Bridging Career Technical and Academic Education: A Learning Pathway Focused on Scaffolded Instruction and a Transformed Student Mindset

Christina Anketell, Maryanne Galindo, Nicole Albo-Lopez
Los Trade Technical College (United States)

Abstract

This presentation focuses on a curriculum which provides scaffolded instruction to students through strengthening their discrete and holistic language skills. The program also recognizes the link between affective learning outcomes and the desired explicit cognitive goals. It is believed that students who are exposed to a growth mindset will be successful lifelong learners who will embrace new ideas, experiment with innovative options, and motivate themselves to strive beyond their comfort zone.

Los Angeles Trade Technical College (LATTC) is one of the nine community colleges in the Los Angeles Community College District, California, USA. It is located in the heart of South Los Angeles and serves a diverse urban population that is highly underserved economically, socially, and educationally. The college offers a Liberal Arts pathway but is primarily focused on Career Technical Education (CTE) to enhance the skill development of marginalized workers and foster their employability. Increasing globalization augments the need to connect CTE and academic education to ensure an effective workforce with the requisite core competencies in English and Math, coupled with soft skills in Leadership and Communication.

LATTC's Academic Connections Department is a collaborative interdisciplinary hub that inter-connects the campus to provide students with support services required to achieve their academic, vocational, and personal goals. The department focuses on providing both academic remediation programs and student support services such as tutoring specifically to adult students who are re-entering the academic field. It is a model program that serves as the seamless bridge for new students and community partners to successfully transition and prepare for college by strengthening their foundational skills. The faculty is dedicated to creating a student-centered environment which fosters life–long learning through the delivery of high quality flexible lecture-labs and self-paced workshops. The focus is to engage students in developing skills through metacognitive adult-learning theory and self-efficacy strategies.

Academic Connections provides foundational academic courses and workshops in reading, writing, math, computer literacy skills, English as a Second Language, workplace readiness, and life skill strategies. The department is the one-stop venue for individualized and small group tutoring in campus-wide academic disciplines. Success is measured through comprehensive assessments of discrete competency skills and just-in-time instruction and resources that address each student's unique learning gaps. The main objective of Academic Connections is to enhance student self-efficacy and retention and re-engage students to achieve their life-goals and ambitions.

Introduction: About Los Angeles Trade Technical Community College

Los Angeles Trade Technical Community College (LATTC) is a two-year community college with a 90 year history of career technical and academic educational services. Out of 113 community colleges in the state of California, it is the only campus that dedicates roughly 70% of its institutional resources to career-technical education (CTE). The college serves 15,000 students annually and is located in South Central Los Angeles, known as America's "ground zero" in terms of urban poverty, and its complex variables. LATTC's primary service area is the community of South Central Los Angeles. The area has the highest Educational Needs Index (ENI) score in the nation and is the single most-at risk community for educational attainment in the United States.

Beginning in 2010, the college launched the Trade Bridge Academy which was a concentrated effort to: examine the pipeline of student progression to reaching their educational goal(s), identify gaps or gatekeepers that impeded student progress, and build bridges to address them. The lessons learned from these efforts led to the development of an innovative, comprehensive student competency-based

