

The Impact of Immersion in a Local Research Problem on Technology Skills and Use

**CENTRAL WASHINGTON UNIVERSITY
PREPARING TOMORROW'S TEACHERS
TO USE TECHNOLOGY (PT³)**

Evaluation Findings



Professional Learning Communities Integrating Technology into Local Research Problems

Project
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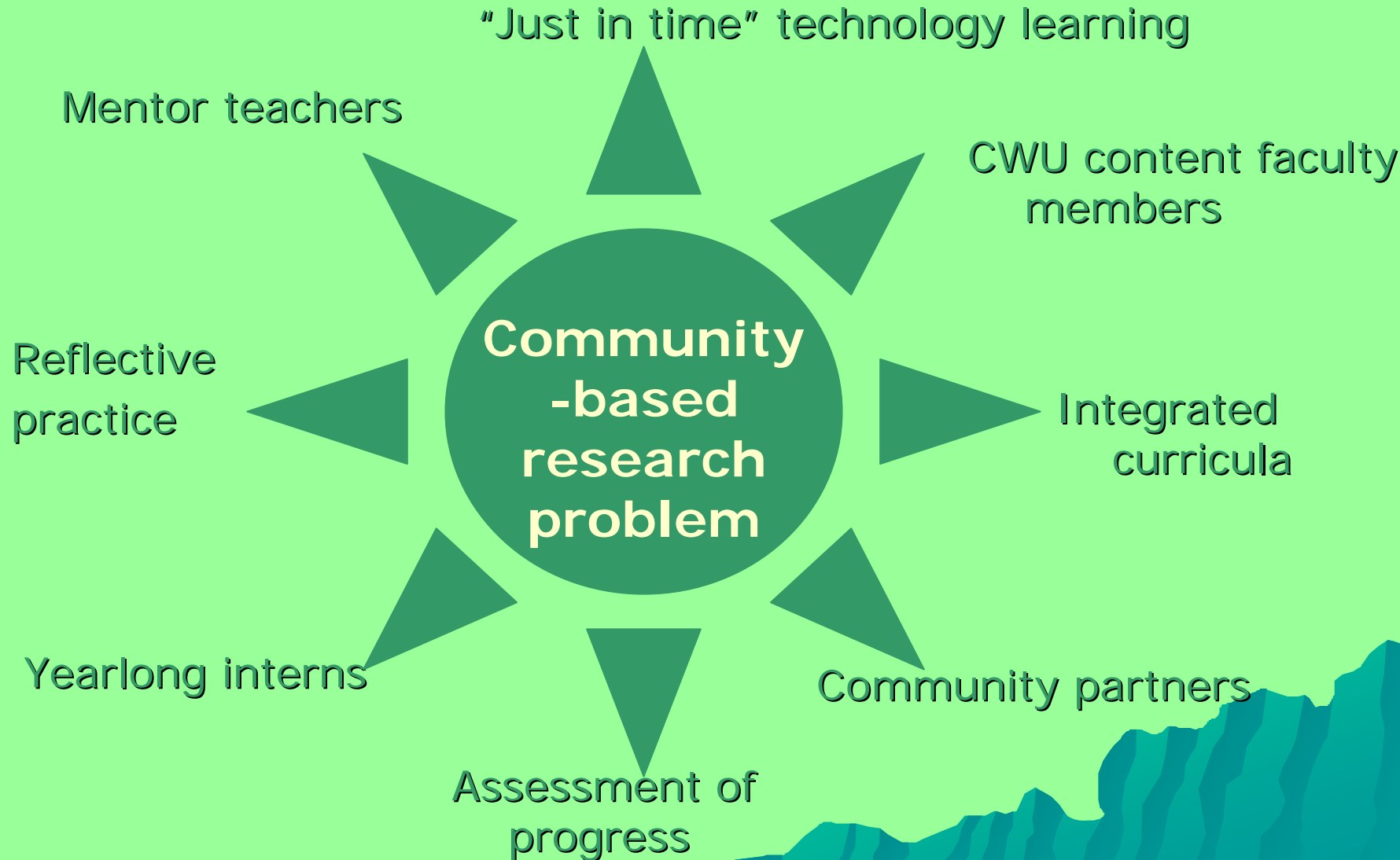
Project
CROAK

