

There was good attendance during the January 2014 ePortfolio faculty trainings, which suggests an interest in continued faculty development and support in the areas of online learning and facilitation.

Faculty reported to the AMPed NH Distance Learning team that vendor training on purchased curriculum was adequate.

When approached to consider putting manufacturing courses 100% online, the response was generally that manufacturing courses cannot be taught online.

Suggested Action Plan

If a college or the CCSNH is interested in developing online versions of manufacturing courses and/or programs, faculty need to be provided with support, including centralized online course development training and eDesign feedback for all 100% online courses. To kick off an online course or program development initiative, examples from other TAACCCT rounds^{iv} of manufacturing courses online may help faculty visualize what a 100% online or hybrid manufacturing course would look like. A subject matter expert or instructional designer could be contracted to research, analyze, and present this information to faculty as part of an information or training session.

Faculty Support and Training Sessions to consider

- Supporting faculty with Individual Faculty Readiness Plans
- Identifying benefits and challenges of moving 100% online
- Providing support and suggestions for transitioning from face to face to online
- Identifying and sharing best practices for online facilitation
- eDesign Rubric and Feedback
- How to design high quality online courses
- ADA and UDL compliance in the design and development of 100% online courses
- Finding, reviewing, and selecting open educational resources
- Developing a Blackboard Course Environment
- Available tools in Blackboard
- Faculty to faculty peer support and mentoring

Faculty trainings, online instructional design support, and eDesign feedback ensures a common online learning experience for all CCSNH students, and provides faculty with the required resources to design, develop, implement, and evaluate the effectiveness of 100% online courses. A strong support system for online faculty can motivate faculty to move from face to face to online, and create a community of online faculty who will work together and share experiences and best practices. This support system includes support from administrators, department heads and program coordinators, faculty time to develop an online course, and faculty incentives to develop an online course.

Below are some delivery options should a manufacturing online course or program be consider by any college or the CCSNH:

- Low residency in which the class is F2F for the first week or two, then 100% online, with F2F checkpoints and/during lab times
- Low residency program in which the class is 100% online, with Saturday labs. Alternatively, students can drop in for lab times when it is convenient.

- Flipped classroom in which everything but the labs are completed 100% online. Lectures are either curated from open educational resources or generated by faculty working with an instructional designer and media specialist.
- 100% online, and if possible, labs can be completed at home and videoed.
- If the class is 100% online, relationships and agreements are formed with an approved employer where student can complete their lab work.
- As one of the goals is to reach students across the state, coordination among CCSNH colleges for student lab time could be considered which would allow students to utilize labs at any CCSNH college.

Staff Needs

- CCSNH Distance Learning Coordinator
- CCSNH Faculty trainer(s)
- Instructional Designer to provide initial and ongoing faculty support
- eDesign Coordinator
- Technical support staff
- Media specialist to provide lecture capture editing services

Benefits

- Attract and accommodate students who have real life responsibilities
- Attract and accommodate students who have transportation issues
- Accommodate and free up lab time through use of online curriculum. If labs are completed partially online/at home/through the use of simulation, lab time and space generally hosted by the college is freed for projects that cannot be completed through any other means than with the machines, tools, and resources provided by the school.
- Conserve space – the college can provide education to more students without physical brick and mortar constraints
- Students will enhance their workplace skills related to computer technologies, troubleshooting, and online communication
- Students will develop and refine their time management, organization, motivation, and resourcefulness skills

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3.1.6: Online Assessment Tools developed for students

- Strategy.Activity ID:
3.1.9: Deploy effective online assessment tools for determining skill levels, personal interests, and career interests.

Introduction

ePortfolios are an interactive, online collection of student work. Authored by the student, ePortfolios include examples of their work, also known as artifacts, to illustrate their interests, experience, skills, education, goals and achievements. ePortfolio research suggests that authoring an ePortfolio is a reflective process that can help students assess their skill levels, personal interests, and career interests and facilitate “identity construction” (Eynon, Gambino, and Torok 104) (ANY OTHERS TO ADD?)

Eynon, Gambino, and Torok identify three propositions regarding the implementation of ePortfolios (96). Firstly, the authors assert that ePortfolio initiatives can advance student success. The authors present data from a variety of campuses to support that ePortfolio authoring results in higher pass rates and higher GPAs. Data from a 2012 U.S. Department of Education report suggests that student retention is positively influence by the use of embedding ePortfolios into curriculum.

