Students’ Performance and Perceptions of Online Interprofessional Education in Hong Kong

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Interprofessional education (IPE) represents a transformative shift in medical education.

IPE Aim: to train future healthcare workers to be better collaborators.

IPE Outcome: improved health outcomes for patients.
O-IPE design

**Preparation**
- Study pre-class materials

**Readiness Assurance Process**
- Answer questions to check readiness

**Application Exercise**
- Work as a team to solve complex problem

**Enrichment Activity**
- Discuss and review

**Asynchronous**

- Day 1-3: Independent study
  - Pre-evaluation survey, Team naming, Online discussion, MCQ writing*

- Day 4-5: Team Readiness Assurance Teats tRAT

- Day 6-9: Case based learning
  - Care plan writing
  - Independent team meeting

- Day 10 (120 mins): RAT Appeal Care Plan
  - Break-out meeting
  - Peer evaluation

**Synchronous**

- Day 4-5: Appeal
  - MCQ activity

*MCQ writing is likely a typographical error and should be corrected to another activity.
IPE Modules in 2020:

1. Anticoagulation Therapy
2. Multiple Drugs and Complementary Therapies
3. Depression
4. Cancer
IPE Generic Learning Outcomes

- Collaborate with students in other professions to identify and solve the clinical problems.
- Compare the roles, responsibilities, and limitations of different disciplines in providing healthcare to patients.
- Communicate my opinions to other disciplines and listen respectfully to their opinions regarding the care of patients.
- Recognize the need to work collaboratively in the best interest of patients.
- Recognize the stereotypical views of other professionals held by themselves and others when caring for patients.
- Recognize that views held by other professionals are equally valid and important when providing care to patients.
Distinguished how the online IPE developed the following skills among students after the intervention:

1. Collaborative decision making and problem solving
2. Teamwork and collaboration (e.g., team skills)
3. Open communication (e.g., ability to listen and express)
4. Negotiation and respect for the opinion of other disciplines (e.g., accommodate/reconcile differences in perspectives)
5. Interprofessional skills (e.g., being comfortable in team)
Methodology:

- Six hundred and eighty-seven students
- Predominantly Chinese
- Three modules: multiple-drugs and complementary therapies, depression, and cancer.
- Using a pretest-posttest experimental design and qualitative responses
- This work aims to examine effects of the program to students in terms of achievement of generic interprofessional learning outcomes.

<table>
<thead>
<tr>
<th>Participating Disciplines</th>
<th>Multiple Drugs and Complementary Therapies</th>
<th>Depression</th>
<th>Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese Medicine</td>
<td>6</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>MBBS</td>
<td>103</td>
<td>96</td>
<td>114</td>
</tr>
<tr>
<td>Nursing</td>
<td>95</td>
<td>90</td>
<td>93</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>21</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Social Work (Bachelor)</td>
<td></td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Social Work (Masters)</td>
<td></td>
<td>58</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>225</td>
<td>285</td>
<td>323</td>
</tr>
</tbody>
</table>
### Results

<table>
<thead>
<tr>
<th>Extent of attainment of important interprofessional learning skills after the intervention</th>
<th>Anticoagulation Therapy</th>
<th>Multiple Drugs and Complementary Therapies</th>
<th>Depression</th>
<th>Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative decision making and problem solving</td>
<td>4</td>
<td>4.09</td>
<td>4</td>
<td>3.97</td>
</tr>
<tr>
<td>Teamwork and collaboration</td>
<td>4</td>
<td>4.30</td>
<td>4</td>
<td>4.02</td>
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<tr>
<td>Open communication</td>
<td>4</td>
<td>4.04</td>
<td>4</td>
<td>4.05</td>
</tr>
<tr>
<td>Negotiation and respect for the opinion of other disciplines</td>
<td>4</td>
<td>4.44</td>
<td>4</td>
<td>4.07</td>
</tr>
<tr>
<td>Interprofessional skills</td>
<td>4</td>
<td>4.51</td>
<td>4</td>
<td>3.97</td>
</tr>
</tbody>
</table>

**Notes:**
- Likert scale used: 1 – to a very small extent, 2 – to a small extent, 3 – undecided, 4 – to a large extent, 5 – to a very large extent
- Data collected at posttest
Results

### IPE Depression

Specific team activities considered by the students as beneficial in achieving the goals of IPE (n=198)

- AE: Patient-care management planning: 17.1%
- AE: Case analysis: 23.8%
- AE: MCQ team discussion: 19.0%
- AE: Concept mapping: 19.6%
- Readiness assurance team discussion: 20.4%

### IPE Cancer

Specific team activities considered by the students as beneficial in achieving the goals of IPE (n=219)

- AE: Concept mapping: 8.5%
- AE: Case analysis: 22.5%
- AE: Patient-care management planning: 11.3%
- AE: MCQ team discussion: 18.4%
- Readiness assurance team discussion: 17.5%
- AE: MCQ answering: 21.8%
Results

• Significant increase of perceived attainment of IPE generic learning outcomes
• After the intervention. One IPE module was conducted in face-to-face implementation. Three IPE modules were implemented online: each around a clinical area which could engage students from complementary health and social care disciplines. Synchronous sessions were conducted at the end of each 2 weeks implementation period. Feedback was given to students reflecting the learning outcomes of the IPE programme.
Conclusion

Despite some challenges in developing and implementing the IPE programme, our data and experiences showed that the online asynchronous and synchronous O-IPE model is acceptable. The significant increase of students’ perceived attainment of IPE generic learning outcomes after the intervention showed the effects of the online IPE program in preparing students for collaborative practice. Factors that contributed to the success of transitioning to the online interprofessional education program for IPE are discussed.
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