SUPPORTING VETERANS ON THE PATH TO ENGINEERING AND TECHNOLOGY CAREERS

ACADEMIC & VOCATIONAL TRAINING PROGRAMS FOR VETERANS WITH DISABILITIES AT THE UNIVERSITY OF PITTSBURGH
OVERVIEW

• WHO WE ARE

• VETERANS TRANSITION PROGRAMS: INSPIRATION

• VOCATIONAL & ACADEMIC TRACKS
  • NEED
  • APPROACH ROOTED IN THEORY
  • RESULTS

• IN THEIR OWN WORDS
WHO WE ARE

- RORY COOPER, PhD
  - CHAIR, PITT RST
  - DIRECTOR, HERL
  - CO-DIRECTOR, QoLT ERC

- MARIA MILLEVILLE
  - EDUCATION & OUTREACH COORDINATOR, HERL & QoLT ERC

- NATHAN BASTIEN
  - ELeVATE STUDENT
  - PIT T HONORS GRADUATE

- CLARENCE WILSON
  - AIM STUDENT
VISION
NEED

- OIF & OEF VETERANS: UNIQUE POPULATION – UNIQUE SET OF NEEDS

- WAR ZONE: OVER 2 MILLION DEPLOYED IN IRAQ & AFGHANISTAN
- AGE: 52% ARE 20-29 YEARS OLD
- WOUNDED & INJURED: 45,000
- PTSD: 40%
EMPOWERMENT THROUGH EDUCATION

- BENEFITS FOR VETERANS:
  - USING SKILLS ACQUIRED IN THE MILITARY
  - EMPLOYMENT
  - ECONOMIC STANDING
  - QUALITY OF LIFE

- BENEFITS FOR SOCIETY:
  - DIVERSITY IN THE WORKFORCE & POSTSECONDARY PROGRAMS
  - GLOBAL COMPETITION
WHAT IS AVAILABLE NOW

- Transition process not well understood
- Non-traditional students: unique set of needs
- Disability: additional challenges
- Lack of knowledge & expertise
- Lack of resources
WHAT CAN BE DONE?

THEORETICAL FRAMEWORK:
- EXPERIENTIAL LEARNING
- SELF-EFFICACY ENHANCEMENT
- SOCIAL COGNITIVE CAREER THEORY
- SOCIAL ENGAGEMENT THEORY

ELeVATE & AIM GOALS:
- SUPPLEMENTAL ASSISTANCE TO VETS IN TRANSITION TO EDUCATION & EMPLOYMENT
- EDUCATE FACULTY, STAFF, AND INDUSTRY REPS ABOUT VETERANS’ NEEDS
- DEMONSTRATE THAT TRANSITION PROGRAMS FOR VETERANS ARE EFFECTIVE
- BE A MODEL FOR VETERANS TRANSITION PROGRAMS
ELeVATE: PROGRAM DESIGN

- 3-PHASE APPROACH
- ACADEMIC PREPARATION
- PROFESSIONAL DEVELOPMENT
- VOCATIONAL COORDINATION
- COMMUNITY REINTEGRATION
ELeVATE: IMPORTANT ELEMENTS

- TIMELINE
- MENTORING
  - FACULTY
  - GRAD STUDENT
  - COMMUNITY MENTOR
- RESEARCH
  - REAL-LIFE EXPERIENCE
  - REHAB SCIENCE & TECHNOLOGY: CONTEXT FOR LEARNING ENGINEERING & TECHNOLOGY SKILLS
- DELIVERABLES: PAPER, POSTER, PITCH
ELeVATE: ACADEMIC PREPARATION

- ESSENTIAL SKILLS WORKSHOPS
  - INTRO TO ASSISTIVE TECHNOLOGY, GOOD DESIGN PRACTICES, RESEARCH METHODS, ETC.

- MATH
  - ALGEBRA, PRE-CALCULUS, CALCULUS, STATISTICS
  - INDIVIDUALIZED APPROACH

- WRITING
  - ESSENTIALS OF TECHNICAL WRITING
  - INDIVIDUALIZED APPROACH
ELeVATE: PROFESSIONAL DEVELOPMENT

- PROFESSIONAL DEVELOPMENT
- CAREER PANEL, RESUME WRITING, INTERVIEW SKILLS, NETWORKING OPPORTUNITIES
- CONTENT INSPIRED BY STUDENTS’ NEEDS
- APPLYING TO COLLEGE, GI BILL BENEFITS, RESILIENCE TRAINING
ELeVATE: REHABILITATION NEEDS