Secondly, the authors assert that [by] making student learning visible ePortfolio initiatives support reflection, social pedagogy, and deep learning (Eynon, Gambino, and Torok 98). Student learning is literally “visible” within the ePortfolio through selected artifacts and selecting artifacts is inherently reflective. For example, when an ePortfolio is embedded into a program, students may spend several semesters selecting artifacts and reflection is support through guidance from faculty and reflective questions prompts to help students make connections between their coursework, “personal, family, and community life” (Eynon, Gambino, and Torok 99).

An ePortfolio is almost always created with the intention of sharing it with peers, faculty, academic advising professionals, career advising professionals, and employers. Sharing an ePortfolio makes it a “social” learning tool, especially when students receive feedback on the content (Eynon, Gambino, and Torok 101-102). When students know their work will be shared outside of the college they are likely to create a quality ePortfolio and find the process meaningful.

Lastly, the authors assert that ePortfolio initiatives promote learning-centered institutional change (Eynon, Gambino, and Torok 104). A successful ePortfolio initiative requires collaboration between faculty and staff and the collaboration provides an opportunity for otherwise unconnected people and departments to share ideas and influence and support each other’s goals.

ePortfolio authoring helps students:

- Assess their current and developing skill level;
- Make connections between what they knew, what they know, and what they are going to learn;
- Identify transferable skills, and communicate these transferable skills to employers;
- Develop a professional, online identity

AMPed NH Grant Activity

During the spring of 2013, goals and objectives for an AMPed NH student ePortfolio project were assessed and established. The plan, which was communicated to VPAAAs during a VPAA meeting, was for ePortfolios to serve as the online assessment tool for students to identify their skills levels, personal interests, and goals related to manufacturing.

During the summer of 2013, ePortfolio services were researched and AMPed NH chose Foliotek as the AMPed NH ePortfolio provider, and secured ePortfolio accounts for students. Following the purchase of licenses, the AMPed NH Online Advisor team worked to campaign the ePortfolio Project.

Foliotek was chosen for several reasons:

- Cost effective – of the three ePortfolio services researched, Foliotek was the most reasonable
- Students can easily and inexpensively continue their ePortfolio account beyond graduation^v
- Blackboard Plug-in option, students can access through single Bb sign-on^{vi}
- Free faculty accounts
- Free Administrator access/dashboard
- Ability to create and personalize templates
- Supports multiple forms of media
- Embedded survey/feedback tool
- Excellent technical and implementation support
- Students and faculty can create multiple ePortfolios
- ePortfolio content can be downloaded and exported
- Sharable through weblink, email invite, Facebook, LinkedIn, Twitter
- ePortfolio author can set date and time restrictions for access
- Simple interface
- Drag and drop features

Creating faculty involvement and awareness

Faculty were invited to meetings and online training sessions to learn about the AMPedNH Student ePortfolio Project, including considerations for the purpose and usefulness of faculty and student ePortfolios, and ideas and suggestions for how to integrate ePortfolios with curriculum.

Suggested ePortfolio artifacts were developed using course goals from each program and associated authentic learning projects. Suggested ePortfolio artifacts provided faculty with examples of what student ePortfolio can contain and direction for how to integrate ePortfolio into curriculum.

NHTI, Manchester Community College, Lakes Region Community College integrated ePortfolios into curriculum. Faculty were collaborative with the AMPedNH Online Advisor team, reserving class time – usually one hour – for an ePortfolio student workshop. Faculty were provided with an ePortfolio Feedback Rubric to assist with grading the completeness of student authored ePortfolios.

The faculty, PC, and Machine Tool Club student members from Nashua Community College heavily promoted the use of ePortfolios as a resume enhancement tool. Several well-attended workshops were facilitated at NCC.

Creating student awareness and involvement

ePortfolio information was included on syllabi, sent via email correspondence, on posters and flyers, and through word of mouth. Students were provided with face to face and online workshops on how to build and maintain their ePortfolio. The AMPedNH Online Advisor team discovered that face to face workshops built into class time were most effective. During the workshops students were provided with an ePortfolio Project Objective Guide, overview what an ePortfolio is, review of student authored ePortfolios, and the opportunity to start authoring an ePortfolio. Pre-and-post workshop emails were sent to students which included additional support information. Every two weeks during the regular terms students would receive email reminders to work on and share their ePortfolios.

