

PURDUE POLYTECHNIC INSTITUTE

EDUCATION FOR THE THINKING ECONOMY

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THE TIME IS RIGHT FOR TRANSFORMING HIGHER EDUCATION

BIG MOVE: PURDUE POLYTECHNIC INSTITUTE

1. The world has changed
2. Values adopted
3. Approach and status
4. Partnering together Purdue – Ivy Tech – K-12



1. THE WORLD HAS CHANGED

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THE NEW ECONOMY

WHAT EMPLOYERS LOOK FOR TODAY AND TOMORROW



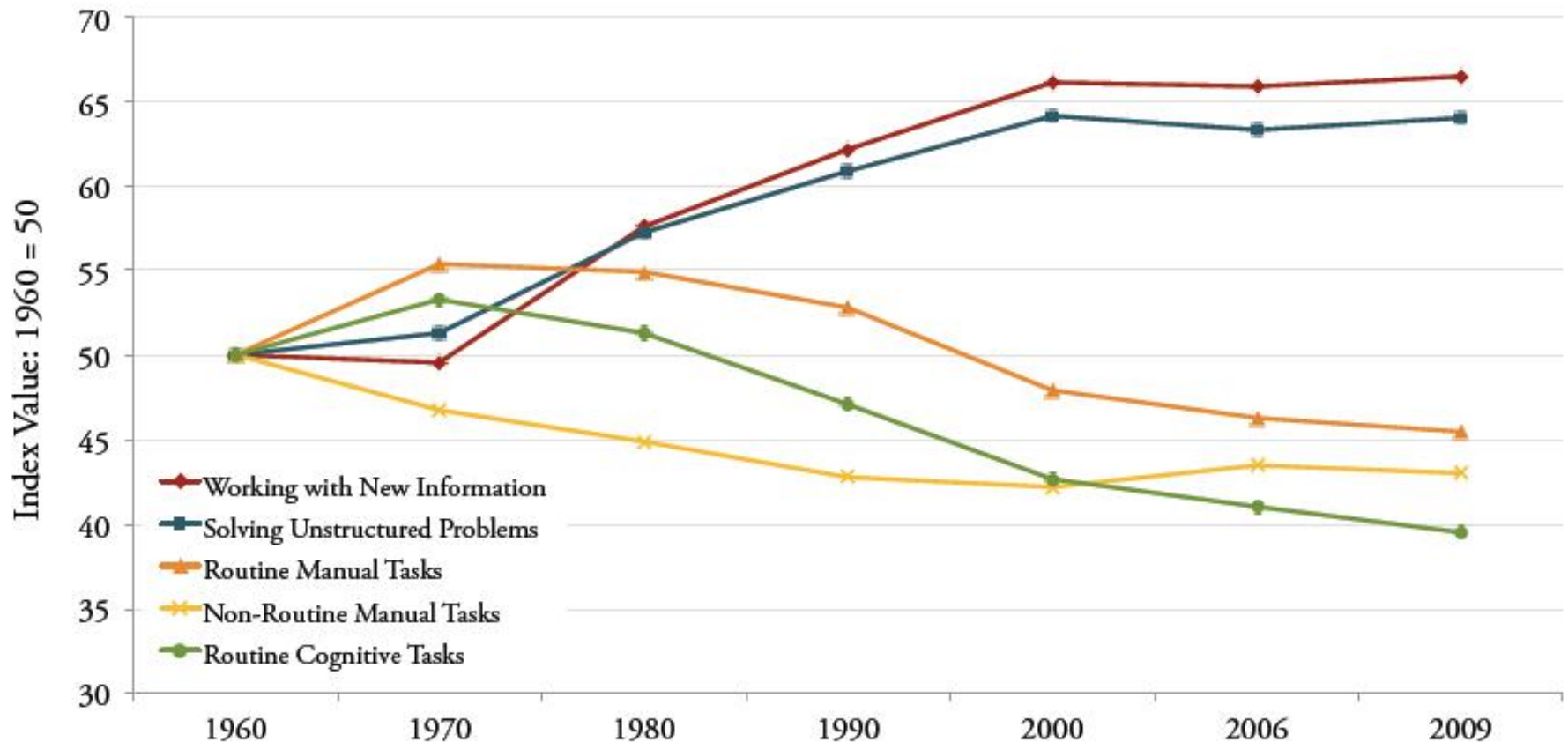
The intellectual equipment needed for the job of the future is an ability to define problems, quickly assimilate relevant data, conceptualize and reorganize the information, make deductive and inductive leaps with it, ask hard questions about it, discuss findings with colleagues, work collaboratively to find solutions and then convince others.

