

# Long-Term Impacts of Project-Based Learning

## Alumni Survey Findings

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Research questions: What are the long-term professional and personal impacts of experiential project work on the careers and lives of alumni? What factors influence those impacts?

Group studied: A sample of over 10,000 alumni of Worcester Polytechnic Institute's project-based curriculum, classes of 1974 to 2011. Survey yielded a 25% response rate, giving a 95% confidence level.

Curricular description: Each alumnus completed two nine-credit-hour intensive academic projects (not course-based) involving real-world problems. Projects were completed in small teams under faculty guidance, often for external organizations. Over half of students complete at least one project off campus; about 40% complete one overseas.

**Junior year interdisciplinary project: a problem involving social issues and human needs**

**Senior year capstone project: a significant research or design effort in the major area**

Intended learning outcomes: Critical thinking; written and oral communication; research skills; application of prior knowledge in authentic settings; collaborative problem solving; interdisciplinary and contextual understanding.

### ***Areas of greatest reported long-term impact***

- **Professional abilities:** Taking responsibility for one's own learning, developing ideas, integrating information, solving problems, understanding ethical responsibilities, using current technology.
- **Interpersonal and communication skills:** Teamwork, project management, leadership, written and spoken communication, communication, interpersonal dynamics, professional interactions.
- **Professional advancement:** Succeeding in business or industry, gaining knowledge to inform future plans.
- **World views:** Understanding connections between technology and society, awareness of how one's decisions impact others, awareness of global issues, understanding of other cultures.
- **Personal impacts:** Developing a stronger personal character, achieving work/life balance, feeling connected to the university community, having one's life enriched in non-academic ways.

### ***Differences between alumni groups***

- **Alumni who completed projects away from the campus** reported greater impact in 33 of 39 areas, with notable differences in interpersonal and communication skills, world views, and personal impacts.
- **Females** reported more positive impacts than males in 36 of 39 areas, again with notable differences in interpersonal and communication skills, world views, and personal impacts.
- **Engineering alumni** reported more positive impacts in 29 of 39 areas than alumni of other fields, including all 24 items related to professional abilities and advancement, interpersonal skills, and communication skills.

## Long-Term Impacts of Project-Based Learning (n=2532)

### Professional Impact Area % Reporting Positive Impact

Taking responsibility for one's own learning	89
Developing ideas	89
Solving problems	88
Having effective professional interactions	87
Functioning effectively on a team	86
Effectively managing projects	86
Writing clearly and effectively	83
Succeeding in business or industry	78
Being an effective leader	78
Speaking clearly and effectively	76

### Personal Impact Area % Reporting Positive Impact

Developing a stronger personal character	87
Feeling one's own ideas are important	79
Feeling able to make a difference	66
Having an enriched personal life	64
Feeling connected to WPI	62
Achieving work/life balance	53

### Impact on World Views % Reporting Positive Impact

Viewing issues from different perspectives	79
Understanding connections between technology and society	77
Understanding global issues	55
Understanding people of other cultures	51
Developing respect of cultures outside one's own	49

### References

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