framework titled **Pathways to Academic, Career, and Transfer Success** (PACTS). PACTS enables the college to focus all instructional and student support programs and services in a concentrated and strategic manner to identify and select targeted interventions focused on addressing critical areas of student need in an effort to ultimately increase student completion.
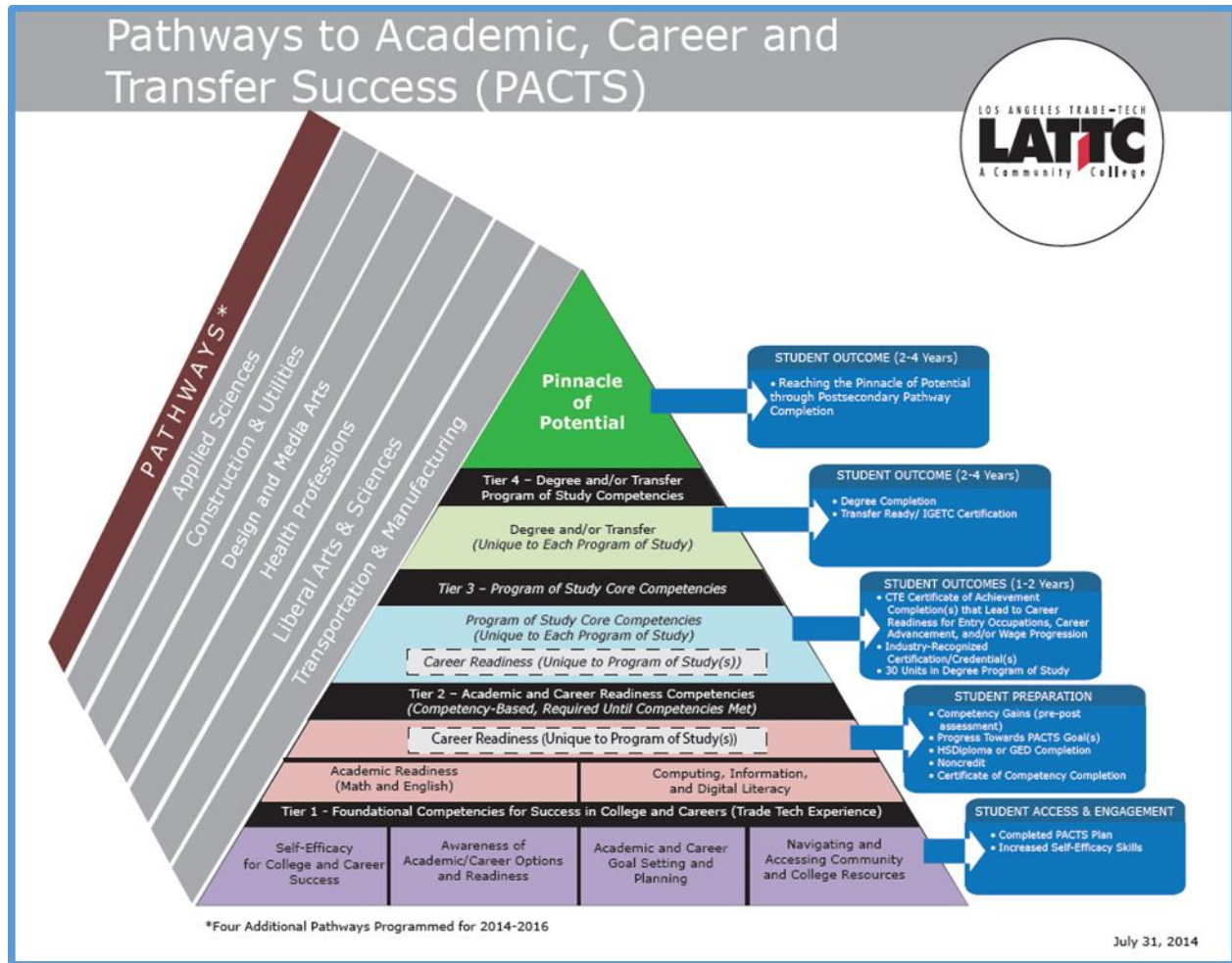
PACTS has 4 competency tiers (navigational, academic readiness, major program, and degree/transfer) and serves as the guiding framework for the reorganization of several campus departments and disciplines. To address the campus-wide needs of Tier 2, academic readiness in English, Math and Digital Literacy, a new department was formed through the merger of two pre-existing departments consisting of five academic disciplines (English as a Second Language (ESL), ESL Civics, Remedial English, Remedial Math, and Digital Literacy) and tutoring. The new department chose the innovative name of Academic Connections to be inclusive of all of its instructional team and reflective of its mission to connect students to their next level of success.

Many adult students decide to return to college with initial intentions of pursuing new career goals which often expand to include educational goals for university transfer. They enter the college with high levels of motivation, take the placement test and discover that they lack the requisite English and Math skills to enter college-level coursework. Each semester, approximately 900 new students enter the college. Placement scores reveal that 88% of new students fall 1 to 3 levels below college level English (not including ESL) and 99% of new students' fall 1 to 3 levels below college level Math. Formerly, students who began credit English and Math courses below the transfer level, required an additional 2-5 extra academic semesters to reach the requisite transfer level course. The demanding sequence of courses can become demoralizing and a deterrent to academic persistence. To overcome the institutional barriers and educational gaps, Academic Connections designed a student-centered, interdisciplinary learning

pathway capitalizing on the strengths of the various disciplines in alignment with self-efficacy support services.

