Grading by Experience Points: An Example from Computer Ethics

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Lee Sheldon’s 2012 book is on grading by experience points (XP).
Each student begins as a level-1 avatar, can rise to level 12.
Students can never lose points by doing an assignment, only gain.

Our course—Ethics in Computing
• Required 1-credit course for computer-science majors.
• Major topics
  - Ethical principles
  - Intellectual property
  - Privacy
  - Security
  - Malware
  - Software safety

The grading scheme

Students choose a topic for the various rounds of ethical analyses,
... then submit their work.
After two rounds of peer review,
the instructor/TA assign scores
... then score the students’ reviews.

High-school biology class
• Points for doing homework, passing quizzes.
• Successive levels require twice as many points as previous levels.

Teaching with Technology
• U. of Arizona South
• Multiple assgts. in each content area, successive levels of Bloom’s taxonomy.
  - Hundreds of available assgts. in dozens of context areas
  - Achievements recognize accomplishments
  - Exemplary performance on an assignment
  - Aggregate skill point totals
  - 5 categories of skill points, secret achievements

LSU Intro. to the Study of Education
• Reflective blogs – achievements
• Shine: posting 4-6 comments/week
• Super Shine: posting 7-9 comments
• Mega Shine: posting ≥ 10 comments
• Achievements for content
  - High Five
  - Hmm: For a comment that they believed
    now but might reconsider later
  - Good sport: For not taking teacher’s comments personally

Other examples of grading by experience points

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The Process

Grades: Bimodal at the extremes

What the data shows

Survey results
Students in the XP class were moderately supportive of the peer-review process, but less supportive than students in other classes.

High-school biology class
Teaching with Technology
LSU Intro. to the Study of Education

Survey results

<table>
<thead>
<tr>
<th>Question</th>
<th>OOD course</th>
<th>2012 OOD course</th>
<th>&quot;Typical&quot; (course in 2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>75</td>
<td>130</td>
<td>107</td>
</tr>
<tr>
<td>Response rate</td>
<td>58.65</td>
<td>58.45</td>
<td>54.25</td>
</tr>
<tr>
<td>I had trouble understanding what was expected of me in writing a textbook chapter.</td>
<td>3.36</td>
<td>2.20</td>
<td>2.05</td>
</tr>
<tr>
<td>I got a lot of effort into writing my articles for the wiki textbook.</td>
<td>3.83</td>
<td>4.23</td>
<td>4.07</td>
</tr>
<tr>
<td>The material I read in order to write my chapter gave me new insight into the topic I was writing on.</td>
<td>3.57</td>
<td>4.45</td>
<td>4.10</td>
</tr>
<tr>
<td>The textbook articles I wrote are credible entries for a textbook.</td>
<td>2.81</td>
<td>4.11</td>
<td>3.78</td>
</tr>
<tr>
<td>I am proud of my contributions to the wiki textbook.</td>
<td>3.34</td>
<td>4.33</td>
<td>3.97</td>
</tr>
<tr>
<td>Having students write a textbook supplement for a course like this (course) is a good idea.</td>
<td>3.05</td>
<td>4.11</td>
<td>3.71</td>
</tr>
<tr>
<td>I clearly understood what was expected of me in reviewing a textbook chapter.</td>
<td>2.95</td>
<td>4.21</td>
<td>4.04</td>
</tr>
<tr>
<td>The chapters I read that were authored by other students gave me new insight into the material they covered.</td>
<td>3.21</td>
<td>4.12</td>
<td>3.74</td>
</tr>
<tr>
<td>The reviews I received helped me to improve my work.</td>
<td>2.98</td>
<td>3.76</td>
<td>3.83</td>
</tr>
<tr>
<td>The scores assigned by the reviewers were fair.</td>
<td>3.07</td>
<td>3.76</td>
<td>3.44</td>
</tr>
</tbody>
</table>