Project
PATTHS


Project
Sumo Robot




CWU Professional Learning Community Characteristics




Evaluation Activities

- ◆ Annual interviews with participants, focus groups
 - ◆ Annual site visits
 - ◆ Faculty, teacher, and yearlong intern surveys gathered data on attitudes toward teaching and technology as well as use of digital tools
 - ◆ Syllabi review (pre-post PT3 implementation)
 - ◆ Pre-post survey for students in first year of e-portfolio use
 - ◆ Interview study with Ed. Tech. faculty members
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Findings on Development of PLCs

- ◆ Created high interest in integrating curricula
 - Novel and challenging at high school level
 - ◆ Teams mostly integrated 2 content areas
 - Faced challenges of time necessary to develop integrated lessons and curricula
 - ◆ Technology integration raised interest levels for students and teachers
 - Recognized learning new technologies also requires time for training and practice
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Reported Value of the K-12—CWU Collaboration


- ◆ Mentor teachers strengthened:
 - Content knowledge
 - Technology skills
 - Relationships with other teachers
 - Connections with CWU faculty members
 - ◆ Provided mentors and interns with:
 - Time to reflect on practice
 - Time to learn and integrate technology into teaching
 - Greater access to and use of digital tools
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K-12—CWU Collaboration

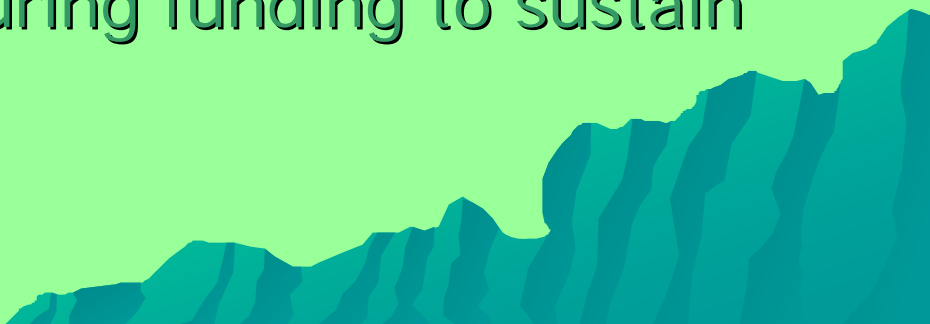
- ◆ CWU Faculty members:
 - Gained a better understanding of the K-12 contexts
 - Folded K-12 experience at PLCs into course and field work (site visits, assignments, practica)
 - Strengthened ties with other CWU faculty members
 - Increased attention to integrating technology into coursework
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Intern Benefits of the Yearlong Placement and PLC Involvement


◆ Yearlong Interns:

