Bringing the field into the classroom: an innovative teaching methodology in health program implementation

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Public Health Education is Changing...

- Formal recognition for Public Health as a profession.

- MPH is required entry-level credential.

- Students are younger and need on-the-ground experience.

- Teaching methods need to provide opportunities for complex, high-level, and real world problem solving.

- Project-based learning is an optimal methodology for building actionable knowledge and practical skills applied in real world settings.
What is Project-Based Learning?

“A comprehensive approach designed to engage students in investigation of authentic problems” for real organizations.
Implementing Programs in Developing Countries: Making Programs Work

- Students work in consulting teams remotely with an international healthcare organization.
- Client organizations provide scopes of work on five implementation problems.
- Students address assigned scope of work.
Significant Learning Framework

**Learning how to Learn**
Becoming a confident self-directed public health practitioner

**Caring**
Developing professional interests and values

**Human Dimension**
Learning about oneself and others capacity and ability to work together and lead

**Foundational Knowledge:**
Understanding and remembering information and ideas useful for program implementation

**Application:**
Problem solving and application of skills to manage projects

**Integration**
Connecting program implementation with different aspects of public health and personal experience

**Caring**
Developing professional interests and values
e-Portfolio Reflections

- Students required to document their experiences and reflect on the challenges they face personally.
  - Bi-weekly e-Portfolio reflections.

- The students given open-ended rubric to guide reflections.
  - Encouraged to use their own voice and be creative.

When I volunteered to lead the Health Information/mHealth module, I envisioned our team building an innovative tool that CHWs can use in Tanzania. I thought we would learn new software and get to develop new training content for MDH.

Once I read the scope of work, I found out we would be doing something far from this. Our SOW was more about process, people, politics and strategy.

In Tanzania, the system for data collection already exists. It’s nothing fancy- no tablets or texts- just paper, reports, data clerks and a website- but it works. Of course, it only really works if people actually use it—this was our assignment...

http://www.garylellis.org/category/kingdom-life/page/2/
New information;
New technical skills;
New tools
Team skills
More connection to other disciplines;
The course facilitated learning;
The problems are more realistic

Results expressed on a scale of 1 to 5
5=strongly agree,
1=strongly disagree

Average of responses calculated for each question
# Results of Student Surveys

<table>
<thead>
<tr>
<th></th>
<th>PBL Courses</th>
<th>Non-PBL Courses</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of courses</td>
<td>6</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>Students surveyed</td>
<td>521</td>
<td>1711</td>
<td>2232</td>
</tr>
<tr>
<td>Respondents</td>
<td>347</td>
<td>1088</td>
<td>1435</td>
</tr>
<tr>
<td>Response rate</td>
<td>67%</td>
<td>64%</td>
<td>64%</td>
</tr>
</tbody>
</table>
## Results of PBL vs. non-PBL

<table>
<thead>
<tr>
<th>Topic area</th>
<th>PBL</th>
<th>Non-PBL</th>
<th>Percent difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>The course was organized in a way which facilitated learning</td>
<td>4.37</td>
<td>4.04</td>
<td>7%</td>
</tr>
<tr>
<td>Realistic problems/cases were used to promote an understanding of course concepts</td>
<td>4.78</td>
<td>4.19</td>
<td>13%</td>
</tr>
<tr>
<td>I acquired new information (facts and concepts I understand) in this course</td>
<td>4.74</td>
<td>4.48</td>
<td>6%</td>
</tr>
<tr>
<td>I acquired new skills (things I can do) in this course</td>
<td>4.76</td>
<td>4.25</td>
<td>10%</td>
</tr>
<tr>
<td>The course gave me the tools to learn more about this subject on my own.</td>
<td>4.66</td>
<td>4.25</td>
<td>8%</td>
</tr>
<tr>
<td>The course connected course material to other disciplines in public health.</td>
<td>4.59</td>
<td>4.26</td>
<td>7%</td>
</tr>
<tr>
<td>Working with other students was valuable</td>
<td>4.67</td>
<td>4.17</td>
<td>10%</td>
</tr>
<tr>
<td>Overall Course Rating</td>
<td>4.47</td>
<td>4.35</td>
<td>2%</td>
</tr>
</tbody>
</table>
Why is PBL Rated Higher than Other Courses?

