Green Study Places: Improving Mental Health of College Students

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The Need
To improve the mental health of college students at WPI in order to reduce depression rates and increase GPA among students.

Background Information
Depression/Anxiety rates
A study done on a broad range of US college students found that about 10% had a mood disorder and about 12% had an anxiety disorder.

A study done at a large public mid-western US university found depression rates of 12% to 16% and anxiety rates of 4% to 7% among students.

Effects of Depression/Anxiety
“Depression is a significant predictor of lower GPA and higher probability of dropping out, particularly among students who also have a positive screen for an anxiety disorder.”

Combating Depression/Anxiety
Going outside is beneficial, since it means more exposure to UV light, leading to higher Vitamin D levels and thus higher levels of Dopamine. Dopamine is a “feel-good chemical” and helps combat depression.

Studying inside with a natural element in view such as water, whether it be a painting or through a window can be restorative,

meaning students feel rejuvenated and can work for a longer period of time.

The Approach
To encourage students to spend more time outside by renovating Higgins Lawn or to renovate an area inside to include an aspect of nature.

Step 1
- Students study outside for 5-30 minutes a day - twice a week

Step 2
- The increased UV light exposure causes more Vitamin D to be produced leading to an increase in Dopamine

Step 3
- Dopamine is described as a “feel-good chemical” and helps combat depression

Step 4
- As the severity of depression decreases, GPA will increase

Further Development
Students who utilize an area that includes an aspect of nature can study longer and feel better at the end of studying. This is because indoor areas that include an aspect of nature are found to be restorative or rejuvenating.

A future extension of this project could be exploring the possible development of an indoor study area at WPI with this in mind.

Statistics at WPI
At WPI several hundred students visit the Student Development and Counseling Center each year. Of those students approximately 1 in 5 visited because of depression and 1 in 6 because of anxiety.

It is also known that men seek out help at half the rate women do, and since WPI is about three-quarters male, we determined that this warranted attention.

<table>
<thead>
<tr>
<th>Year</th>
<th>Students who visited SDCC</th>
<th>% visiting for depression</th>
<th>% visiting for anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>257 Different Students</td>
<td>25%</td>
<td>22%</td>
</tr>
<tr>
<td>2009</td>
<td>278 Different Students</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>2010</td>
<td>334 Different Students</td>
<td>19%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Out of students who reported a mental issue, the percent who reported depression.

Acknowledgments
We would like to thank Charles Morse for providing data from the Student Development and Counseling Center. We would also like to thank Helen Vassallo and Jill Rulfs for being great teachers and helping us at every step.

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  - The Approach
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