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## WEB PAPER

# A framework to teach self-reflection for the remedial resident

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## Abstract

**Background:** Regardless of the area of deficiency, be it in knowledge, skills or attitudes, residents requiring remediation are rarely self-identified. This illustrates a diminished ability for self-reflection. Self-reflection is a cornerstone of adult education. During the remediation process, the remediation curriculum needs to emphasize self-reflection.

**Aims:** How can one structure self-reflection in a remediation curriculum?

**Methods:** This article describes how to adapt and apply environmental scanning for remedial residents.

**Results:** Environmental scanning is a rigorous and well-developed business approach that can be adapted for personal continuous quality improvement to foster self-reflection in medical trainees. There are often already existing tools which can form the foundation for regular reflection in medical education using an environmental scanning structure.

**Conclusions:** Environmental scanning can be thought of as a structured approach to internal and external reflections.

## Introduction

Postgraduate medical trainees (commonly addressed as residents) are a group of self-selected individuals who are assumed to be highly motivated and with strong academic performance. When they are identified as requiring remediation, they can experience a considerable amount of stress (Zuzelo 2000). Their successful remediation is critical, as the quality of their training can have ramifications for future patient care. How big is the problem? The prevalence of residents requiring remediation varies by country, specialty and program, ranging from 5.8% to 9.1% (Yao & Wright 2001; Ratan et al. 2008). There is scant literature focused on describing programs designed to improve resident performance (Ratan et al. 2008).

Regardless of the area of deficiency, be it in knowledge, skills, or attitudes, residents requiring remediation are rarely self-identified. This illustrates a diminished ability for self-reflection. Therefore, during the remediation process, the remediation curriculum needs to emphasize self-reflection. Also, while there is little literature dedicated to program design for remediation, there is no literature focused on improving self-reflection in remedial residents.

Self-assessment and reflection is an integral part of self-directed learning and self-regulation (Hays et al. 2002). But how does one encourage and teach self-reflection? Environmental scanning is a rigorous and well-developed business approach that can be adapted for personal continuous quality improvement to foster self-reflection in medical trainees.

## Educational principles

Self-reflection is the cornerstone of adult education. This is illustrated in several different models and theories of andragogy.

### Practice points

- Remedial residents need a structure for self-reflection.
- The environmental scanning framework can be modified for personal reflection.
- Supervised structured personal reflection using focused tools and targeted questions, applied in a regular manner can be beneficial to remedial residents.

### Knowles

Knowles' andragogical assumptions and principles (Knowles 1984) form the basic foundation of adult learning. They include:

- The adult learner is independent and self-directing.
- Adult learners often respond to internal motivation, rather than external. This is in contrast to young learners who are often compelled to learn.

The overlap between independence, self-direction, and response to internal motivation is the ability to be reflective.

### Kolb

Kolb's model of experiential learning (Kolb 1984) illustrates a cycle composed of four continuous and contiguous stages, moving from Experience through Reflection and Conceptualizing to Action and returning to Experience. Each stage follows the other, and thus successful movement through the cycle requires one to pay adequate attention to stages preceding and proceeding. Reflection is critical.

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## Schön

The importance of reflection is highlighted again in Schön's work surrounding reflective practice (Schön 1987). 'Reflection in action' occurs immediately in a situation as it transpires. Alternately, 'reflection on action' occurs later, with the learner thinking back on what happened.

## The remedial resident

It is often assumed that residents are adult learners. While remedial residents have many characteristics of adult learners, they also share characteristics of non-adult learners – they are highly motivated, but their motivation is both internal (desire to be a good doctor) as well as external (desire to pass examinations, desire to excel in evaluations). Under remediation, they have even more external motivations; they are also expected to complete the prescribed remedial learning to satisfy their program director and licensing body. Combined with the observation that remedial residents are rarely self-identified, this triangulates to suggest that the self-reflective ability of remedial residents is deficient.

