Adult Learning in Residency Training

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What do we want?
Proficient
Safe
Independent
Professional
What does that mean?
Clinical and technical knowledge
Critical thinking skills
Interpersonal skills
Ability to identify what they do not know
Ability to improve/learn new K/S/A on their own

K/S/A = Knowledge/Skills/Attitudes
Clinical and technical knowledge

Critical thinking skills

Interpersonal skills

Ability to identify what they do not know

Ability to improve/learn new K/S/A on their own

K/S/A = Knowledge/Skills/Attitudes
How do we help them get there?
Life-long learners

Reflection

and

Self-Directed Learning
Life-long learners

Reflection

and

Self-Directed Learning
Reflection

Part of critical thinking

Metacognitive* process that creates a greater understanding of both the self and the situation so that future actions can be informed by this understanding.

*Metacognition: Thinking about thinking

[Sandars, 2009]
Reflection

Kolb’s Experiential Learning Cycle:

Experience → Reflection → Conceptualization → Action → Experience
When can this help?

Always!

- Clinical/technical scenarios: Patient did not setup as well as expected for treatment
- Interpersonal interactions:
  - Patient’s attitude changed during conversation
  - Disconnect between team members

... What exactly happened, why, what could we change?
When can this help?

Always!

- Clinical/technical scenarios: Patient did not setup as well as expected for treatment
- Interpersonal interactions:
  - Patient’s attitude change during conversation
  - Disconnect between team members

Helpful for ✅ and ❌ experiences
<table>
<thead>
<tr>
<th>TYPES OF QUESTIONS</th>
<th>QUESTIONS THAT TRIGGER REFLECTION</th>
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<tbody>
<tr>
<td>Noticing</td>
<td>• What just happened?</td>
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<tr>
<td></td>
<td>• What were you thinking when ...?</td>
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<tr>
<td></td>
<td>• Did you notice that ...?</td>
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<td></td>
<td>• What surprised us in that case?</td>
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<td></td>
<td>• How does it make you feel?</td>
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<tr>
<td>Processing</td>
<td>• Are we doing this the right way?</td>
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<td></td>
<td>• Are there alternatives?</td>
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<td></td>
<td>• Is this applicable in our setting?</td>
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<tr>
<td></td>
<td>• What does this mean?</td>
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<td></td>
<td>• Why does it make you feel this way?</td>
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<td></td>
<td>• What are the consequences of you feeling like this?</td>
</tr>
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<td></td>
<td>• Are we the right people to address this?</td>
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<tr>
<td>Future action</td>
<td>• What do we need (eg, resources, knowledge, skills) to resolve that problem?</td>
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<td>• What will we do differently next time?</td>
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<td>• What are the barriers to ...?</td>
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<td>• What can facilitate ...?</td>
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</table>

[Ménard and Ratnapalan, 2013]
Self-Monitoring

Ability to notice our own actions, curiosity to examine the effects of those actions, and willingness to use those observations to improve behavior and thinking in the future.

Helps early recognition of:
• Cognitive biases
• Technical errors
• Emotional reactions

[Epstein et al, 2008]
Life-long learners

Reflection and

Self-Directed Learning
**Self-Directed Learning (SDL)**

Process in which individuals take the initiative, with or without the help of others, in:

- Diagnosing their learning needs
- Formulating goals
- Identifying human and material resources for learning
- Choosing and implementing appropriate learning strategies
- Evaluating learning outcomes.

[Knowles, 1975]
Self-Directed Learning (SDL)

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[Knowles, 1975] [Saks and Leijen, 2014]
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[Knowles, 1975] [Saks and Leijen, 2014]
Self-Regulated Learning... Certainly, they have these skills from grad school, right?
Students who adequately self-regulate their learning in an academic setting may have difficulties in the more complex clinical setting

Why?

Learning goals are now subsidiary to patient care

[van Houten-Schat et al, 2018]
How can we promote Self-Directed Learning?

- Triggers
- Uncover knowledge gap

Reflection and Self-Monitoring
How can we promote Self-Directed Learning?

Self-Regulated Learning

- Formulate learning objectives
- Use resources
- Apply knowledge
- Evaluate learning
- Uncover knowledge gap
- Uncover knowledge gap

Reflection and Self-Monitoring

Triggers
PROCESS

Triggers

Formulate learning objectives

Uncover knowledge gap

Use resources

Evaluate learning

Apply knowledge

[Sawatsky et al, 2017]
Residency program structure and culture

Guidance

Formulate learning objectives

Uncover knowledge gap

Use resources

Evaluate learning

Apply knowledge

Triggers

[Sawatsky et al, 2017]
Formulate learning objectives
Use resources
Apply knowledge
Evaluate learning
Uncover knowledge gap

CONTEXT
Residency program structure and culture
Guidance

PROCESS
Triggers

PERSON
Knowledge framework
Individual characteristics

[Sawatsky et al., 2017]
Formulate learning objectives

Use resources

Apply knowledge

Evaluate learning

Uncover knowledge gap

Triggers

Guidance

Residency program structure and culture

Knowledge framework

Individual characteristics

Motivation

Change over time

[ Sawatsky et al, 2017 ]
These may be different depending on focus of SDL:
- Clinical/technical K/S/A
- Interpersonal skills
- Professionalism
Beware of barriers for Reflection and Self-Directed Learning:

- Time
- Perceived lack of competence
- Culture
- Little autonomy/responsibility

[Sandars, 2009; Sawatsky et al, 2017]
Possible ways to overcome barriers:

- Time – Explicitly incorporate SDL and Reflection into residency curriculum
- Perceived lack of competence – Provide guidance and feedback
- Culture – Create a conducive environment and model the behaviors you want to instill
- Little autonomy/responsibility – Give them opportunities

[Sandars, 2009; Sawatsky et al, 2017]
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[International Rotations]

[Sandars, 2009; Sawatsky et al, 2017]
Acknowledgements

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References


Thanks for watching!