CCC Statewide Branded Pathways
Development Criteria and Process
2014-2016

Information and Communication Technologies - Digital Media Sector Team

*Purpose: The criteria and development process of the **Business Information Worker (BIW)** and the **Information Technology Technician (ITTP)** branded pathways are described to assure prospective colleges that the pathways are reliable and effective for their students.*

The development of **CCC Statewide Branded Pathways** by the **Information and Communication Technologies-Digital Media (**ICT-Digital Media**) Sector Team** is a case study in the successful launching of a consistent statewide CA Community College educational product - a branded pathway - that meets the needs of both the workplace and the varied 2.5 M students who attend 113 CCCs.

Since the organizational structure of the CCC's is based upon decentralization resulting in regionally originated curriculum, the process of adoption, consensus building and linkage for a consistent statewide branded pathway is challenging – but ultimately a superior quality product follows because of the diverse and constructive views of the contributing CCC faculty, Deans and regional businesses.

Funding for the Doing What Matters Program has been critical to bring together a statewide assessment and problem-solving team with marketing and implementation know-how to pull off the effort. The 'brand' of the pathway is intended to be occupationally recognizable statewide for students and businesses, as well as a CCC consistent offering.

In the end, the components of the solution were all there to start with. The curriculum, the faculty, the COE research team (for Labor Market Information). What they lacked was a common thread...or pathway…to link them together with the aid of website functionality, a communication strategy, a support team to adjust and tweak the content and methodology, as well as a statewide perspective.

THE CHALLENGE

Between the 113 CCC's there are several thousand ICT and Digital Media certificates and programs with little apparent consistency. There is one counselor for every 2,000 students and the average counseling time per student is 20 min per annum (just enough to complete a TMC based ED Plan that may not be right for that student).

From our 40+ counselor phone survey (40 min per counselor, spring 2015) we were told that confusion by faculty, counselors…and of course students...about real, available IT-related jobs was the number one problem to be addressed. For that and many other reasons, our team has focused on statewide branded pathways for ICT.

We define statewide branded pathways with the following success criteria: They

- Have 20,000 or more entry-level jobs statewide annually

- Contain skill sets widely vetted by industry experts

- Have achievable entry-level jobs in 6-10 months

- Are achievable by 80% + of any student cohort

- Have further credentials and job levels to follow, and

- Can be available at 80%+ of the 113 colleges.

With these criteria we hope to simplify the decision making for those who otherwise would leave the CCC's in less than a year out of confusion or mismatch of their real life needs and the academic structure. Currently some portion of the 50% annual CCC attrition rate would benefit from this simple and clear approach.

BRANDED PATHWAYS

The Business Information Worker Pathway (BIW)

The BIW was originated in the San Diego Region in response to a perception that modern office workers needed advanced skills in Internet applications and perhaps social media. Instead, placement agencies, who hire the majority of entry level office workers these days (the try before you buy approach was critical in the

recent recession), were clear that MS Outlook, Excel, Word and keyboarding were the lacking skill –even from 4-year college students entering the workforce.

With support from the COE Labor Market Information data, the entry level BIW program was seen as a statewide opportunity with over 20,000 entry-level jobs and a pathway that could result in the hiring of entire cohorts of students. Additionally, the pathways could be offered at every campus without oversupplying the need.

The BIW pathway utilizes existing academic programs and courses. No new curriculum is created. The BIW I incorporates Keyboarding, Microsoft Office (Word, Excel, Outlook) Information Systems, Business Communications and Human Relations/Customer Service.

Advantages to business are to have a known skill set detailed and communicated consistently across the state. The advantage to students, who need employment sooner rather than later, is a clear and definitive pathway that leads to an entry-level job.

Enabled by a BIW Website (www.ict-dm.net/biw) a statewide communication effort with brochures, one-page flyers, an online 20-minute administrative process resulted in over 60% of the CCC's voluntarily enlisting in the BIW program within the first 10 months of the campaign.

