Teaching metacognitive strategies

There are several practical ways of integrating the teaching of metacognitive strategies into your own practice. Two of these are the KWL strategy and the IDEAL approach.

The KWL strategy

The KWL (know, want, learn) strategy (Dixon-Krauss, 1996) attaches importance to students being actively involved in thinking about their learning. First students need to know or identify what they already know. They may do this by discussing what they know and brainstorm or list information that they have. This step invites students to bring their own experience and background knowledge to the learning situation. Having completed this step, learners are in a position to identify what they want to learn and know more about. In this way the learners are active in constructing their learning, rather than being told what they must learn by the teacher. Finally, they reflect on what they did learn. Students review their learning which is made more meaningful as they make connections between prior knowledge and new learning.

IDEAL

This is another approach to teaching metacognitive skills that promote efficient thinking and problem solving (Byrnes, 1996). IDEAL is an acronym for identify, define, explore/evaluate, act and look/learn.

Identify

The first step involves anticipating difficulties you may encounter during the problem-solving process. Novices rarely engage in this step. They have difficulty anticipating the difficulties and lack the planning skills to prepare for them.

Define

Defining the problem involves thinking through the steps of the problem and which steps might potentially be difficult. The expert sets goals for overcoming possible problems before they arise.
Explore/Evaluate
In the exploration phase, the expert learner tends to be reflective and to think more broadly about ways of solving the problem. Novice learners spend little or no time on this planning phase.

Act
The more experienced learner spends time thinking, reflecting and planning before acting, whereas the novice learner tends to act without devoting time to these earlier phases.

Look and learn
The look and learn phase engages learners in self-reflection, self-questioning about the process, and thinking about what has been learned and how they might learn from the experience. Novices typically lack reflection and self-monitoring skills.

A practical application of the IDEAL approach is outlined below.

An IDEAL approach to problem-solving with adolescents
The following example could be demonstrated and discussed in a class of Year 9 students discussing personal development issues.

**Problem:** A lot of your friends have started to smoke. They always want you to go with them to buy cigarettes and keep offering smokes to you.

**Table 5.1**

<table>
<thead>
<tr>
<th>I Identify the Problem</th>
<th>My problem is deciding whether or not to start smoking. Lots of my friends smoke and I’m not sure they’ll still hang out with me if I keep saying “no”. I really don’t think smoking is smart.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D Define and describe the problem</td>
<td><strong>Solution 1</strong> Start smoking</td>
</tr>
<tr>
<td>E Explore and Evaluate strategies, solutions ΔPositives ΔNegatives</td>
<td>😊 The pressure will be off. 😊 I won't lose friends 'cause I'll be like them. 😊 It costs a lot.</td>
</tr>
<tr>
<td></td>
<td>My parents will find out.</td>
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<td>--------------------------</td>
</tr>
</tbody>
</table>

**A Act on the strategies**

I choose solution 2

I’m not going to smoke because it’s not worth the risk.

**My reasons for choosing this solution:**

My grandmother tried but couldn’t quit smoking, even after she had a serious heart attack.

**L Look back, evaluate the effect of your strategies and learn**

I learned that friends who pressure me do to something I disagree with are not the kind of friends I want to have ... smoking really isn’t cool anymore.

Source: Adapted from Peel (2002).

### Activities

1. Can you think of ways you could adapt this approach for other subjects and age groups you may teach?

### References


Peel (2002). Available online at: [http://www.region.peel.on.ca/health/commhlth/probsolv/probtn1.htm](http://www.region.peel.on.ca/health/commhlth/probsolv/probtn1.htm)