A “Degree Chart” was created by the AMPed NH Online Advisor and distributed to ePortfolio students. Using the “Degree Chart” specific to their program, students could see which courses were required for their curriculum, and also share the Charts with potential employers when the Chart was added to their ePortfolio.

Creating employer awareness and involvement

Employer awareness was created during career fairs, college open houses, and employer site visits. The AMPedNH Online Advisor teams showcased student ePortfolios during events, sent ePortfolio links directly to employers, and added ePortfolio links to

the AMPed NH newsletters. Employers said ePortfolios were an innovative way for students to demonstrate their skills and several employers indicated they would request ePortfolios during the application process^{vii} and recruitment^{viii}. The AMPedNH Online Advisor team attended at least one MCC advisory board meeting to present ePortfolios. All agreed that the ePortfolio product was good and should be embedded within the curriculum.^{ix}

Assessment of Implementation

Through ePortfolio authoring, our CCSNH AMPed NH Students:

- Reflected on their growth
- Collected and curated examples/artifacts of their knowledge and skills
- Discovered new ways to showcase their skills
- Developed a professional, online identity
- Collaborated with other students

Types of artifacts (evidence/work samples) added to ePortfolios included:

- images of projects and lab time
- videos of projects and lab time
- blueprint drawings
- screencasts of the student using career related software

Students rarely attended on-site, voluntary workshops. At NCC, there was a very successful collaboration between the AMPedNH Online Advisor and the leaders of the student Machine Tool Club, indicating that peer-to-peer influence on the usefulness of the ePortfolio is an area to explore, and that student ePortfolio ambassadors may help in gaining interest and sustaining success of an ePortfolio initiative.

In some instances students reached out to the AMPedNH Online Advisor to make requests for ePortfolio accounts (at least 8). Many of the self-referred students easily created a comprehensive and organized ePortfolio with little to no assistance.

Suggested Action Plan

The following are suggestions for continuing or initiating an ePortfolio project within the AMPed NH programs. Each suggestion requires support and collaboration from administrators, faculty, staff, and other stakeholders. Creating an “ePortfolio culture” is essential (Eynon, Gambino, and Torok 109). For example, creating awareness about the ePortfolio project; facilitating workshops for faculty, staff, and students; sharing success stories; and building ePortfolio checkpoints throughout the student college experience.

ePortfolio as an effective online assessment tool for determining skill levels, personal interests, and career interests

The Connect to Learning (C2L) FIPSE-funded initiative focuses on ePortfolio strategies throughout multiple campuses. A Core Survey was deployed to students at participating campuses, and feedback was promising regarding the use of ePortfolios as an online assessment tool for determining skill levels, personal interest, and career interest. For example:

- 65.6% agreed or strongly agreed that “Using my ePortfolio had allowed me to be more aware of my growth and development as a learner.”
- 70.0% agreed or strongly agreed that “Building my ePortfolio helped me to make connections between ideas.”
- Open ended responses included, “I got to show who I was. While creating my ePortfolio, I learned more about myself.”

(Eynon, Gambino, Torok 100)

ePortfolio as a Career tool

Career ePortfolios are authored as a complement or replacement to a traditional resume. Students can easily share a career ePortfolio through a unique web link and the updates made to an ePortfolio are instant, so an employer will always have the most relevant and current information about the student (Bonsignore 109).

Not only does a Career ePortfolio provide a medium for students to create and share their professional identity, accomplishments, and goals, creating an ePortfolio takes some technical and computer skills - core skills employers seek (Bonsignore 110).

Curriculum integration

Eynon, Gambino, Torok shared data that indicates when ePortfolios are integrated into “multiple courses” throughout an academic program there are higher retention rates (97). This may be due to the constant meaning-making reflective process that takes place when authoring an ePortfolio. Likewise, perhaps when faculty provide reflective prompts and feedback on student ePortfolios, the constant contact and reinforcement between faculty and student promotes student satisfaction and retention.

Involve faculty and academic and career advising staff in setting visions and goals for the ePortfolio project. Together, faculty and staff can identify essential artifacts, determine which courses to introduce the ePortfolio project, determine the frequency for adding artifacts and ePortfolio Feedback checks. It is essential for students to capture artifacts early in their academic program to show their progress from beginning to end.

ePortfolio as an Academic Advising tool

Academic advising efforts can be maintained and enhanced through student authored ePortfolios. Indiana University-Purdue University used ePortfolios as medium for

a personal development plan (Eynon, Gambino, Torok 97). The personal development plan is authored by the student and shared during academic advising sessions to demonstrate areas of growth, interest, and consider goals for the following semester and beyond.