- Increased confidence in the classroom and with technology use
 - Gained greater familiarity with students, scope of a year's content, and school/classroom procedures
 - Learned strategies mentor teachers use to teach specific content through the year
 - Built professional relationships beyond their mentor teacher
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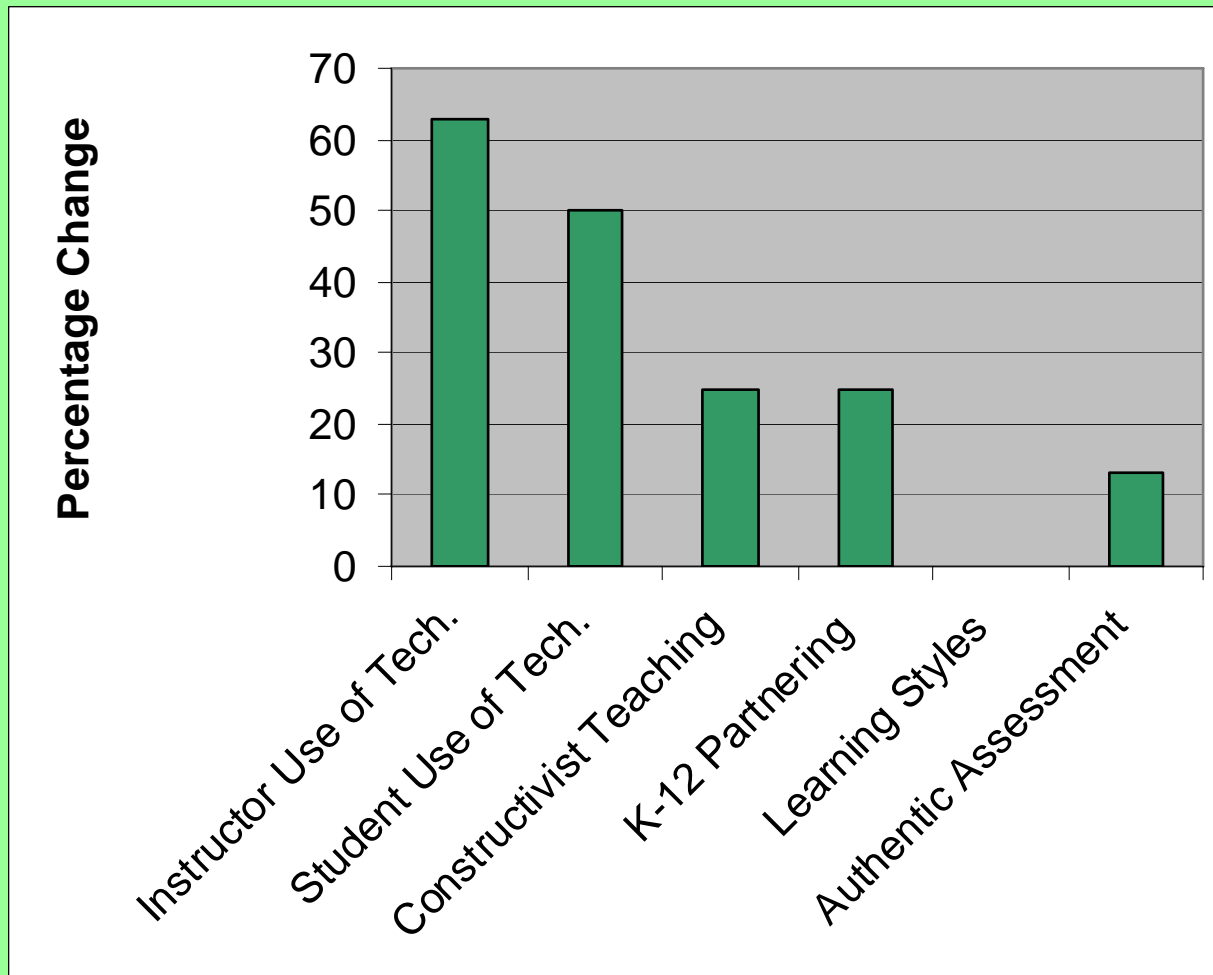
Additional Benefits of PLC Involvement

- ◆ Mentor teachers:
 - PT³ project brought more technology into their classrooms
 - Increased interest in using technology and content integration to conduct project-based research
 - Built professional relationships with community partners and university colleagues
 - Raised interest in securing funding to sustain work
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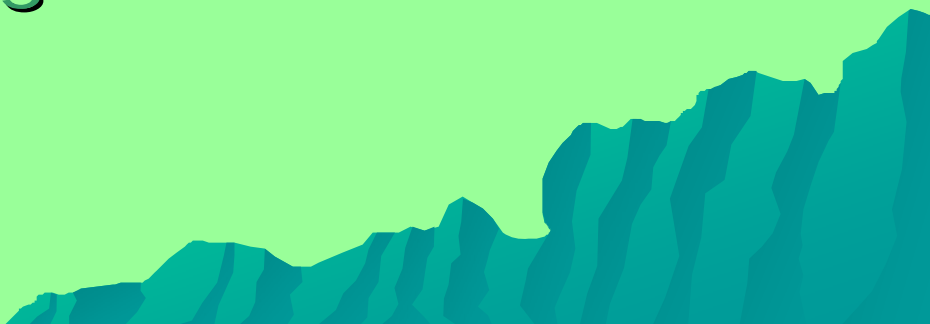
PLC to University Coursework Translation

- ◆ Most PT³ professors gained proficiency in PLC-related IT tools (74% reported gains in tech. skills through grant)
 - ◆ Increased number of student assignments that were interdisciplinary, authentic, and required technology components
 - ◆ 50% added student field components directly involving work with PLC sites
 - ◆ Increased use of technology in campus course instruction (63% increase of instructor use of technology in teaching)
 - ◆ Increased expectations for student technology use in coursework
 - ◆ Facilitated interdisciplinary collaboration among faculty members
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Syllabi Analysis of Change in Matched Sets Time 1-Time 2

