Education for Sustainable Development: An Assessment of West Midlands Schools

An Interactive Qualifying Project by:
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In light of a decline in school funding and Eco-Schools participation, our team worked to develop an assessment tool to determine where schools succeed in ESD and where they can improve.

This tool needed to accurately

Understand educator attitudes concerning sustainability and its place in the classroom

Observe sustainability practice in action at schools

Characterize student understanding and participation in ESD
Introduction

Background

- United Nations and the Sustainable Development Goals
- Education for Sustainable Development and the UK
- Developing Assessments
  - Case studies

Methodology

- Focus Group
- Sustainability Observational Analysis
- Faculty Interviews
- Student Surveys

Results and Conclusions

- Findings
- Sustainability Reports
- Recommendations
Background
2015: The United Nations Sustainability Goals

UN 2015 Sustainable Development Goals
Education for Sustainable Development (ESD)

- ESD implementation includes:
  - Improving schools’ learning environment
  - Adopting whole-school approach

- Eco-Schools: International Educational Program
  - Supports ESD practice
  - Largest educational program in the world
  - Highest recognition is the Green Flag Award

- UN commends UK for ESD implementation
  - 70% of UK schools registered with Eco-Schools
Designing Assessments

1. Planning
   - Define performance criteria and evidence
   - Determine type of data to be collected
   - Identify what knowledge gaps already exist

2. Design and Development
   - Define context of the assessment
   - Explore assessment types and consider needs

3. Quality Check
   - Examine assessment for potential biases
   - Pilot assessment
   - Compare data to existing benchmarks
Case Studies: University of Bristol and Latvian Schools

University of Bristol
- Examined curriculum for frequency of ESD
  - Employed text-count based methodology and student interviews

Latvian Schools
- Explored two schools exhibiting best practice
  - Interviewed administrators about how ESD was incorporated in curriculum

Want to generate results that offer insights into:
- Frequency of ESD
- Subject matter in the curriculum
- Experiences of teachers and students with ESD
Methods
Focus Group

- 9 educators from Worcestershire and Hereford counties
- Focused around educator opinions on ESD
  - How do they incorporate the ideals of sustainability in their classrooms
  - What types of behaviors do they consider sustainable
- Unstructured: cover broad topics instead of specific questions
Observational Analysis

● Given a tour by geography educator
  ○ Observed the sustainability features on checklist

● Observation criteria:
  ○ Is each item in the checklist seen?
  ○ How well are they maintained and implemented?

● Score based on those factors
Faculty Interviews

- **Department Heads**
  - (9 Questions)
- **Semi-structured format**
  - Interviewer
  - Scribe
- **Potential patterns, curriculum topics, shared feelings or commonly flawed practices**
Student Surveys

- Surveys given to department heads to administer to a representative sample of students
- Approximately 25 surveys per school, asked for even representation of gender and year
- Survey responses reflect student perception of and participation in sustainable actions
Analysis

- Individual school analyses
- Each school will receive a review of their ESD practices
  - Will be scored similarly to Ofsted reports (1 to 5, instead of 1 to 3)
  - Schools will be averaged. The average school receives a 3.
- Suggestions for improved sustainability will be included

Scores are given on a scale of 5-Excellent, 4-Good, 3-Satisfactory, 2-Needs Improvement, 1-Poor

<table>
<thead>
<tr>
<th>Section</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>Sustainability implementation</td>
<td>[1-5]</td>
</tr>
<tr>
<td>Curriculum integration</td>
<td>[1-5]</td>
</tr>
<tr>
<td>Student understanding of sustainability goals</td>
<td>[1-5]</td>
</tr>
<tr>
<td>Overall</td>
<td>[1-5]</td>
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</table>
Results
March 12th Focus Group

• Most geography educators are displeased with sustainability education, practices, and understanding in their schools
  ○ Sustainability education is provided mainly by the geography department, outside of set curriculum
  ○ Geography not compulsory in higher levels
  ○ Higher level curriculum geared mostly toward GCSE preparation
Observational Analysis

- Most schools lack a fully realized recycling program
  - Did not have proper separation
- Older buildings make it difficult to implement new sustainable systems
- Every school visited had an outdoor area for students
- Few demonstrated an explicit effort to promote sustainability within the schools

<table>
<thead>
<tr>
<th>School</th>
<th>Preliminary Score</th>
<th>Scaled Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>School B</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>School C</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>School D</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>School E</td>
<td>32</td>
<td>5</td>
</tr>
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</table>
Faculty interview

- Same obstacles mentioned by almost all educators:
  - Not enough time allotted to geography educators to cover sustainability
  - Budgetary restrictions
  - Lack of support from senior management
  - Students feel disconnected to sustainability issues