Bridging Career Technical and Academic Education: The Opportunity

The socio-economic and educational backdrop of incoming students created the need to explore strategies which push traditional norms to create a learning environment focused on re-engaging adult students by providing them with the necessary tools and competencies to not only survive, but also thrive within the college culture. The role of Academic Connections is to bridge the gap between the academic/career curricula and the existing academic knowledge of students. The department intentionally focused on providing students with self-efficacy tools to address the affective domain and enhance their cognitive skill development.

Scaffolded Instruction: Embracing Academic Innovation

In order to meet the unique challenges and strengths of the student population, Academic Connections adopted a competency based education (CBE) model as the learning structure. Through a process of scaffolded learning, CBE assists students to systematically build on existing competencies and close learning gaps as they achieve mastery. The learning process is structured using the Vygotskian concept of Zone of Proximal Development (ZPD). Instructors assess students' current knowledge and through structured and scaffolded instructional modes, assist students with gaining knowledge as they work towards reaching their expected goals. This model develops the capacity of students to be more competent by giving them control of their own learning process, strengthening their existing knowledge/competencies, and ultimately empowering them to design and measure their learning goals and achievement. Kouwenhoven (2010) defines competency as the ability to decipher and apply the combined skills of knowledge, skills, and attitudes in order to accomplish desired goals. A competence, on the other hand, is the ability to achieve proficiency and perform a needed task in a professional manner. Using the model set out by Kouwenhoven, the department built a program focused on providing students with core educational competencies paired with self-efficacy competencies.

Learning Pathway: Building Core Competencies

Core language competencies are a basic skill students need to accomplish their learning goals. Academic Connections built a learner-centered program utilizing the Vygotskian learning model. As such, instructors assess the knowledge/competencies students are able to accomplish independently, and through a structured process of introducing new information in a student-centered way, they prepare students to reach their desired learning goals.

In order to accomplish this, constant assessment and re-assessment takes place to gauge student progress and learning. The skills taught in the classroom are not taught with an active focus on the end result. The faculty built the curriculum backwards by begining with the broader view of what a competent student should be able to perform to be successful in their academic/career pathway. From this perspective, the curriculum, skills, and subskills were deconstructed. The determination of content to be taught is driven by the compentencies the student needs to be able to competently perform his/her chosen field of study.

The assessments in a CBE model are competency-based and measure mastery and learning gaps through formative and summative evaluations. The role of an instructor becomes one of a faciliator of learning who is interested in meeting students at their point of need and moving them forward. Every student in the class will have his/her own learning curve. Therefore, the teacher's role becomes one of sharing knowlege and guiding the student through the learning process. Thus, instruction becomes based on a "just in time - just in place" methodology. In this environment, the instructor is always cognizant of the pulse of the class and instruction is not driven by the curriculum and completing the required material. Rather, it is determined by what students have mastered and by identifying challenges. This allows the instructor to reflect on how instruction should be shifted to engage students and increase comprehension of a discrete or holistic skill that students need to further develop.

The majority of the students served in Academic Connections are native English speakers with limited basic reading, language and math skills. The department uses the TABE® (Test of Adult Basic Education) as a comprehensive and reliable academic assessment which comprehensively identifies learning gaps. Pre and post- tests effectively measure student knowledge gains and provides instructors with a framework for structuring student-centered individualized lesson plans to address learning gaps.