Teaching self-reflection, especially while working with such a challenging group can be a daunting task. It is necessary for the instruction of self-reflection to be solidly based on a well-established model. Environmental scanning can be an appropriate structure to foster self-reflection.

## Environmental scanning

Environmental scanning is a method by which an organization or a body can examine its context, looking at both the internal and external situations (Hatch & Pearson 1998; Ratnapalan & Hilliard 2002). The somewhat novel term "environmental scanning" describes a well-accepted concept which has long been understood as prudent business practice (Miller & Friesen 1977; Newgren et al. 1985; Choo 2001). To capture the information in events, trends and relationships, environmental scans can include many processes from casual conversations to more formal research using focus groups (Choo 1999, 2001). But environmental scanning should not be understood simply as a specific set of activities and process. Rather, it is a general receptiveness to external and internal data (Albright 2004).

### Organizational approaches to the environmental scan

Is the environment easily analyzed or not? If an environment is easily analyzed, an organization would aim to characterize it via systematic information gathering (surveys, trials, etc.). On the other hand, if an organization deems the environment more difficult to analyze, more qualitative methods might be employed; interpretations and explanations would be sought to explain characteristics (via focus groups, in depth interviews with key persons, etc.).

Environmental scanning directions are "inside-out", or "outside-in". In the inside-out approach, internal organizational landscapes are surveyed and described (for example, by oral and written internal reports, budget information, and

comments from department heads) (Ratnapalan & Hilliard 2002) followed by the external environment scan. The outside-in approach looks first at mega-trends and the broader external environment, and focuses internally on the organization itself afterwards (Blau 1994).

### Environmental scanning and the reflective resident

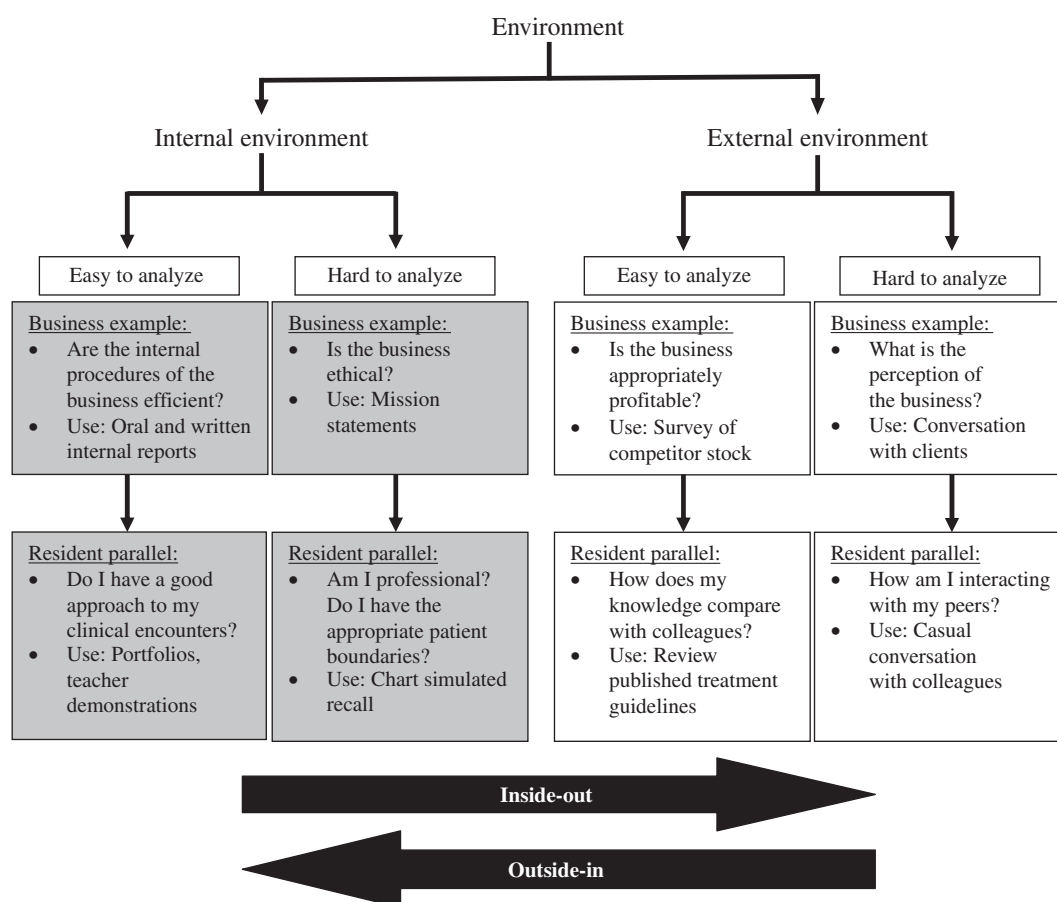
Environmental scanning can be thought of as an organizational approach to internal and external reflections (Figure 1). The approach to performing a personal professional environmental scan is similar to the business approach to scanning; the tools will depend on one's understanding of environmental analyzability (analyzable versus not analyzable).

