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Evaluations of Exit Competencies of Optometrists in Mozambique

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Evaluations of exit competencies of optometrists in Mozambique

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Introduction
The Mozambique Eye care Project (MEP) is developing the country’s first indigenously trained optometrists using a competency-based education curriculum.

Aims
- To evaluate the exit clinical competencies of the first optometry graduates in Mozambique
- To use the competency evaluations to inform the evolution of the competency curriculum
- To establish entry-level competency standards for emerging optometry graduates in Mozambique

Methods

<table>
<thead>
<tr>
<th>Practical assessment</th>
<th>Theory assessment</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional intelligence</td>
<td>Clinical skills</td>
<td>Binocular vision</td>
</tr>
<tr>
<td>Communication skills</td>
<td>Patient management</td>
<td>Visual function</td>
</tr>
<tr>
<td>Professional conduct</td>
<td>Teamwork</td>
<td>Binocular vision</td>
</tr>
</tbody>
</table>

Semi-structured interviews

Results
i) Practical assessment and internal exams
Using UK based competencies as a benchmark the following results were obtained:

<table>
<thead>
<tr>
<th>Competency</th>
<th>Number of students competent (N=9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Communication</td>
<td>9</td>
</tr>
<tr>
<td>2. Professional Conduct</td>
<td>9</td>
</tr>
<tr>
<td>3. Methods of Ophthalmic Examination</td>
<td>9</td>
</tr>
<tr>
<td>4. Ocular Disease</td>
<td>4</td>
</tr>
<tr>
<td>5. Visual Function</td>
<td>0</td>
</tr>
<tr>
<td>6. Binocular Vision</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 1: Results of students competencies

ii) Results from interviews with course developers and lecturers

- Prior clinical and teaching experience of the lecturer
- Teaching practice of lectures
- Quality of clinical supervision
- Language of instruction
- Context of learning and learning environment
- Reference & availability of course notes
- Equipment available in clinics
- Lecture support and clinical feedback
- Patient experiences of healthcare services
- Patient role/ contribution to healthcare
- Eye health conditions in the country
- Existing operating healthcare context
- Nature of optometry practice
- Levels of maths and science education
- Student capacity to engage with learning
- Student learning experiences
- Student poverty
- Student background
- Determining professional culture to be led by the professional foundations. Poor subjective.

Figure 2: Results from interviews with course developers and lecturers: Factors influencing student performance

iii) Observations during assessments
The context of the examinations was UK based exit competencies were used with students on an international curriculum taught by multi-national lecturers. This presented unique challenges.

- Patient understanding and response patients poor (first eye test). Poor subjective.
- Best vision software not used.
- Patient time insufficient.
- High percentage of challenging patients with low vision.
- Culture to be led by the professional foundations. Poor subjective.

Figure 3: Observed reasons for failure

Discussions and Recommendations

Factors affecting performance
a) Student learning experience
- Lecturer background and training influenced student training - e.g. strong diagnostic and therapeutic influence, at the expense of refinement routine elements such as binocular balancing
- Clinical training protocol need to be implemented to optimise clinical competencies.

b) Existing healthcare context

Enhanced training needs: Adapting the course to increase clinics in:
- High percentage
- High refractive errors
- Binocular vision
- Addressing local issues of health literacy, poverty and traditional medicine

Clinic organisation needs: Better structure to allow for more time in clinics with challenging patients and more support staff to give feedback.

Personal development plan: When the students go into practise a personal development plan is recommended to be prepared with a lecturer who mentors them and oversees their training and progress.

c) Student capacity
The University has to set appropriate pre-entrance exams to pick students that are more suitable for the course. Only 9 of the original 16 students progressed to the final year. A higher entry standard for basic maths and sciences would ensure that the students can understand concepts quicker influencing student performance.

Conclusions

Two main lessons have been learnt in Unilurio about starting up a competency based education system for health professionals in a developing country context:

a) A need for early review due to the lack of ideal starting conditions (lecturers with different backgrounds, course materials not arriving etc).

b) Complex health and social contexts have significant impact upon the required performance of optometrists. An analysis of local context is necessary before designing a curriculum based on competencies.

As a result of these evaluations the final year students underwent a one-week intensive course in subjective testing and binocular balancing successfully before graduation.

Acknowledgments

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For further information
Please contact kajshah@aol.co.uk. More information on this and related projects can be obtained at www.mozeyecare.org

Figure 1: Methods of comprehensive exit competency evaluation

Figure 4: Students and lecturers in clinic