Pre Test — English

Post Test — English

Pre Test — Math

Post Test — Math
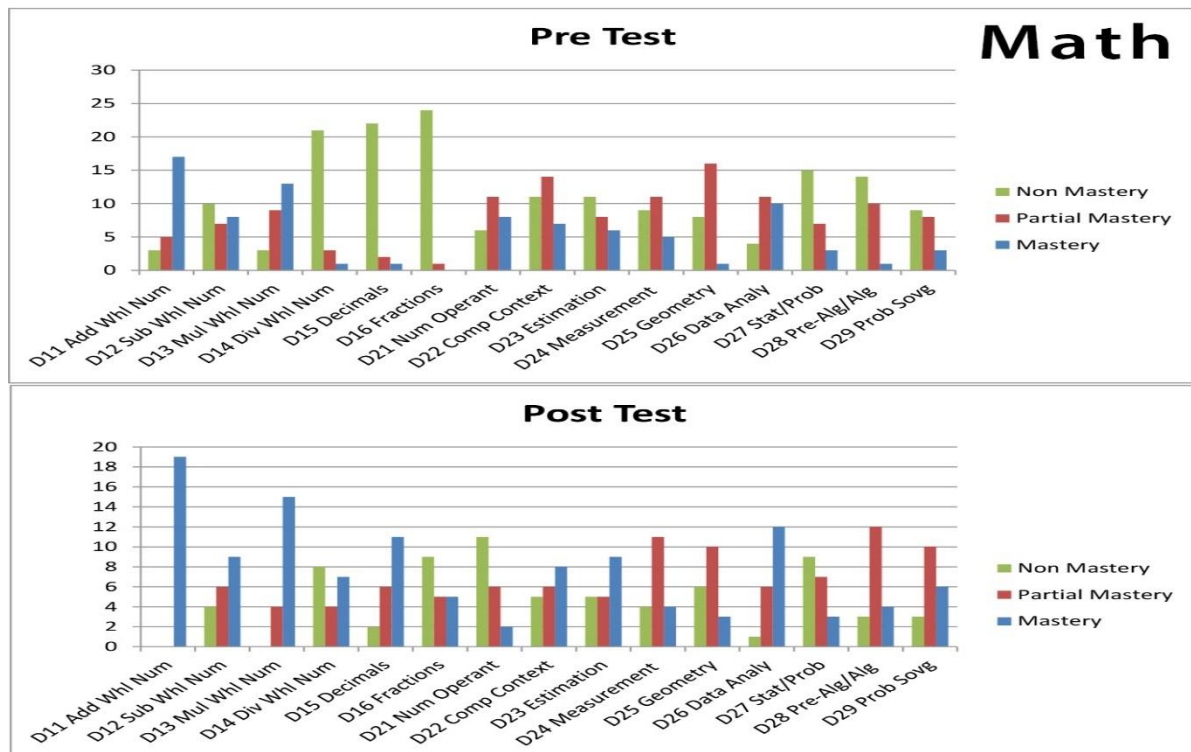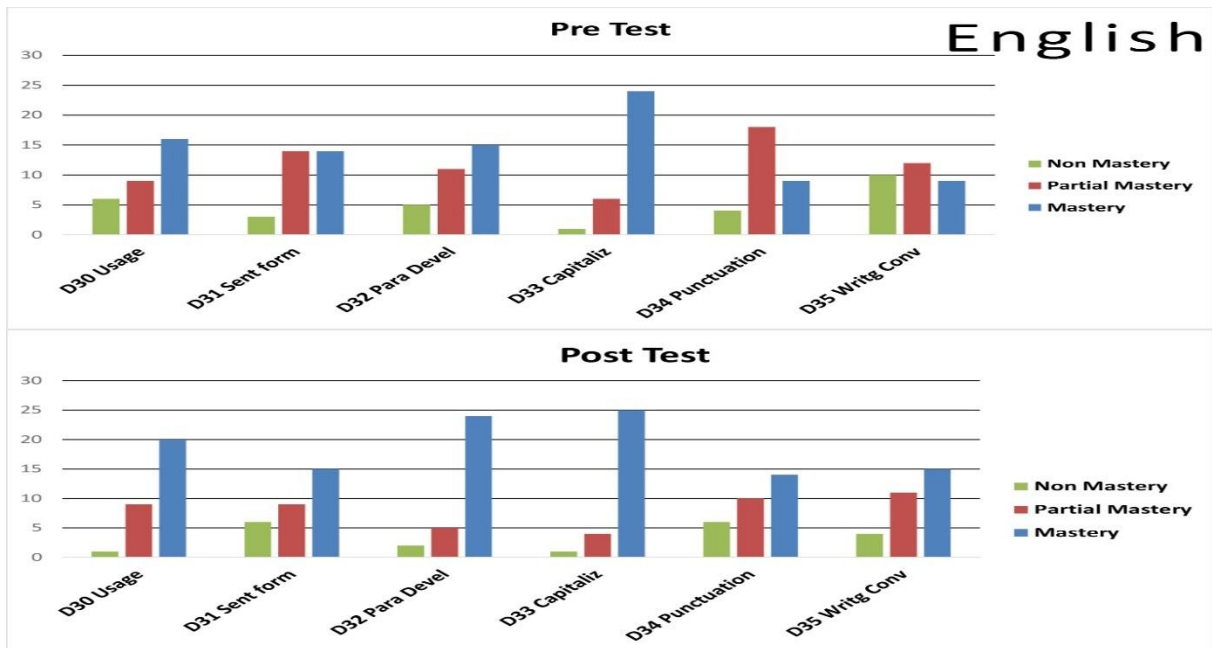
Transforming Student Mindset: Self-Efficacy Strategies

