

Student Self-assessment to Enhance Learning in Pharmacotherapeutics

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Extracted from: <http://blog.successatthecore.com/great-formative-assessment-resources-for-educators/>



<http://failingtolearnbetter.blogspot.sg/>

Student Self-assessment

“Development of skilled and flexible learners who can move beyond the boundaries of what their course prepares them for, focuses attention **not just on learning how to learn** but on the subset of this to which often neglected: learning how to assess. Students must be **effective self-assessors**; to be anything less is to be dangerously ill prepared to cope with change.”

Boud (2000), p160

Student Self-assessment

- “Preparing students for **lifelong learning** necessarily involves preparing them for the tasks of making complex **judgements about their own work** and that of others and for making decisions in the uncertain and unpredictable circumstances in which they will find themselves in the future.”

Boud & Falchikov (2006), p402

Self-assessment in Pharmacy Education

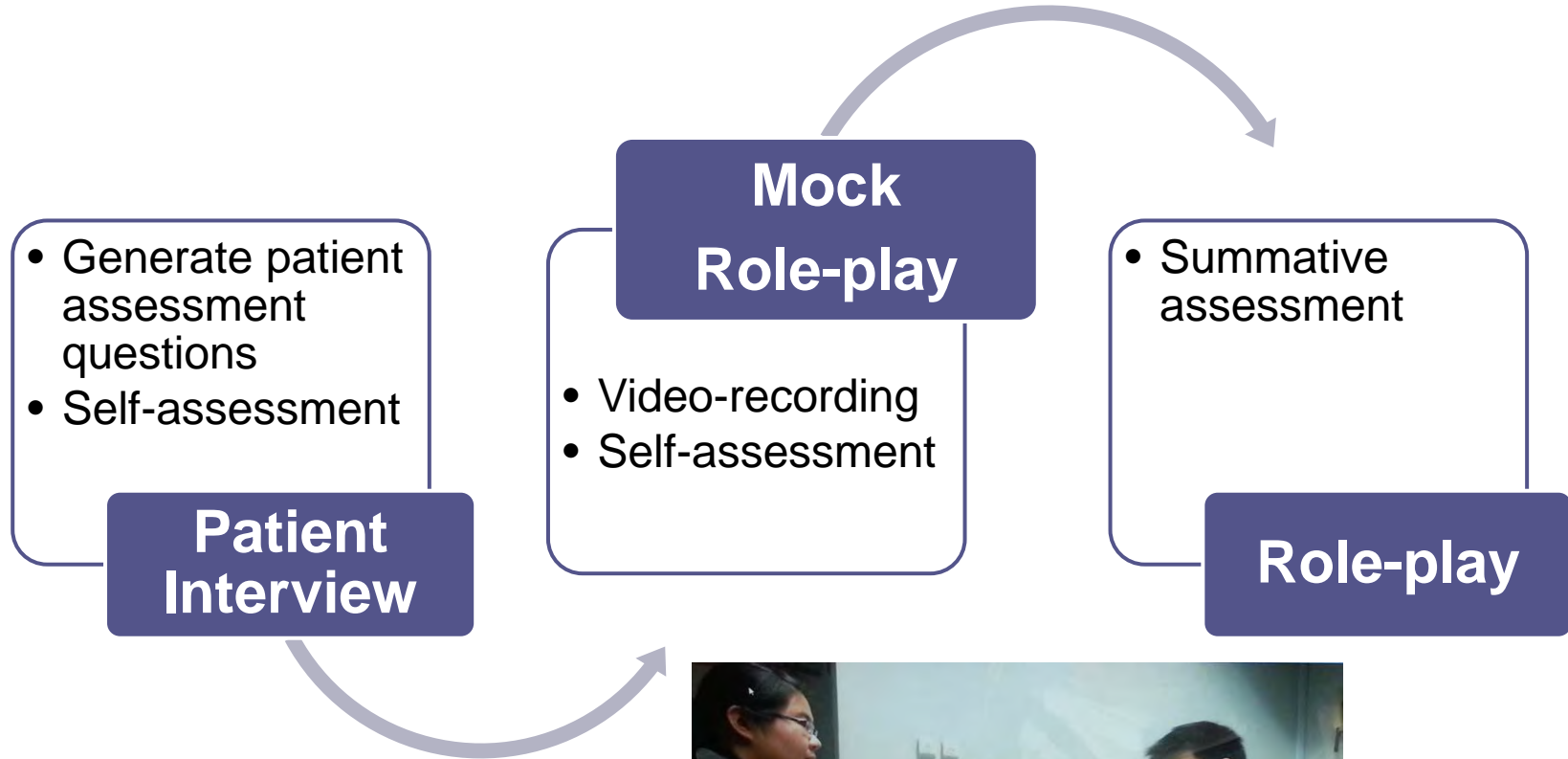
- Self-assessment forms the foundation upon which the cycle of continuous professional development is built.
- The reflective practice drives the continuous effort to enhance competence in professional practice.