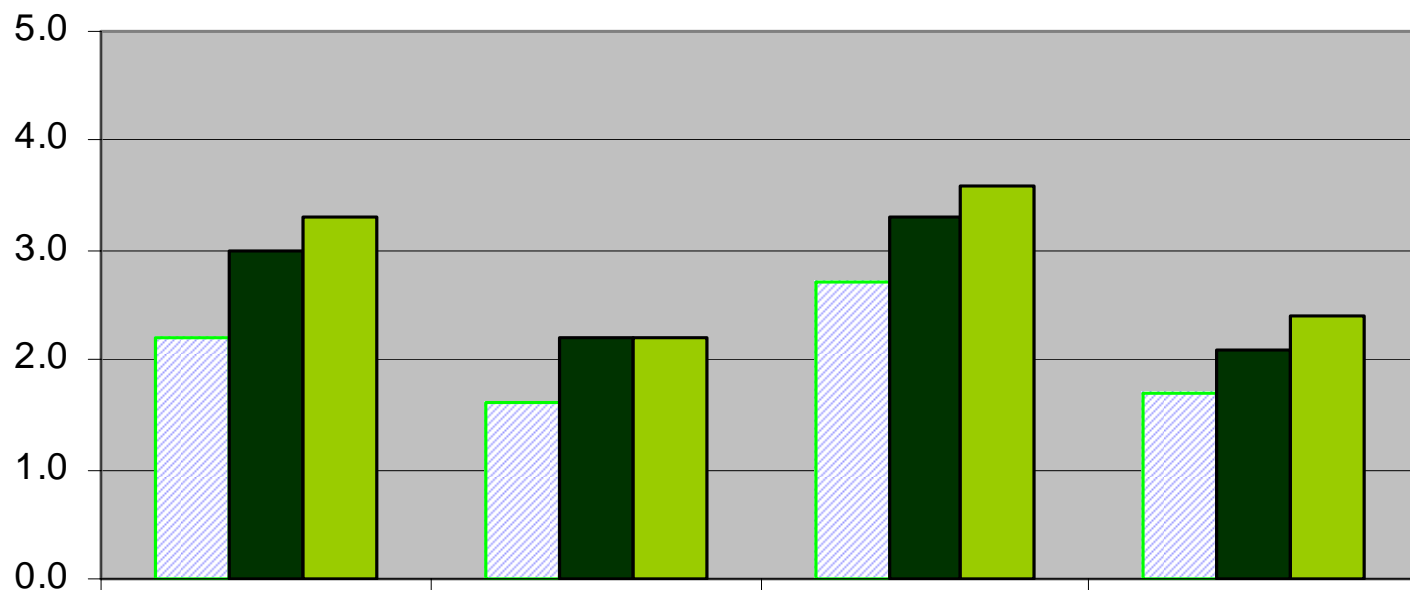


Faculty Survey Findings

- ◆ Technologically savvy group who gained additional skills
 - ◆ Capable of serving as tech. problem solvers for self and others
 - ◆ High knowledge and skill levels using a variety of IT tools
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University Faculty Survey Results for Learning Community-related Subscales