(Robert Reich)

izquotes.com

THE WORLD HAS CHANGED

Figure 3: Index of Changing Work Tasks in the U.S. Economy 1960-2009²¹



2. VALUES, ASSUMPTIONS

2. VALUES ADOPTED

PURDUE POLYTECH VALUES

We cater to the whole person



We value diversity of thinking, knowing, and learning



PURDUE POLYTECH VALUES

Openness, collaboration,
and cooperation

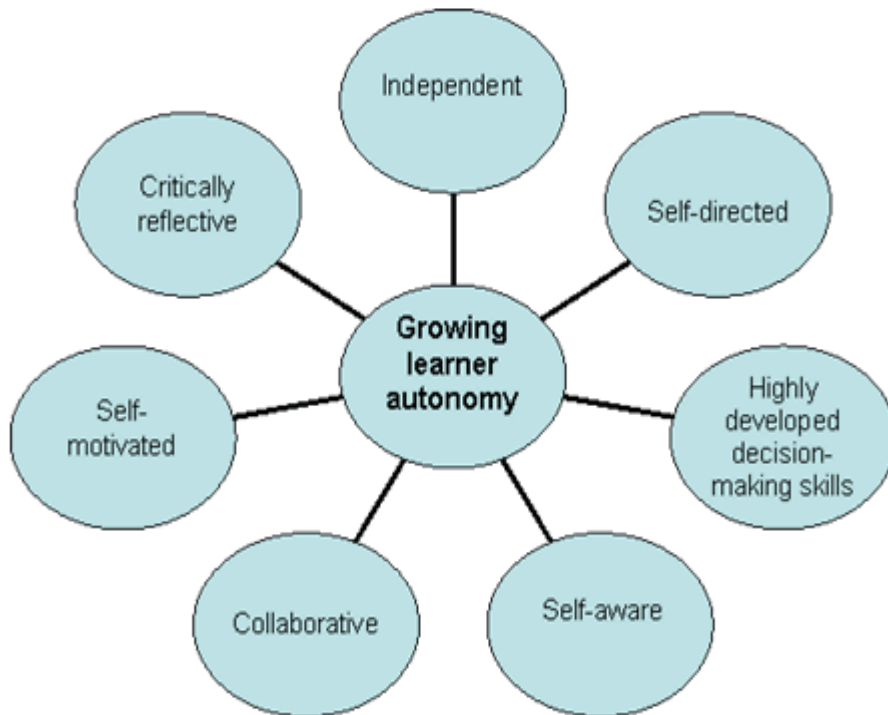


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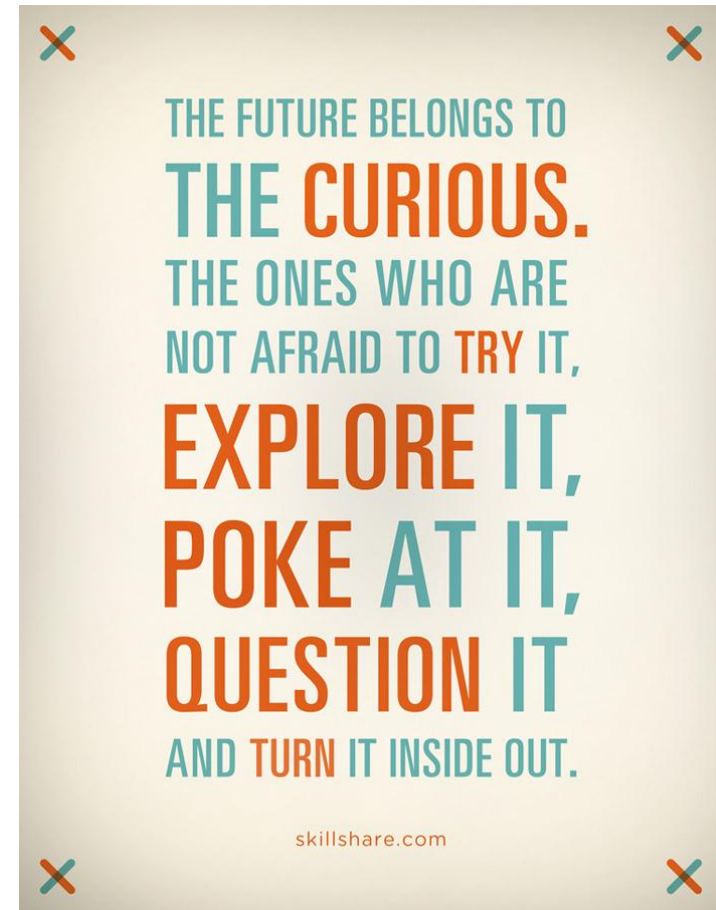