- WHY VOCATIONAL REHABILITATION
- MENTOR TRAINING: TBI & PTSD AWARENESS
- ONE-ON-ONE MEETINGS
  - REHABILITATION PLAN
  - ELeVATE ROADMAP
- GROUP SESSIONS
  - WEEKLY
  - ATTENDED BY ALL STUDENTS AND STAFF
AIM: ESSENTIAL ELEMENTS

• TIMELINE
  • WEEKS 1-12:
    • TRAINING AT HERL
    • OCCUPATIONAL COMPETENCIES
    • KNOWLEDGE, SKILLS, ABILITIES
  • WEEKS 13-18:
    • 40 HRS/ WEEK PAID APRENTICESHIP
    • CAREER SKILLS WORKSHOP
    • APPLY/ INTERVIEW FOR FULL-TIME EMPLOYMENT
AIM: COMPETENCIES

- JOB PLANNING AND MANAGEMENT
- JOB EXECUTION
- QUALITY CONTROL AND INSPECTION
- PROCESS ADJUSTMENT AND CONTROL
- GENERAL MAINTENANCE
- INDUSTRIAL SAFETY AND ENVIRONMENTAL PROTECTION
- CAREER MANAGEMENT AND EMPLOYMENT RELATIONS
AIM: KNOWLEDGE & SKILLS

- TECHNICAL SKILLS
- COMMUNICATION SKILLS
- DECISION MAKING
- PROBLEM SOLVING
- INTERPERSONAL SKILLS
ENVIRONMENTAL FACTORS

- HUMAN ENGINEERING RESEARCH LABORATORIES
- VET-FRIENDLY
- CONNECTION TO VETS ORGANIZATIONS
- DIVERSITY
- RESOURCES

- PITTSBURGH
- REHAB EPICENTER
- COST OF LIVING
- COLLEGES AND UNIVERSITIES: MANY OPTIONS SERVING INDIVIDUALS OF DIFFERENT ACHIEVEMENT LEVELS
- EXCITING INNOVATIVE RESEARCH
- TECH JOBS
OUTCOMES

• STUDENTS
  • 3 ELeVATE COHORTS
  • 17 PARTICIPANTS
  • 100% SATISFACTION
  • 14 ENROLLED IN POSTSECONDARY PROGRAMS
  • 2 ENROLLED IN GRADUATE PROGRAMS (MEDICINE, PHARMACY)
  • 7 PARTICIPANTS CONTINUED TO WORK ON THEIR PROJECTS UPON COMPLETION OF THE 10-WEEK SUMMER EXPERIENCE

• PROGRAM
  • TRAINING MATERIALS FOR VETS
  • TRAINING MATERIALS FOR MENTORS
  • RENEWED FUNDING FROM THE NSF
  • NEW PROGRAMS: REV-T & AIM

• AIM:
  • FIRST COHORT – 2 VETERANS
  • NEW GRANT FROM MEAF
FUTURE PLANS

- **MAIN GOAL: EXPANSION AND SUSTAINABILITY**

- **RESEARCH STUDY: DEMONSTRATE EFFECTIVENESS OF ELeVATE**

- **REPLICATION of ELeVATE:**
  - NEW PARTNERSHIPS: COLLEGES & TRANSITION UNITS
  - ESSENTIAL RESOURCES: ROADMAP, HOW-TO GUIDE, TRANSITION CURRICULA, REHABILITATION COUNSELING CURRICULA

- **EXPANSION OF AIM:**
  - EXPAND TO ALL PEOPLE WITH DISABILITIES
  - NEW OJT PARTNERS

- **NEW FUNDING**

- **RECRUITING MORE VETERANS**
IN THEIR OWN WORDS

• NATHAN BASTIEN
  • US ARMY
  • UNIVERSITY OF PITTSBURGH HONORS COLLEGE GRADUATE
  • ELEVATE GRADUATE

• CLARENCE WILSON
  • US ARMY
  • AIM STUDENT
SPECIAL THANKS

- NATIONAL SCIENCE FOUNDATION, PROJECT EEC 1036964
- HUMAN ENGINEERING RESEARCH LABORATORIES
- REHABILITATION SCIENCE AND TECHNOLOGY, UNIVERSITY OF PITTSBURGH
- QUALITY OF LIFE TECHNOLOGY CENTER, CARNEGIE MELLON & UNIVERSITY OF PITTSBURGH
- OUR PARTNERS AT VETERANS ORGANIZATIONS
- OUR MENTORS
- OUR STUDENT VETERANS