



# *Mentoring Youth in a Talent Development STEM Pipeline*

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**Background:** For 16 semesters, I did R&D on creating a **Talent / Workforce Development Pipeline** comprised of:

**Youth + Undergrad-mentors + STEM Professionals**

We can create a Pipeline for any industry sector that needs **competent workers**, who *know* what to do, have the right *motivation*, and have developed the *behavioral skills* needed for successful performance.

## **Some key Pipeline Components include these:**

- Trained **Undergrad-mentors** help Youth learn *about* STEM disciplines and learn *why* they are important, then connect Youth with Professionals to learn *how* STEM solves real-world problems.
- **Youth** can be in grades 4-12 (ESL; At-risk; Gifted/Talented; Native; Other).
- **Mentor-Assisted Enrichment Projects** (based on Undergrad expertise and Professional input) provide structure so what's started is completed and presented to an audience, who find out what was done & learned.
- **STEM Professionals** are supplied by any industry sector with a skilled worker shortage, including: Nursing, Teaching, Trades.
- **Incentives** must be external as well as internal motivation.
- **Roles & Responsibilities** must be identified & fulfilled.
- **Training** (not pep talks) must be provided for all participants, using proven Training Activities & Materials (e.g., *Mentoring for Results Training*; *Mentoring Style Indicator*; *Mentoring Action Plan*).
- **Trained Undergrad-mentors** employ best practices from Didactic Instruction & Discovery Learning.
- **Trained Coordinators** match small groups of Youth to participate in Group Mentoring & Team Projects, and monitor activity of all participants.
- Include the **"ARTS"** to attract STEM-resistant Youth (especially girls & minorities) to participate in a **STEAM Project**.

## **Some key Benefits include these:**

**Youth** identify careers that match their talents, aptitudes and aspirations – so they take the right courses & graduate.

**Undergrad-mentors** learn how to manage a Team Project & maximize learning – and access potential Employers.

**Employers** hire better prepared new hires – this increases work performance & reduces costly turnover.