PURDUE POLYTECH VALUES

Students' autonomy with their learning



Risk taking



3. APPROACH

3. APPROACH AND STATUS

PARTNERSHIP FOR EDUCATIONAL R&D

PURDUE

- College of Technology
 - SoET (5), CIT (2), CGT (2), BCM (2), AT (1),
- College of Liberal Arts
 - English(1), Comm(2), Theatre & Performing Arts (1)
- College of Education (1)
- College of Sciences (1)
- DLRC
- CIE/IMPACT

Outside partners

Olin, Cal Poly, Center for STEM Learning U of Colorado



NEW CULTURE FOR STUDENTS

- Students are mentored into discovering and creating a purposeful path rather than given a one size fit all plan of study.
- Students work in classroom with multidisciplinary teams of faculty (mostly) rather than through fragmented mono-disciplinary courses.
- Students learn just in time following their passion and purpose rather than just in case it comes up in the test.
- Students receive credit for demonstrating mastery rather than for seat-time served.
- Students receive credit for everything they learn no matter they learn it, rather than only through our lectures.
- Students are trusted and respected rather than tested and suspected.

NEW CULTURE FOR FACULTY

- Working with students is our highest form of scholarship rather than a routine different from scholarship.
- Faculty trust the students, nurture their passion, and follow their lead rather than be the sage on the stage.
- Faculty model openness, growth mindset, risk-taking, and lifelong learning, the same values and skills we expect from students.
- Faculty are collaborative, cooperative and reflective in their working with students.
- Faculty expect the highest standards from themselves, from each other, and from the students.

NEW CULTURE FOR CLASSROOMS

- Classrooms are open laboratories. Faculty collaborate with each other and with the rest of the community to practice the three R's of the 21st century:
- Rigor: Students practice how to think (reason, analyze, weigh evidence, problem-solve) and communicate effectively.
- Relevance: Problems addressed are relevant to the students' world and interests.
- Relationships: Students' place in the world relative to their peers and to the global world are always central to what they do.

3. APPROACH

**STUDENT IN THE DRIVER SEAT;
LEARNING INTEGRATED AND IN CONTEXT;
COMPETENCY-BASED CREDENTIALING**

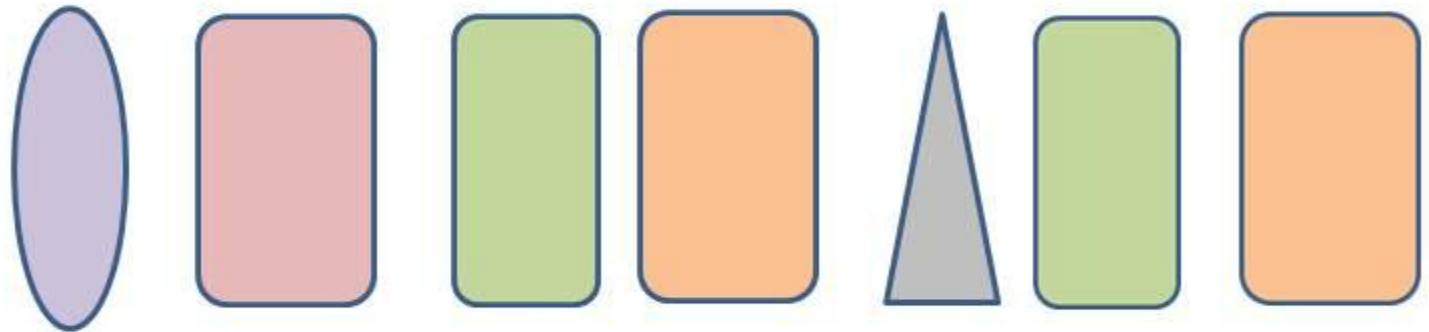
STUDENT CREATES PURPOSEFUL PATH



Problem Based Design:

Purposeful pathways to learning. Progressively harder and broader problems

Physical &
Virtual
learning
PODs



First Year Seminar:

Big contemporary and timeless questions; critical inquiry; frequent writing; information literacy; collaborative learning.

Architecture 1st year

COMPETENCY-BASED CREDENTIALING

DECOUPLING LEARNING FROM CREDIT HOURS

- Student earn badges by demonstrating competency
- Badges and work used stored in electronic portfolios.
- Badges replace grades
- Taxonomy of badges students can earn; some discipline specific, others cross disciplinary
- Self learners, auto-didacts can earn a higher number of badges, faster
- Industrial sponsors and endorsers
- Several interface issues being worked out

4. PARTNERSHIP PPI-IVY TECH-K12

**4. PARTNERING TOGETHER PURDUE – IVY TECH-
OTHERS**

NONE OF US CAN DO THIS ALONE



PARTNERSHIP PPI-IVY TECH

- Badge definitions
- Badge exchange/recognition
- Integrated learning and teaching
- Partnerships with industry
- Educational research community