Qualitative Study:

- Stratified random sampling of 696 reflections from 116 students.
- Total sample of 30 students and 180 reflections over five years:
  - All of the reflections were entered and analyzed in Nvivo.
  - Analyzed using grounded theory.
  - Generated six themes that capture the type of learning students experienced during the course.
- Our analysis of these themes provided a window into the value and impact of project based learning that occurred in our course.
New Knowledge and Skills

**Knowledge:**
- Highlighted knowledge not taught in other course: human resource management; quality improvement; and logistics management.
- Highlighted knowledge gained from exposure to client’s work

**Skills**
- Highlighted emerging skills related to improving organizational performance: developing mobile health applications, and computer-based applications development and work planning

New knowledge acquired from exposure to the “real world”:
“I have an iPhone, which isn’t compatible with the technology we were using, so this was completely new to me. I had no idea about all the programs that already exist in this field.”
Solving Real World Problems

- Organizational problems are messy and can’t be packaged nicely for the classroom;
- Organizational needs are primary drivers of professional work;
- Clients don’t always know what they need and meaningful dialogue with clients is needed to refine scopes of work;
- Organizational problems are not bound by discipline and require incorporation of diverse content areas; and
- Negotiation is key to resolving ambiguity of deliverables.

Students learned to adjust projects based on client need, not wants:
“As we assessed the current process, we realized that the issue was not that the Project Managers did not know HOW to budget, rather that they did not have the ability to MONITOR their budgets. We offered best practices to make a budget and to monitor a budget......We suggested changing the job descriptions of the Project Managers to give them responsibility over their project budgets.”
Complemented Existing Knowledge and Skills

- Constant practice and improved knowledge gained from previous coursework, practicums and internships, and previous and current work experience.

- Integration of experience from personal life into coursework.

- Integration of experience from the course experience earlier in the semester.

Reflections on Integration:
This module was interesting as it gave me a chance to put previous courses together such as Organizational Behavior and Leading Teams to Achieve Results in Public Health.

Using the knowledge I had gained from courses at the School of Management, our group started to crowd source. We reached out to experts, friends and used YouTube to our advantage.
Learning to Work in Teams

- Value of coordination, communication, delegation, and compromise in effective teamwork.

- Value of continued formal team assessment.

- The opportunities that learning from others provide:
  - Direct training for technical skills;
  - Coaching for new content and presentation skills; and
  - Observing others to learn presentation skills.

- The value of team member relationships:
  - Uniformly positive team experiences with only minor frustrations.

The value of team member expertise:
The group leader for the week and her knowledge of the process was immensely helpful to us all! It was a great start utilizing the skills that each of us brings to the table.
Preparation for Professional Practice

- Experience of real world problems.
- Developing one’s own professional interests and values.
- Incorporation concepts, knowledge, skills and tools into a vision for their professional future.

The Professional Development Process:

While business and management were never things that I would have declared any interest in in the past, I am quickly realizing how important those skills are (lucky I took this class!).

I look forward to taking these financial management components and transferring them to working in a small health organization, running a health program, or even something as simple as financially managing my wedding budget.
Self-Efficacy

- Presenting and public speaking was improved through multiple practice opportunities and support from team members.

- Continued interaction and experience with the client led to confidence in professional interactions.

- Opportunities to be in leadership positions and observation of colleagues built leadership capacity.

Building Self-Efficacy and Personal Confidence:
We have adeptly dealt with some difficult situations and have managed to finalize deliverables against all sorts of obstacles and crazy time crunches. So going into this last unit, we all had a lot of confidence that we could turn around whatever was asked of us.

Being the team was very enlightening; I gained greater confidence in my leadership abilities.

We had all grown to a place where we felt comfortable with whatever was thrown our way.
Conclusion

“Are you ready to tackle the challenges presented in real life?

I sure am. I am excited, I feel prepared, and I am ready to tackle the next step with gusto!”
Thank You

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