Academic Connections recognizes that the student population has experienced past trauma in both academic and personal settings. This trauma lingers and can affect the learning process. Students who believe that they are not capable of achieving academic success often perform to their self-perceived

expectations. To transform this mindset, the department purposefully designed strategies intended to influence self-efficacy as a means to sustain student motivation in achieving their goals.

Time on Task

Unlike the traditional scheduling model for academic education with patterns of meeting once or twice per week, the first strategy adopted to enhance the curriculum was to schedule courses daily. The change in scheduling enhances student discipline for self-regulation, especially for those previously disconnected from education. The daily structure provides repetition and the development of skill mastery. Increased time on task has been an influential factor in student discipline, motivation, engagement and academic success. Collectively, the curriculum and daily practice in a positive educational environment promotes student self-efficacy, and transforms the mindset from a deficit to an asset-based perspective. This shift, assists the student with understanding they have the capacity for continued success. The department also created a scheduling format focused on acceleration and flexibility. Courses that would normally take place over a four-month semester are now offered in two-months meaning a student can accelerate their academic progress which increases motivation and persistence.

Academic Support

The TABE® assisted the department with aligning the test and course content utilizing a competency-based model. In addition to classroom and curricular changes, instructors designed supplemental workshop seminars to compliment courses. The pre-test scores enabled instructors to inform students about their individual competency development needs, allowing them to direct students to supplemental opportunities such as workshops, technology tools and tutoring. Students set proximal learning goals and manageable action plans which created a self-regulated learning environment. They monitored and adapted tangible learning plans based on competency achievement. Self-regulation and participation in competency workshops and seminars on the affective domain of learning shifted the mindset of students by building a history of success. The instructors measured success for individual students while the department measured competency gains that led to cohort success and student matriculation. Quantitative data gathered through TABE® and matriculation records together with anecdotal success stories provided the department with evidence of the success of the competency-based model.

Conclusion: Top 4 Elements for Model Replication

Four lenses through which successful leaders of organizational change can assess the scope of education reform efforts are offered in the fifth release of Bolman and Deal's Reframing Organizations (2011). The four perspectives – political, structural, human resource, and symbolic; support the visioning process of an interconnected, comprehensive strategy for reforming educational models. The following are critical elements that took place in the transformation of Academic Connections and Los Angeles Trade Technical College. Understanding the elements can assist educators interested in similar efforts:

1. Political – Engage in campus-wide discussions that result in a shared model for reframing institutional structures and curricular barriers to equity and student success. Use existing institutional data to reveal gaps and inform bridge-building strategies.
2. Structural – Identify potential linkages between CTE and curricula such as "universal" competencies in language, math, digital literacy and self-efficacy that can be relevantly contextualized. Create new course structures as needed. Identify an instrument to measure student gains in discrete competencies and intentionally design a feedback structure within the curriculum so that students can measure their own performance and create their own academic goals.
3. Human Resource – Invest time in relationship building and consistent communication to re-invigorate and unify department culture. Offer relevant faculty training in both instruction methodologies and emotional intelligence to enhance the self-efficacy of instructors who will become models in the classroom. Where possible, create co-teaching opportunities for continued innovation.
4. Symbolic – Solicit and capture student voices for critical feedback. Encourage instructors to "trade" success stories to spark best practices and continued innovation that is specific to the demographic served.

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