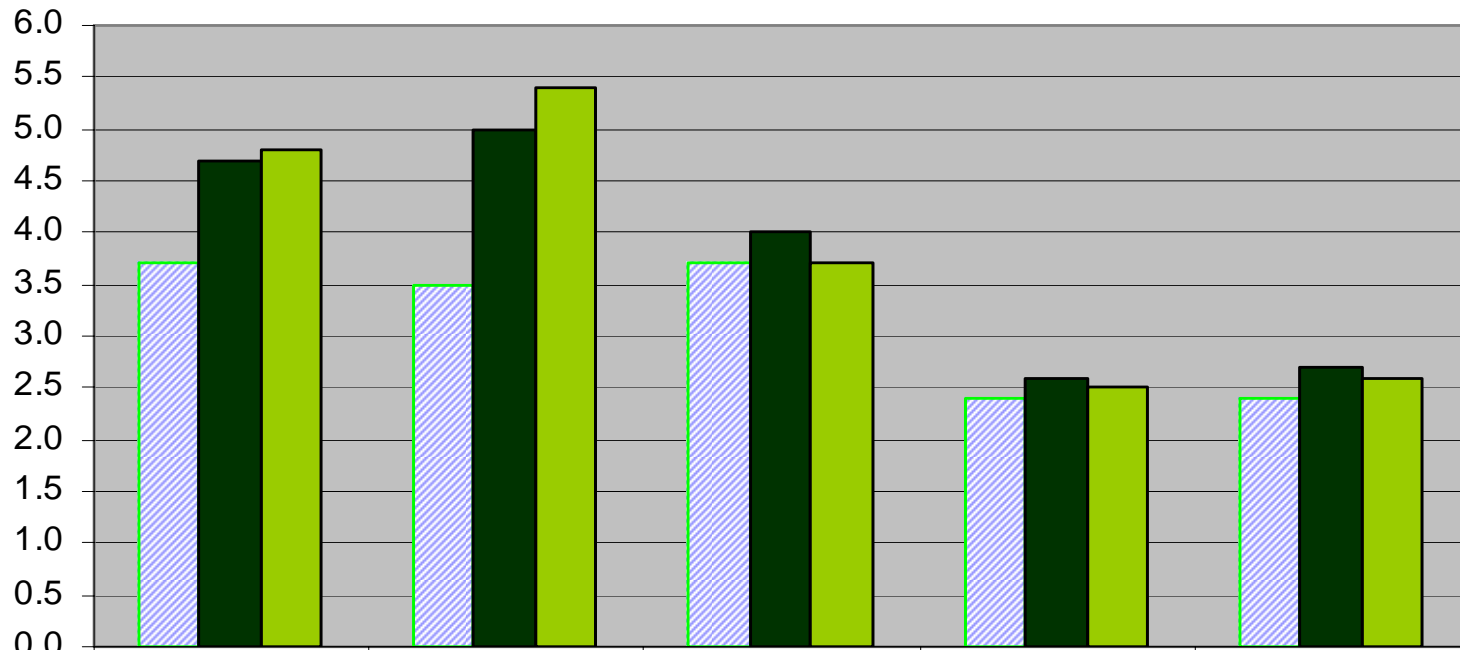
Comparison of Means for Survey Sub-scales on Pedagogy and Collaboration



	Student Engagement in Long-term Projects	Collaboration of Students in Long-term Projects	Student Directed Class Activities	Collaborative Experience with Curriculum Design
Comparison Group	2.2	1.6	2.7	1.7
PT3 Faculty T1	3.0	2.2	3.3	2.1
PT3 Faculty T2	3.3	2.2	3.6	2.4


University Faculty Survey Results for Technology-related Subscales

Comparison of Means for Survey Subscales on Technology Experiences




	Teaching with Technology Self-efficacy	Personal Computing Self-efficacy	Personal Support for Technology	Digital Tool Use	Purposes for Using Digital Tools
Comparison Group	3.7	3.5	3.7	2.4	2.4
PT3 Faculty T1	4.7	5.0	4.0	2.6	2.7
PT3 Faculty T2	4.8	5.4	3.7	2.5	2.6


Facilitating Conditions

- ◆ Good match between yearlong interns, teacher mentors, and project goals
 - ◆ Proximity of school to participants
 - ◆ Time to work within PLCs during the summer session
 - ◆ Administrative, school board, and community support at the K-12 schools
 - ◆ Communication of clear expectations between all participants
 - ◆ Leveraging resources
 - ◆ Selective process for project involvement
 - ◆ Common digital tools at K-12 schools and CWU
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Effective Strategies Used to Expand Project Impact on Campus

- ◆ Involved more colleagues and students through introduction of e-portfolios on campus
 - ◆ Carved out time to work on project activities and integrate project work into teaching through project retreats and release time
 - ◆ Regular meetings to communicate expectations, activities, successes
 - ◆ Applied technology skills as quickly as possible after training (just in time)
 - ◆ Learned from each other, shared effective strategies
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Overall Impact

- ✓ 4 PLCs on local research problems created with high potential for continued collaboration
 - ✓ PT³ faculty members redesigned curricula, increased IT skills, and collaborated with PLC sites
 - ✓ Year-long interns integrated content and technology, and became confident technology learners
 - ✓ Increased IT integration in teacher preparation through e-portfolios
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