In addition to the aforementioned tactics, in order to successfully continue or begin an ePortfolio initiative, consider:

- Who are the stakeholders?
- Are ePortfolio accounts paid for by the student or through college/lab fees
- Is the ePortfolio available post-graduation

Available resources (products developed by AMPed NH)

- ePortfolio Project Student Objectives Guide
- Suggested Artifacts document
- Degree Charts
- Advanced Manufacturing Student ePortfolio Template (through Foliotek application, although can be adapted for many ePortfolio applications)
- ePortfolio Feedback Rubric
- Video and paper based tutorials

Faculty Involvement

- Create and state clear expectations for students
- Determine grade weighting if integrated into curriculum
- Develop and communicate suggested artifacts
- Create ePortfolio checkpoints throughout the semester
- Provide feedback to students on ePortfolio content and organization
- Participate in planning sessions
- Participate in evaluation sessions
- Participate in training sessions

Staff Involvement

- Information Technology staff to ensure the college computers meet technology requirements for the ePortfolio application
- Academic advisors and career advisors to determine ways ePortfolio can support their student service efforts
- Alumni staff to help determine how the ePortfolio is maintained post-graduation
- Faculty trainers to provide ePortfolio and instructional design training

Student Support Needs

- Create awareness and excitement over the ePortfolio initiative to help students see how authoring and maintaining an ePortfolio is relevant to them now and in the future

- Host ePortfolio events – perhaps a best in show and student panel, and even creating a competition (Bonsignore 112)
- Set expectations from the beginning – if an ePortfolio will be a requirement, include this information on relevant course syllabi and program materials
- Guidance and suggestions on what to include in the ePortfolio, how many artifacts to include, and how to organize information (*Suggested Artifacts and ePortfolio Project Template*)
- Design and formatting assistance (*ePortfolio Project Template, face-to-face training*)
- Feedback from faculty or staff on the student ePortfolio (*ePortfolio Feedback Rubric*)
- Student use contract that includes guidelines for netiquette, professionalism, and appropriate content for the ePortfolio (Bonsignore 111)

Anticipated Costs/Alternative no-cost online technologies

The recommendation for the AMPedNH Online Advisor team is to continue with Foliotek as the service provider. All of the student support materials are built based on the Foliotek interface, and the low cost of student accounts coupled with free faculty accounts make Foliotek a sustainable option. Friendly and effective technical support is available through Foliotek, and the company communicates updates and releases each week via a blog post.

There are several free tools that can be used to maintain the ePortfolio, although the technical support may not be available. The free tools include:

- [STEMPremier](#)
- [LiveBinder](#)
- [Google Sites](#)
- [Wikispaces](#)

Benefits of Continued implementation

ePortfolios are an effective online assessment tools for determining skill levels, personal interests, and career interests (Eynon, Gambino, and Torok 2014). Through the reflective act of authoring ePortfolio content, students can see their growth, potential, and goals. These can then be shared with faculty and academic advisors, employers, and transfer institutions.

Authoring an ePortfolio demonstrates computer skills and can help students refine their writing skills (Bonsignore 2013). Students can learn from one another as they share their ePortfolios, creating a community of learners who can effectively discuss their projects, accomplishments, and challenges.

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3.1.7: Virtual Learning Communities established

- Strategy.Activity ID: 3.1.8:
Using Blackboard Learning System, create Student One-Stop Portals which serve as their virtual one-stop for all student services online.

Introduction

CCSNH TAACCCT Grant Consortium DOL TAACCCT proposal research stated “..the current active NH TAA eligible participants range in age from 22 – 80. One half are over age 55 and fewer than 6% are under age 35. The large majority of these individuals have worked decades at the same company and have not received any formal education for years” (page 3). It was expected participants included those who would be unemployed, underemployed, first time/first generation students and would need additional supports to be successful in their academic programs.

Student support services needed to be available in a central online location, and available 24/7. Providing the support services via a user friendly online platform that included reporting features to identify student log in, and access to only AMPed NH student participants was necessary. A Blackboard course shell enabled the Online Program team to accomplish all of this without any additional expenditures or training for staff and students.