To the CCC's it is an effective repurposing of what they already have...and it is immensely useful to the students who get jobs. In a two-day marathon of interviews at San Diego City College, Manpower was able to hire over 145 students with criteria similar to the BIW. Faculty and Counselors from colleges throughout the state were relieved that they were being heard and that a constructive response was being deployed.

This approach to identifying industry/marketplace need and then allowing colleges to 'Opt in' for participation was not only effective, but has been respectful of the faculty role in defining the student experience and curriculum in the classroom. Our relationship with the Academic Senate has and continues to be one of active collaboration especially as we took the next step to establish the industry criteria for BIW II.

Since the focus of the BIW I is to get students into open jobs, BIW II needed to build on their skill sets for advanced jobs. To determine the advanced skill sets, a variety of office skills, software and Internet applications were tested

by a Lawrence Research/COE survey of over 400 small to medium businesses to assess their desired middle skills for office workers.

As a result of the survey a BIW II prototype pathway was developed which includes advanced MS Office skills (Excel and PowerPoint) and QuickBooks, Collaboration software and electronic records software in addition to Customer Service. The BIW II is then followed by a selection of specialized courses including Salesforce.com, project management and advanced presentation support that are identified as the Business Information Specialist.

The BIW II and Specialist prototypes were then reviewed by a statewide selection of CCC Faculty (BIW I participants) and placement agencies. The new BIW Pathways website and material rollout occurred at CCCAOE April 2016.   Keep your eye on developments by the Academic Senate as they move forward with developing CTE C-ID for the courses leading to statewide transferability between CCCs as well as statewide certifications.

The Information Technology Technician Pathway (ITTP)

Information Technology Networking (not to be confused with software development) continues to grow, becoming more specialized, and requiring more experience and sophisticated training. Expanding market needs for Cybersecurity, the Internet of Things and the massive distribution of local networks in schools, business and home requires more and more sophisticated IT Technicians. Under-represented minorities and women are less frequently entering this rewarding STEM career. The CCC's offer the best hope of addressing these opportunities.

Persistence by the Academic Senate in support of a Transfer Model Curriculum (TMC) has not resulted in an IT TMC even though the recommended curriculum met the requirement for rigor and transfer. Instead, an IT Model Curriculum, MC not TMC, was designated because the CSUs do not have the next two years of curriculum to match the basic education in IT that the CCC's provide.

While the future transferability or 'Bachelors' potential for an IT education evolves, it is important for the CCC's to get their diverse student body into successful IT careers. The ITTP was designed to close that gap. The ITTP utilizes the IT MC curriculum where possible, at least 80%.

Students who want to get an entry-level job in computer support or network information technology quickly, without a 4-year degree, to meet their financial needs and then build on that entry-level job to make a career, would need a sequence of job/credential building steps such as an IT Pathways guide.

ITTP Development Methodology
For over two years much research and discussion with experts went into the development of the IT Technician Pathway. As a rapidly evolving industry, the pathways are new and always changing.

In our initial review, IT entry level qualifications based upon Burning Glass real-time jobs data clearly indicated that 80% of advertised IT jobs required a BS degree and another 15% a Masters. These criteria seemed to fly in the face of a 'general wisdom' among IT experts at MPICT that Certifications (Cisco, CompTIA, MS etc.) were the key to jobs. It also questioned the relevancy of the whole CCC IT CTE program.

Troubled by this material disagreement, Steve Wright, Sector Navigator, ICT-Digital Media, sought out John Reed, Sr VP Robert Half Technology whose department places thousands of IT personnel annually (about 50% are for Help Desk and User Support jobs). John said neither degree nor certifications are as important as ten years of experience, which trumps all.

It became clear that we had a hybrid - experience based - branded pathway to develop.

To further explore the criteria, the Bay Area Community College Consortium, BACCC, hosted a full day employer 'marketplace' focus group to study the hiring needs for Computer Technician and Support. While the emphasis was on the Help Desk and User Support functions, the question of experience came up often. It was a sidebar discussion with a placement agency where the statement was made "when you recruit you just go to a Geek Squad- Best Buy or Apple Store and recruit someone from behind the counter."

