Trees & Youth in the City:
Research on Affects of Urban Forestry Work Experiences on Inner City, Underserved Adolescents

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Trees & Positive Youth Development

Sponsors & Collaborators:
US Forest Service
National Urban & Community Forestry Advisory Council
EarthCorps
University of Washington
Research Questions

- Do adolescents gain positive development benefits from urban nature program experiences?
- What is the relationship of adolescent nature program experience and career choice?

Research Phases

- Phase I: Interviews & Surveys
  - youth program “veterans” in Seattle
  - urban forestry professionals - U.S.
- Phase II: Pre/post evaluations
  - youth programs - 8 across U.S.
- Phase III: Pre/post evaluations
  - youth programs - Seattle
Phase II Research

- Pre/post evaluations
  - youth programs - 8 across U.S.

Evaluation Methods

- Summer 2005
- Youth Programs - Seattle, national
- Pre & Post Tests
- Survey - developmental concepts, demographics, 10 pages
- Statistical data analysis
Youth Sampling

- 2005 - 8 programs, all U.S., 119 youth
- Youth aged 15-19 (12-19 actual)
- Program of 60+ hours
- Activity - restoration of natural areas and/or tree planting
- Additional activity - education, leadership development, job skills
Developmental Concepts

- Environmental Identity
- Self Efficacy (general & social)
- Environmental Concern (biosphere, egotism, altruism)
- Self Perception (social, athletic, physical, job, friendship, behavior, self-worth)
- Civic Action

Analysis Outcomes

- Developmental Concepts
- Survey(s) data
- Statistical tests - means/SDs, correlation, t-Tests, ANOVA
- Hypothesized and Actual
I like the shading better!
Urban Forestry Youth Programs
Youth Development Evaluation - Summer 2005 pre/post

Developmental Concepts

Hypothesis 3
specific change

2005 Actual Results
(about 100 cases)
Analysis - Youth Traits

- across programs, 2006 - 1 program
- by age 12-19
- gender
- socio-economic status
- cultural background
- nature program prior experience

Phase III Research

- Pre/post evaluations
  - youth programs - Seattle
  - add reflection exercises

Reflection: to consider a past experience or event and the impact it has had, yielding insight about self and others
Phase I Research

- Phase I: Interviews & Surveys
  - youth program “veterans” in Seattle
  - urban forestry professionals - U.S.
Participants - Interviews/Surveys

- Professionals:
  - snowball sample
  - 28 "minority" individuals, throughout U.S.
- Youth
  - directed sample
  - 26 inner city, Seattle metro region
  - 14-18 age

Nature Program Activities

<table>
<thead>
<tr>
<th>Main Activity</th>
<th>Pros %s (n=26)</th>
<th>Youth %s (n=26)</th>
<th>% difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetation/Ecosystem Enhancements</td>
<td>42%</td>
<td>85%</td>
<td>-42%</td>
</tr>
<tr>
<td>Structures &amp; Construction</td>
<td>15%</td>
<td>50%</td>
<td>-35%</td>
</tr>
<tr>
<td>Litter and Clean Up</td>
<td>0%</td>
<td>19%</td>
<td>-19%</td>
</tr>
<tr>
<td>Urban Greening &amp; Horticulture</td>
<td>15%</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>Nature Reflection/Apprecation</td>
<td>8%</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>Informal Experiences</td>
<td>12%</td>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>Leadership Experience</td>
<td>23%</td>
<td>4%</td>
<td>19%</td>
</tr>
<tr>
<td>Agricultural Education</td>
<td>23%</td>
<td>0%</td>
<td>23%</td>
</tr>
<tr>
<td>Unique Program Experience</td>
<td>27%</td>
<td>0%</td>
<td>27%</td>
</tr>
<tr>
<td>Outdoor Recreation</td>
<td>31%</td>
<td>4%</td>
<td>27%</td>
</tr>
<tr>
<td>Structured Education</td>
<td>94%</td>
<td>12%</td>
<td>42%</td>
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</tbody>
</table>

Pros recalled multiple experiences - > 100%
Memorable Program Aspects

<table>
<thead>
<tr>
<th>Memorable Aspects</th>
<th>Pros %s (n=27)</th>
<th>Youth %s (n=26)</th>
<th>% difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stewardship &amp; Giving Back</td>
<td>7%</td>
<td>15%</td>
<td>-8%</td>
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<tr>
<td>Outdoor Recreation &amp; Physical Activity</td>
<td>17%</td>
<td>23%</td>
<td>-6%</td>
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<tr>
<td>Personal Development</td>
<td>3%</td>
<td>8%</td>
<td>-4%</td>
</tr>
<tr>
<td>Social Dynamics</td>
<td>66%</td>
<td>58%</td>
<td>8%</td>
</tr>
<tr>
<td>Nature Identity &amp; Appreciation</td>
<td>21%</td>
<td>8%</td>
<td>13%</td>
</tr>
<tr>
<td>Sense of Achievement</td>
<td>21%</td>
<td>8%</td>
<td>13%</td>
</tr>
<tr>
<td>Leadership &amp; Opportunity</td>
<td>21%</td>
<td>8%</td>
<td>13%</td>
</tr>
<tr>
<td>Teachers &amp; Mentors</td>
<td>34%</td>
<td>4%</td>
<td>31%</td>
</tr>
<tr>
<td>Learning &amp; Discovery</td>
<td>34%</td>
<td>4%</td>
<td>31%</td>
</tr>
</tbody>
</table>

multiple responses per person > 100%

Career Choice Influences

<table>
<thead>
<tr>
<th>Career Choice Influences</th>
<th>Pros %s (n=28)</th>
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</thead>
<tbody>
<tr>
<td>Family Dynamics</td>
<td>18%</td>
</tr>
<tr>
<td>Revealed Social Concerns</td>
<td>21%</td>
</tr>
<tr>
<td>Nature Solace &amp; Joy</td>
<td>25%</td>
</tr>
<tr>
<td>Professional Modeling</td>
<td>25%</td>
</tr>
<tr>
<td>UF as Unique Professional Niche</td>
<td>29%</td>
</tr>
<tr>
<td>Nature Comfort &amp; Affinity</td>
<td>36%</td>
</tr>
<tr>
<td>Satisfactions &amp; Aesthetics</td>
<td>39%</td>
</tr>
<tr>
<td>Develop Aptitudes, Interests &amp; Abilities</td>
<td>61%</td>
</tr>
</tbody>
</table>

multiple responses per person > 100%
Conclusions

- Teen years - volatile or stable?
- Multiple & diverse experiences = environmental identity & personal development
- Not just learning, competence! in social setting

Conclusions - Youth Programs

- coordinated series of opportunities
- across collaborative organizations
- across place and life cycle
- landscape/regional scale of programs vs. “random acts of nature”