- Educators have taken steps to improve ESD practice:
  - Use of natural surrounding for teaching sustainability
  - Raise students’ interest in sustainability
  - Create exciting sustainable classrooms
  - Have dedicated people to be role model in ESD

<table>
<thead>
<tr>
<th>School</th>
<th>Positive (P)</th>
<th>Negative (N)</th>
<th>Preliminary Score (P/N)</th>
<th>Scaled Score</th>
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<tbody>
<tr>
<td>School A</td>
<td>8.00</td>
<td>10.50</td>
<td>0.79</td>
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</tr>
<tr>
<td>School B</td>
<td>6.00</td>
<td>8.50</td>
<td>0.70</td>
<td>2</td>
</tr>
<tr>
<td>School C</td>
<td>28.00</td>
<td>23.00</td>
<td>1.22</td>
<td>3</td>
</tr>
<tr>
<td>School D</td>
<td>11.00</td>
<td>12.00</td>
<td>0.92</td>
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</tr>
<tr>
<td>School E</td>
<td>22.00</td>
<td>7.00</td>
<td>3.14</td>
<td>5</td>
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</table>
Student surveys

- Four schools returned completed surveys
- No demographic trends noted

<table>
<thead>
<tr>
<th>School</th>
<th>Preliminary Score</th>
<th>Scaled Score</th>
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</thead>
<tbody>
<tr>
<td>School A</td>
<td>33.08</td>
<td>3</td>
</tr>
<tr>
<td>School B</td>
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<td>n/a</td>
</tr>
<tr>
<td>School C</td>
<td>29.64</td>
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<tr>
<td>School D</td>
<td>22.53</td>
<td>2</td>
</tr>
<tr>
<td>School E</td>
<td>33.5</td>
<td>3</td>
</tr>
</tbody>
</table>

Question 2 asked students to gauge how often they participated in daily activities that relate to living a more “eco-friendly” lifestyle.
Student surveys

- Sustainability lessons are occurring in schools, but not very frequently (avg 0.64=once per month/Unsure)
- Many students do not make a conscious effort to reduce their consumption

Question 8 asks students to gauge their enjoyment of environmental and sustainability education.

Question 9 asks students to assess the quality of sustainability education they are receiving in the classroom.
Overall Results

- Schools were scored with respect to the other schools visited
  - Difficult to draw analytical conclusions with a small sample
- Every school analyzed had members aware of sustainability and its importance
- Many schools had difficulty teaching sustainability as more than a subject in geography
- A few dedicated people can influence an entire school

<table>
<thead>
<tr>
<th>School</th>
<th>Interview Score</th>
<th>Observational Score</th>
<th>Survey Score</th>
<th>Final Score</th>
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</thead>
<tbody>
<tr>
<td>School A</td>
<td>1.742</td>
<td>2.039</td>
<td>3.343</td>
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<tr>
<td>School B</td>
<td>1.555</td>
<td>1.893</td>
<td></td>
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</tr>
<tr>
<td>School C</td>
<td>2.700</td>
<td>3.058</td>
<td>2.995</td>
<td>3</td>
</tr>
<tr>
<td>School D</td>
<td>2.033</td>
<td>3.350</td>
<td>2.276</td>
<td>3</td>
</tr>
<tr>
<td>School E</td>
<td>6.970</td>
<td>4.660</td>
<td>3.385</td>
<td>5</td>
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</table>
Conclusion
Summary

- Developed an assessment tool to identify trends and offer insights into the current state of ESD
- Used the tool to assess ESD practice in five secondary schools in the region
- Generated a sustainability report for each participating school
- Effectiveness of the tool
  - Although sample size of the study was small, this tool is designed to work on a larger scale
  - Gives accurate assessment of ESD at each school: good practice, setbacks, current efforts
Recommendations

For Schools

- **Communication across departments**
  - Improve integration of sustainability across the curriculum

- **Visible Sustainability Features**
  - Lead to increased awareness and increased enthusiasm

- **Project Based Learning**
  - Promotes critical thinking about sustainability

- **Eco-Committee**
  - Educator run/student run
  - Improve sustainable practice

For the Tool

- **Increase the Sample Size**
  - Analyze more schools to reach a more accurate measure of an average school.

- **Broaden the Range of Interviewees**
  - Interview senior management and educators from departments beyond geography.

- **Update the Observational Analysis**
  - Modify the checklist to better represent common features seen at many schools.

- **Create Electronic Surveys**
  - Electronic surveys are both easier to administer and analyze, as well as less wasteful than paper.
Acknowledgements

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Katy Boom, Director of Sustainability, University of Worcester

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Questions?
References


Roadmap for localizing the SDGs: Implementation and monitoring at subnational level. (2016, Jun 7.). *States News Service*