Serendipitously, during an MPICT/COE study of the economic impact of ICT on the Bay Region economy a surprising number of retail jobs associated with ICT were discovered. Pursuant to that, Sandy Jones, DSN- East Bay, conducted an in-depth phone survey with computer retail outlets (Apple Store, Microsoft Store, Best Buy, Staples, Office Depot, Office Max & Costco), which indicated that the combination of high school education, customer service, and basic computer OS

familiarity was all that was required for entry. Subsequent interviews with cellular stores like ATT and Verizon indicated a higher bar.

The outlines of a self-starter career pathway were becoming clear. Stackable credentials, coupled with recognized Certifications could be matched with the marketplace pathway and packaged statewide in the CCC system. All would be built around the students work experience which, for career advancement and their own finances, needed to start very quickly. LMI for the relevant job titles were reconfirmed thru COE (2014 and 2015).

The design and vetting was not complete. The IT Model Curriculum with its base of C-ID designated courses would be the tent-pole of the ITTP, however, variations needed to exist to enable students' quicker entry into jobs where they could gain experience.

Presentations and feedback of the hybrid pathway concept followed with the MPICT winter conference – San Francisco, the IT Certification Council (leadership for IBM, Cisco, CompTIA, MS) – in Chicago, and locally with Kaiser IT, WASTC, Microsoft Channel Partners and the SME advisory team at CompTIA. The Doing What Matters Retail and Hospitality Sector Team became a valuable research and support partner as we explored the alternate IT retail and retail management paths. To all of them and many select CCC Faculty and Deans we owe the true appreciation for this pathway's design.

The final pathway lists readily available IT curriculum (mostly IT MC C-ID compliant) in three stages to support Computer Retail, then Help Desk/User Support, followed by IT Technician. Along the way appropriate 3rd Party Certifications are cited as well as opportunities for work and peer networking opportunities. In IT relevant 3rd party Certifications or Digital Badges listed on the students Linked-in profile are the technical 'Validation' and the resume for jobs.

As 70% of higher ed students nationwide are now functioning as non-traditional we assume that many ITTP candidates will take the 2 years of classes over a 3+ year period intermingled with the work and Certification efforts. As 'digital natives' or 'millennials' their peer networking engagement is critical to help them keep the focus and support from like-minded student workers.

ITTP, launched in fall of 2015 with its information rich, student oriented website with the theme that '*it all links together for a career in IT*', directs students to actionable steps to 1) Find Courses, 2) Connect with Peers, 3) Get Certified and 4)

Get Hired. Bringing all of the CCC assets for this pathway together on one ITTP website greatly enables visibility and relevance to all of our CCC constituencies.

CCC's 'opt –in' as they wish, to create certificates for all or part of the pathway within their region. Materials on the 'Faculty and Administrators' section of the site provide registration, LMI, course guides with descriptions and certificate development guidance. As with the BIW, keep your eye on developments by the Academic Senate as they move forward with developing CTE C-ID for the courses leading to statewide transferability between CCCs as well as statewide certifications.

In conjunction with many other ICT-Digital Media team efforts, like Xvoucher (discounted Certification Vouchers for students), NETLAB+ UG (24x7 computer lab technology User Group), and additional Faculty development opportunities, our ICT-Digital Media Sector Team role is to facilitate the effectiveness of this pathway. This will also include working with regional partners in education especially the K-12 alignment opportunities like CyberPatriot.

Finally, as the demand for BS degrees in IT continue in online ads, and while the complexity of IT Technology expands we are convinced, due to the lack of meaningful transfer opportunity, that a Bachelors in Applied Science – IT Networking would be a logical next step for the ITTP or the IT/MC student.

CONCLUSION

The value of a statewide facilitating expert team, like the ICT-Digital Media Sector Team, Small Business Sector Team and the Retail Sector Team, are made much more effective by collaborating with the willing Faculty and Deans throughout the system. However our driving force was to be right… to get the data right…to understand the industry correctly…only then would we provide proper support and guidance for CCC students.

Steve Wright
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