THE INDUSTRIAL/EDUCATIONAL (K-20) PARTNERSHIP:  
A WIN/WIN PROPOSITION

Susan Wood, PhD.

Westinghouse Electric Corporation, Baltimore, Maryland

Summary

This talk presents some examples of how the Westinghouse Electric Corporation, a Corporation employing 122,000 people world-wide, supports educational programs - kindergarten through graduate school. While the Westinghouse Foundation directly supports many activities, resources (people and dollars) actually reside at various levels of the Corporation (Figure 1).

Figure 1 - An Industrial Model of Educational Support
The value of leveraging the enthusiasm of a highly skilled workforce in high technology companies cannot be overstressed. Access to employee support is generally facilitated at the Business Unit or Divisional levels. In all cases, it is necessary to secure a Corporate sponsor at the management level. Examples of educational initiatives within Westinghouse are summarized in Figure 2.

**Examples of Corporate Educational Initiatives**

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<tr>
<th>Elementary</th>
<th>Middle</th>
<th>High</th>
<th>Undergrad</th>
<th>Grad</th>
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<tr>
<td>Guilford Windsor Hills</td>
<td>Dunbar Harlem Park</td>
<td>Hammond Southern, Walbrook</td>
<td>B.G. Lamme Scholarship</td>
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<td><strong>EDUCATIONAL PARTNERSHIPS</strong></td>
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<td>Manufacturing Program</td>
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<td>University of Pittsburgh</td>
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<td>Discover &quot;E&quot; 76 Maryland Schools</td>
<td>STC Science Honors Institute</td>
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<td>Junior Achievement Roland Park</td>
<td>STS Science Talent Search</td>
<td>Loaned Exec Scholars Program</td>
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<td>University of Pittsburgh</td>
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Figure 2 - Sample Corporate Educational Initiatives Chart

The Westinghouse - Electric Systems Group (ESG) supports Discover"E", Junior Achievement and a number of Educational Partnerships within Maryland at elementary, middle and high schools and the University of Maryland - Baltimore County campus (UMBC). Figure 3 describes the types of activities at Guilford Elementary. Westinghouse recognizes the need for practicing engineers and scientists to interact with elementary level children to provide role models and exposure to scientific and engineering concepts. Two unique Westinghouse programs aimed at high school seniors are described in Figures 4 and 5. The Talent Search is a nationally recognized, 50 year old program.
Westinghouse - MS&TC/Guilford
EDUCATIONAL PARTNERSHIPS

- Established January 1990

Activities:
- Developing Teaching Materials for Classes in Robotics, Math, Science, etc.
- Teaching All Types of Classes
- Providing People for the Mentor Program
- Designing/Funding the Guilford Computer Lab

Figure 3 - Westinghouse/Guilford Educational Partnership

Westinghouse Science Talent Search

2nd Place $30K
Denis Lazarev
Molecular Genetics

1st Place $40K
Ashley Ritter
Fractal Geometry

3rd Place $20K
William Ching
Neurobiological Research

- Mission: To Identify and Award Scholarships to High School Seniors with Scientific Creativity and Potential
- National Program Established in 1942
- $205,000 Awarded in 1991
- Almost 2,000 Winners to Date Receiving Cash Awards of $2.8M

Figure 4 - Westinghouse Science Talent Search

Women in Engineering Conference: A National Initiative
1991 WEPAN National Conference
The Science Honors Institute, a local program initiated by researchers, is a model activity replicatable by other companies.

**Science Honors Institute**  
**Westinghouse Science and Technology Center**

- Mission: To Expose High School Scholars to Engineering and Scientific Concepts
- Established 1958
- Twelve Saturday Morning Lectures
- 300 High School Seniors Solicited From 120 Schools in the Greater Pittsburgh Metropolitan Area
- Top Two Students Awarded Paid Summer Internship at STC
- 40 Percent Female Participation

Figure 5 - Science Honors Institute of Pittsburgh

**Westinghouse Scholars Program**

- Mission: Leverage Alumni Dollars Against Corporate Gift Matching Program To Provide Scholarships
- Established 1988
- 37 Students in Program
- Scholarship Renewable, Based on 3.0 GPA
- $175,000 From \(\oplus\) to Date

Figure 6 - Westinghouse Scholars Program
A myriad of activities exist at university undergraduate and graduate levels. The Scholars Program at the University of Pittsburgh (Figure 6) embodies the leveraging potential of corporate alumni. Two important Women in Engineering activities are described in Figures 7 and 8. Other programs are aimed at graduate program development and graduate student support (e.g. the Westinghouse Benjamin Lamme Scholarship).

**Women in Engineering Initiative**

- **Mission:** To Increase Participation of Women in Engineering - Retention and Enrollment
- **Established 1988**
- **Received First Significant Industrial Grant From**
- **Contribution To Date $32K**
- **Supported by the College of Engineering and Corporate Contributions From**
  - Boeing
  - NASA
  - HP
  - Ford
  - AT&T
  - IBM
  - Rockwell
- **Focus Areas:**
  - Tutoring
  - Big Sisters
  - Mentoring

![Graph](image)

Figure 7 - University of Washington's Women in Engineering Initiative

Additional activities include funding for development of a Master of Science level Manufacturing Engineering program at the University of Pittsburgh. This grant was the largest Westinghouse Foundation gift in the history of the Foundation. ESG also provides research grant support such as that directed to the Systems Research Center at the University of Maryland (Figure 9).

The Westinghouse tradition of supporting educational activities is jointly motivated by community responsibility and the need to ensure the priming of the skilled workforce pipeline. When academia and industry link together, they can form a truly winning combination!
Women in Engineering Scholarship

- Mission: To Provide Those Talented Young Women Who Are Unprepared to Pursue a Technical Program With an Opportunity To Receive a Dual Degree
- Established November 1989
- Foundation Grant of $15,000 per Year for 3 Years

Figure 8 - Women in Engineering Scholarship at the College of Notre Dame in Maryland

Systems Research Center

University of Maryland at College Park
- Mission: To Advance Knowledge in Systems Engineering and Make Results Available to Industry
- Established 1987
- $200,000 Annual Grant for 5 Years Research Support
- NSF "Center of Excellence"
- Thrust Areas:
  - Intelligent Servomechanisms
  - Chemical Process Systems
  - Manufacturing Systems
  - Communications and Signal Processing Systems
  - Systems Integration

Figure 9 - Systems Research Center at the University of Maryland

Women in Engineering Conference: A National Initiative
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