Independent Learning: Emerging Themes

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Independent Learning: Emerging Themes

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# INDEPENDENT LEARNING: EMERGING THEMES

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University of Massachusetts Medical School

## Methods

A new open-ended item was added to all end of course/clerkship evaluations asking students to define independent learning. Data was extracted from two cohorts (years 1 & 2) in the preclinical years (N=200) and from two additional cohorts (years 3 & 4) in the clinical years (N=100). Comments were then stratified by preclinical and clinical years and by course/clerkship. Four professional evaluators then performed independent qualitative analysis of students’ definition of independent learning. Themes were identified, recorded, and compared between the two cohorts and across the courses/clerkships.

## Results

### Preclinical Years

**Understanding Course Material**

- **Active learning**
  - Creating my own study guides, charts, and tables
  - Seeing how all the pieces fit together

**Preclinical Years Main Focus**

- Studying on my own
- Use of outside resources
  - Using resources other than lecture notes to learn new material

**Clinical Years**

**Patient Focused**

- Reading: reading about patient care, medical concepts, and treatment plans
- Researching: searching for information on treatments, clinical pathways, and patient cases

## Conclusion

From our analysis we found that students valued independent learning and feel that it is an important tool through which a more complete understanding of material throughout their medical education can be achieved. Though independent learning does not have the same definition for everyone, there does appear to be shared characteristics, along with distinct differences. Themes within the clinical years differ from those of the preclinical years with less of a focus on active learning and more attention on self-directed learning through reading and researching about patients. The latter may reflect mastery of some UMass competencies such as “Physician as Scientist” and “Physician as Clinical Problem Solver.” Overall the clinical years’ definitions tended to be more diverse and reflect a higher level of maturity when compared to the preclinical years’ responses. Both years were similar in that students did much learning on their own, often using a mixture of styles to enhance their understanding of both courses and patients. Perhaps sharing this information with faculty could give them the tools to provide students with more resources to aid their independent learning.

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**Intervention**

Previous research findings suggest “independent learning” appeared to be the single most useful method for helping students facilitate learning in their preclinical years. This study extends upon our prior work exploring students’ definition of independent learning.

**Method**

Data was extracted from two cohorts (years 1 & 2) in the preclinical years (N=200) and from two additional cohorts (years 3 & 4) in the clinical years (N=100). Comments were then stratified by preclinical and clinical years and by course/clerkship. Four professional evaluators then performed independent qualitative analysis of students’ definition of independent learning. Themes were identified, recorded, and compared between the two cohorts and across the courses/clerkships.

**Student’s definition of Independent Learning**

<table>
<thead>
<tr>
<th>Major Theme</th>
<th>Student Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studying on my own</td>
<td>Reading the textbook is not given nor administred in class.</td>
</tr>
<tr>
<td>Use of outside resources</td>
<td>Studying lecture materials on my own, looking for new information.</td>
</tr>
<tr>
<td>Student organization of the material</td>
<td>Organizing the material presented in a seminar.</td>
</tr>
<tr>
<td>Active learning</td>
<td>Creating my own study guides, charts, and tables.</td>
</tr>
</tbody>
</table>

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**Clinical Years’ definition of Independent Learning**

<table>
<thead>
<tr>
<th>Major Themes</th>
<th>Student Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>Reading about patient care, medical concepts, and treatment plans.</td>
</tr>
<tr>
<td>Researching</td>
<td>Searching for information on treatments, clinical pathways, and patient cases.</td>
</tr>
<tr>
<td>Seeing patient experiences or information with</td>
<td>Learning how to do procedures step by step.</td>
</tr>
<tr>
<td>health care staff</td>
<td>Using clinical skills and applying them in real situations.</td>
</tr>
</tbody>
</table>

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**Clinical Years Main Focus**

<table>
<thead>
<tr>
<th>Preclinical Years Understanding Course Material</th>
<th>Clinical Years Patient Focused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading: reading about patient care, medical</td>
<td>Reading about patient care,</td>
</tr>
<tr>
<td>concepts, and treatment plans</td>
<td>medical concepts, and treatment</td>
</tr>
<tr>
<td>Researching: searching for information on</td>
<td>plans</td>
</tr>
<tr>
<td>treatments, clinical pathways, and patient</td>
<td></td>
</tr>
<tr>
<td>cases</td>
<td></td>
</tr>
</tbody>
</table>

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**Results**

**Preclinical years**

After triangulating the data, the following themes emerged for the preclinical years in which the main focus was to gain a better understanding of the material/course. The most prevalent response was “studying on my own,” followed by use of outside resources. Student organization of the material, independent of source, was noted many times as a way to assimilate and solidify information. Active learning in which students created material(s) (e.g., making flashcards, rewriting lectures, creating note cards from readings) was often cited. Data did not vary across the preclinical years or the courses within each year.

**Clinical years**

Themes that emerged from the clinical years differed from those of the preclinical years with a greater focus on patient centered learning, where the primary goal was to gain a better comprehension of a particular patient’s case rather than a simple understanding of course content. The two most prevalent responses in the clinical years were “reading” and “researching” typically associated with diseases/diagnoses related to their patients, or topics that students were exposed to during their clerkships. Examples of researching consisted of literature searches, use of internet based resources, faculty discussions, and test/review books. Other common responses included seeking out experiences or information with health care staff (including residents, doctors, midwives, and other members of a student’s team) as well as practicing technical skills. Learning how to function independently in a hospital/health care setting (reading others’ progress notes to see how they compared to the students’, figuring out how to order consults, etc.) was also mentioned. Similar to the preclinical years, data did not vary significantly across clerkships.