Remedial residents can consider their knowledge, skills and attitudes. In terms of their "internal" environment, a remedial resident might ask:

- (1) Knowledge and skills:
  - Do I have a good approach to my clinical encounters? Am I comfortable with formulating appropriate differentials and managing my patients?
  - These would be "analyzable" questions that could be addressed with portfolios and debriefing with supervisors, progress testing and teacher demonstrations. These are often already existing tools which can form the foundation for regular reflection. Supervisors can incorporate this reflection on a weekly basis during rounds of chart review.
- (2) Attitudes:
  - Am I professional? Do I have appropriate patient boundaries? Do I attend to my duties on time?
  - These would be questions that are more difficult to analyze, and addressed using chart stimulated recall.

In terms of their "external" environment, a remedial resident might ask:

- (1) Knowledge and skills:
  - How does my knowledge compare with my colleagues? Do I know the latest guidelines and protocols?
  - These would be "analyzable" questions that could be addressed by reviewing published treatment guidelines for patients that were recently seen, reading plans, mock interview simulation and progress testing. These are often already existing tools which can form the foundation for regular reflection. Supervisors can incorporate this reflection on a weekly basis during rounds of chart review.
- (2) Attitudes:
  - Am I professional? How am I interacting with my peers? How am I interacting with other professionals?
  - These would be questions that are more difficult to analyze, and addressed by casual conversations with colleagues, and mentoring. However, unlike



**Figure 1.** Environmental scanning, illustrating internal and external environments, divided into easy- and hard-to-analyze components, with examples. Parallel example environmental scanning activities for remedial residents are shown. Direction of scanning is also indicated.

the business model, medical colleagues may be hesitant to be frank about poorly performing doctors. While such feedback may be more forthcoming when it is properly requested, 360 evaluations can address this barrier.

## A neglected area in the remedial curriculum

Literature describing various remedial curricula does not highlight the need to target resident self-reflection (Ratan et al. 2008). The environmental scanning framework ensures that scanning/reflection is present, rigorous and structured. Poor clinical skills may just be the symptom, with poor self-reflection as the actual pathology. Without a focus on self-reflection, a resident might successfully complete a remedial program, only to fall back into old habits again.

With a supervisor overseeing weekly environmental scanning sessions and using some of the tools described above, self-reflective abilities can be nurtured into habit; this contextual self-understanding can help to direct future action (Stoffels 1994). The supervisor him/herself can also engage in self-reflection. In this one-to-one teaching/modeling (Cantillon et al. 2003), a highly student-centered learning environment can be created (Bloom 1956; Stott & Davis 1979).

## Conclusion

Well-established adult educational principles are rooted in self-reflection. A successful remediation curriculum must therefore address self-reflection. Following a well-established business practice, structuring reflection using an environmental scanning model may increase the potential for successful remediation of residents. Improved self-reflection may form the foundation upon which a remedial resident can become a true adult learner and exit the remedial curriculum. Medical education can profit from a business tool.

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