Mort & Hansen (2010)

Background

- Subject: Introduction to Pharmacotherapeutics
- Read by level 2, polytechnic students
- Cohort size: 107

Self-Assessment Project



Design of the Self-assessment Project

- There were opportunities to complete the feedback loop and thus these enabled the students to employ their action plans.
 - Modelling the full assessment process in new situations enables the students to apply the feedback / strategies and gain confidence that these are effective in helping them attain the desired outcomes. (Boud, 2000)

Research Question

- What is the impact of student self-assessment on student learning?

Data Collection

- Conducted online student survey (n=100)
 - Instrument comprises 4-point Likert-scale closed-ended questions and open-ended questions
- Reviewed students' self-assessment logs

Results – Survey Findings

| | %SA* | %A | %D | %SD | %NA |
|--|-------------|-----------|-----------|------------|------------|
| I become better aware about my learning through doing the self-assessment. | 28% | 69% | 3% | 0% | 0% |
| The self-assessment enables me to improve on my learning in areas where I am not so good at. | 28% | 67% | 5% | 0% | 0% |
| I worked on the action steps in the next session to improve my work. | 22% | 72% | 5% | 0% | 1% |

*SA – strongly agree; A – agree; D – disagree; SD – strongly disagree; NA – not applicable

Results – Survey Findings

“I think that self-assessing can really help me improve in my work because it can remind me the important details and information that are needed to be included. The self-assessment also stimulate [sic] my thinking by planning action plans to ensure that I can excel in my work.”

(Student 1)

Results – Survey Findings

“Through the self-assessment exercises, I learn to evaluate situations on a deeper level instead of the usual superficial stuff. Self assessments helped me to organize my work and better present my notes to my peers to facilitate their understanding and role-play. I also learned how to identify my weaknesses as well as the action plans to improve on my weaker areas”.

(Student 2)

Results – Survey Findings

“..it helps with my learning and identify any shortcomings. Basically it allows me to be an independent learner.”

(Student 3)

Review of Students' Self-assessment Logs

Checklist for patient interview (Week 2-3)

- Adequacy – ask all necessary questions
- Relevance
- Clarity of questions

| Patient Assessment Questions | | Self-assessment |
|---|---|---|
| <p>Identify medical conditions, ascertain etiology and severity</p> | <p>Questions asked (own group):</p> <p style="text-align: center;">As attached (At the Back)</p> <p>Questions asked by other groups (but not by us)*:</p> <ol style="list-style-type: none"> 1) What medications have you taken, and the dose that was taken? -Rhinathiol Promethazine Syrup (1 tablespoon 3 times daily) & Piriton (2 tablets 3 times daily) What was the duration of treatment? -(1 day ago) 2) Was the Rhinathiol Promethazine Syrup taken with food? (Yes) 3) Do you have flowers at home? (Plenty) 4) Do your eyes itch when in contact with flowers or dust? (No) 5) Did you take Piriton tablets and Rhinathiol Promethazine Syrup at the same time or separately? (Separately) 6) Have you been near to people who have common cold recently? (No) 7) Did the cough appear at a later time than the other symptoms? (Runny nose, blocked nose then cough) 8) What were you doing when you experience these symptoms? (Woke up normally, go to work then go home, and it happened) | <ul style="list-style-type: none"> • Why did I miss out those questions*? • Why do I think those questions* are relevant? • What can I do to ensure I can do better in role-play? <p>-For Qn 1, we did not realise that the patient's <u>medical condition</u> could be a result of drug-related problem and thus we did not ask for the <u>dose</u> taken. Taking the wrong dose could lead to the drug related problem-overdose or under-dose and thus we feel that these questions are relevant. We can do better by making sure to include these questions in our future role-play.</p> <p>-For Qn 2, we did not know that Rhinathiol Promethazine syrup is a medication that has to be taken with food and thus we did not ask if it was taken with food. We think that the question is relevant as after researching we found out Rhinathiol promethazine syrup is to be administered with food. We can do better by finding out the administration for each drug we introduce to the patients.</p> <p>-For Qn 3 & 4, we thought that by asking if the patient was allergic to pollens, was good enough. However, it proves to be unspecific as the patient may not know if they are allergic to pollen. Therefore, a better way to find out is to ask if they have flowers at home and if they experience itchiness of the eyes and nose when in contact with them. We can do better by specifying our questions so that the patients would be able to understand us, and help us in diagnosing their problem at the same time as well.</p> |