The ‘Student Online Suite’ was developed using a Blackboard course shell. A menu with links to various supports was located on the landing page. Students could access all of the TAACCCT funded student supports through the menu buttons (Announcements, Get in Touch, ePortfolio, AMPedNH Connect, Online Workshop Schedule, College Quick Links, Career Resources, The Learning Center, Online Learning 101, and Life Happens).

Announcements included new information for advanced manufacturing students such as scholarship announcements, Career Fairs, as well as a schedule of the Online Advisor’s office hours.

Get In Touch included a link to access the Online Advisor for live help during office hours.

ePortfolio included a direct link to the Foliotek ePortfolio login page, and online tutorials to help students build their professional ePortfolio.

AMPedNH Connect is an online site for students to connect with manufacturing employers to ask for and receive mentoring and career development advice, as well as seek job and internships opportunities. Tips and suggestions on how to get the most of the site were also available.

Online Workshop Schedule showed the ePortfolio and AMPedNH Connect online workshops offered.

College Quick Links allowed students to quickly find access any of the seven community college departments with a click.

Career Resources housed links to various website at the colleges and on public websites where students could find a variety of career advice from resume writing and interviewing tips to skill assessment and career inventories.

The Learning Center included links to online tutoring offered by CCSNH, strategies for adult learners, tips on time management, study guides, as well as information on how to buy, rent and sell text books.

Online Learning 101 offered links to CCSNH online technologies, tips for successful online learning, and an online etiquette guide.

Life Happens included links to community supports for students who may need help with housing, childcare, transportation, mental and physical health, etc.

AMPed NH Grant Activity

- The Student Online Suite went live on 7/31/2013 and was maintained and enhanced with new content until the end of the grant.
- In October, 2014 a Student Success Mentor/Advisor was hired to work non-traditional hours when college offices were closed, and in which the data showed students most used college online tools – typically weekdays from 7:00pm to 11:00pm and on Sunday. The responsibilities included offering virtual one-on-one support for students, group advising, tutorials on the use of ePortfolios, AMPedNH Connect eMentoring, as well as administrative tasks to support the Online Department. Steps taken to let students and faculty know of the Student Online Mentor/Advisor were:
 - Business cards were printed with phone number, email address and website
 - The Student Online Mentor/Advisor joined the Online Advisor and Program Developer on visits to colleges and meeting with students and faculty.
 - Email announcements were regularly sent to students, faculty and project coordinators.
- There were 1825 users of the Student Online Suite

Successes

The Student Online Suite held a wealth of helpful and supportive information for students. All CCSNH students have access to Blackboard and all college courses have a Blackboard component which meant there was no additional software to learn. With the exception of time spent to develop and maintain the SOS, there was no additional cost to the colleges. In addition, there is a built-in mechanism to collect data for reporting purposes. Once the site is developed, there is minimal maintenance which

includes adding new supportive information and periodically checking to ensure the links are live.

Challenges

The Student Success Mentor/Advisor position was hired late in the grant activity time and therefore was only in place for the last 11 months of the grant. There was not as much activity around students contacting the Student Success Mentor/Advisor as anticipated. This may be due to the demographics of the advanced manufacturing students - limited time and technical skills. The Online staff's observation was that it took time for students and faculty to view new and innovative online programs as valuable, and therefore participation slowly grew over time. This may be the case with the student activity around the Student Success Mentor/Advisor.

Suggested Action Plan

The Student Online Suite is a valuable tool for students. It is recommended that it be continued and opened to all students within CCSNH.

Activities necessary to reach post grant visions and goals

The continuation of the Student Online Suite would require little time and effort. The recommendation is to have someone at the System Office Level oversee the updating and maintenance, including verifying that links are active and adding new supports as they become available. Time needed for these activities would likely amount to 4 hours per month. It may make sense for this responsibility to be added to the duties of the Director of Technology and Learning Management System (a vacant position at this time).

The Student Online Suite has now been set as a self-enroll course, meaning students can search for the course shell and add themselves to access the resources. This information has been provided to advanced manufacturing faculty, with the request they include it on their syllabus.

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AMPedNH Statewide Assessment and Action Plan Section Virtual Communities by JoEllen Space is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit http://creativecommons.org/licenses/by/4.0/deed.en_US.

3.1.8: Advanced Manufacturing programming at all 7 consortium colleges to contain an online complement, virtual, or simulation component.

- Strategy.Activity ID:
 - 3.1.10: Expand online delivery and virtual hands-on labs within technical courses/modules.
 - 3.1.11: Incorporate simulations into technical courses and advanced manufacturing labs

Introduction

Academic programs offering online learning enables student access to higher education and training programs they might otherwise have to forgo due to work, family, transportation and other barriers. Online learning offers scheduling flexibility and allows students the opportunity to learn at their level of ability. In addition virtual modeling and simulation allows students to get a hands-on feel of the technical machinery before they enter the lab portion of their courses. "Students in online degree programs are able to manage their time, learn the materials that are presented, and complete assignments on their own schedules". (OEDB, 2012)

AMPed NH Grant Activity

Few advanced manufacturing faculty had experience teaching or developing online curriculum. To shorten the time to offering online advanced manufacturing course, the decision to purchase rather than build the online curriculum on Blackboard was made. At the time some of the colleges were already using purchased advanced manufacturing curriculum. Research of online curriculum began in December 2012. TAACCCT I Grant staff and faculty were involved in the process. To ensure the best curriculum was chosen for the varying needs of the colleges, vendors were invited to campus to demonstrate their curriculum. In addition, a group of Department Heads, faculty and students 'tested' the curriculum and reported back on their findings to the college Project Coordinator and the Online Programs Director.

In July, 2013 an RFP was written and posted on the CCSNH website. Vendors responded and colleges decided to purchase curriculum that they were currently using, and/or best matched their needs as the academic programs varied from college to college. All curricula had an online, simulation and/or virtual component. Training for all software/hardware was provided to faculty by the curriculum vendor.

Curriculum purchased was:

- Technical Education Products Amatrol, Educational STEM solutions, LLC,
- LearnMate
- Tooling U-SME

- Lincoln VRTEX 360 Virtual Reality Welding Simulator (Rose 2012)

Suggested Action Plan

It is difficult to offer some advanced manufacturing courses 100% online due to the lab component. However, the hybrid model in which the lecture portion is offered online and students participate in the lab component at the colleges has worked well. It is recommended that colleges increase the number of courses offered in the hybrid format. According to Washington State University, some of the factors which make hybrid learning attractive are:

- More opportunities to interact with course materials and resources, leading to greater engagement and enhanced opportunities for success
- Higher-quality peer interaction
- Greater flexibility in course scheduling
- Increased skills in self-directed learning leading to greater learner autonomy
- Skills in communicating effectively in multiple modes
- Increased technical skills

Faculty Support Needs

"It's hardly news that a great deal of human communication is nonverbal—anyone who's sat through a long phone conference can tell you that. Now remove the verbal component from the equation and the chances of misunderstanding increase exponentially. It takes a great deal of time and effort on the part of online teachers to make sure they are really clear in their own communications, as well as to understand who they are teaching, what students are trying to tell them, and how well their students are succeeding in each course". (Rose, 6/18/12)

Training provided by each curriculum vendor was technical in nature and geared toward faculty learning the software. The purchased curriculum can be customized by faculty. Teaching using online curriculum was new to most faculty and therefore made sense to teach it as purchased, and determine if the course could be enhanced by customizing.

Continued support by the vendors will be necessary, and is part of the purchase price. For those who wish to customize the curriculum it is recommended that additional training be given to faculty on designing a high quality online course. Should courses be developed by faculty using Blackboard, the current Learning Management System at CCSNH, additional supports will need to be in place. See assessment of "3.1.1: Faculty from all 7 consortium colleges trained in online/virtual/hybrid development and delivery".

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Notes

i Page 5, SGA, "Accelerate Programs for Low-Skilled and Other Workers"

ii Page 4 SGA: "...the Department is interested in accessible online learning strategies that can effectively serve the targeted population..... Interactive software can tailor instruction and tutoring to individual students...."

iii <http://www.smarthinking.com/>

iv See <https://www.skillscommons.org/> for TAACCCT grantee projects

v At the time of research, an individual user account was \$19/year

vi The Blackboard plugin is available, but was not implemented during the pilot session.

vii Freudenberg-NOK, Eptam Plastics (LRCC) and DEKA (NCC)

viii Source: Community College System of New Hampshire TAACCCT Grant Interim Evaluation Report Year 3

ix Source: AMAB Agenda Meeting notes from February 7, 2014 meeting, provided by Phil Przybyszewski.