SAMPLE OF STUDENTS' WORK

Review of Students' Self-assessment Logs

| | |
|--|--------------------|
| <p>-For Qn 3 & 4, we thought that by asking if the patient was allergic to pollens, was good enough. However, it proves to be unspecific as the patient may not know if they are allergic to pollen.</p> | Critique |
| <p>Therefore, a better way to find out is to ask if they have flowers at home and if they experience itchiness of the eyes and nose when in contact with</p> | Improvement |
| <p>them. We can do better by specifying our questions so that the patients would be able to understand us, and help us in diagnosing their problem at the same time as well.</p> | Action Plan |

(Work of Student 4)

Review of Students' Self-assessment Logs

| Checklist (process) | Self-assessment | |
|---|---|----------------------|
| <p>Criteria:</p> <ul style="list-style-type: none"> • Check communication <ul style="list-style-type: none"> ○ Verbal: pace, jargon, audibility ○ Non-verbal: eye-contact, confidence | <p>Check Communication</p> <p>Verbal: The pace was rather consistent throughout the role-play as I did not pause for long during the recommendation of the appropriate treatment. The articulation was loud and clear throughout the whole conversation. However, there are some technical jargons being used when explaining the mechanisms of action. This might perhaps confused the patient as even my peer did not understand the terms being used.</p> <p>Non-Verbal: Eye contact was consistent throughout the role-play. I was confident in distinguishing between GERD and DYSPEPSIA given that the symptoms mentioned by the patients are clear cut to be either one of the medical condition. Also, the other medical condition was direct and I know that it needed referral to doctor.</p> | <h2>Critique</h2> |
| <ul style="list-style-type: none"> • Check PAQ <ul style="list-style-type: none"> ○ Adequacy- Ask all necessary questions* ○ Relevance ○ Clarity of questions ○ Logical sequencing | <p>Action Plan: I should make a role-play friendly summary note for the actual role-play to ensure that everything that is mentioned is free of technical jargon. This can thus help the patient to further understand what exactly is going on without confusing him/her.</p> <p>Check PAQ</p> <p>All necessary questions were asked (drug allergy, underlying medical condition, medication being taken current and the ones that should warrant referral to doctors). All of the questions asked were relevant towards the case scenario and also, the questions asked were clear as the patient is able to understand. The flow of the questions is also good as there were little or no stoppage during the conversation with the patient.</p> <p>Checklist to ensure PAQ is comprehensive</p> <p>The medical conditions of the patient were clearly identified and the causes that lead to the medical condition were surfaced. The severity of the condition is also determined by asking the questions that should warrant referral to doctor. The set of questions is able to help me to identify the best treatment for the patient. Therefore, the PAQ is comprehensive. However, even though it was comprehensive, I did not manage to recommend the most appropriate treatment to the patient. [Refer to progression log section for the sets of PAQs]</p> | <h2>Action Plan</h2> |
| <p>*Checklist to ensure PAQ is comprehensive:</p> <ul style="list-style-type: none"> ✓ Identify medical conditions ✓ Ascertain etiology ✓ Determine severity of condition ✓ Identifying best treatment for patient | <p>Product Recommendation</p> <p>The product that I have recommended was Losec which meets the needs of the patient. However, it was the wrong recommendation as it resulted in drug related problem(patient was taking warfarin). Therefore, it would have resulted in severe consequences if this were to happen in a real case scenario. Hence, something has to be done to surface this problem.</p> | <h2>Critique</h2> |
| <ul style="list-style-type: none"> • Product Recommendation | <p>Action Plan: Highlight all contraindications and drug-drug interactions in the summary notes and to memorize the most common ones so that it will ring a bell once the patient mention it. This will be able to prevent the recommendation of the wrong treatment.</p> | <h2>Action Plan</h2> |

Review of Students' Self-assessment Logs

| Product Recommendation | |
|--|--------------------|
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| <p>Action Plan: Highlight all contraindications and drug-drug interactions in the summary notes and to memorize the most common ones so that it will ring a bell once the patient mention it. This will be able to prevent the recommendation of the wrong treatment.</p> | Action Plan |

Conclusion

- Students' feedback was generally positive and
 - most recognized the value of self-assessment
- Review of the students' reflections revealed that the students demonstrated their:
 - Ability to evaluate the strengths and weakness
 - Potential as self-regulated learners who are able to synthesize improved ideas and action plan

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