Indirect Methods of Assessment: Self-Assessment Instruments.

One way to gather feedback on students’ prior knowledge and skills is to ask them to assess their level of knowledge or skill. The objective is to get an idea of the range of abilities and experience of the class as a whole, not to evaluate individuals. Questions can focus on knowledge, skills or experiences that you assume students have acquired and are prerequisites to your course, things that you believe are valuable to know but not essential, and topics and skills that you plan to address in the class. The feedback from the instrument can help you calibrate your course appropriately or direct students to supplemental materials that you think will help them fill in gaps or weaknesses in their existing skill or knowledge base that may hinder their progress. The questions also help students to focus on the most important knowledge and skills addressed by the course and how prior courses or experiences apply to the course.

The advantage of a self-assessment instrument is that it is relatively easy to construct and score, and because it can be administered anonymously, it is low-anxiety for the student. The weakness in the method is that students may not be able to accurately assess their abilities. However, accuracy improves when the response options are clear and tied to specific concepts or behaviors (e.g., what am I able to do with what I know) that students can reflect on or even mentally simulate, such as trying to define a term, or explain a concept, or recall specific kinds and qualities of experience, such as building or writing or performing in a specific context.

Below are some examples of questions and response items.

1. How familiar are you with “Karnaugh maps”?
   a. I have never heard of them or I have heard of them but don’t know what they are.
   b. I have some idea what they are, but don’t know when or how to use them.
   c. I have a clear idea what they are but haven’t used them.
   d. I can explain what they are, what they do, and I have used them.

2. Have you designed or built a digital logic circuit?
   a. I have neither designed nor built one
   b. I have designed one, but have never built one
   c. I have built one but have not designed one
   d. I have both designed and built a digital logic circuit

3. How familiar are you with a “t-test”?
   a. Have never heard of it
   b. Have heard of it but don’t remember what it is
   c. Have some idea what it is, but not too clear
   d. I know what it is, and could explain what it’s for
   e. I know what it is and when to use it, and could use it to analyze data.
4. How familiar are you with Photoshop?
   a. Have never used it, or tried it but couldn’t really do anything with it.
   b. Can do simple edits using preset options to manipulate single images (e.g., standard color, orientation & size manipulations).
   c. Can manipulate multiple images using preset editing features to create desired effects.
   d. Can easily use precision editing tools to manipulate multiple images for professional quality output.

5. For each of the following Shakespearean plays, place a check mark in the cell if it describes your experience.

<table>
<thead>
<tr>
<th>Play</th>
<th>Have read it</th>
<th>Have seen a live performance</th>
<th>Have seen a TV or movie production</th>
<th>Have written a college-level paper on it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamlet</td>
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<tr>
<td>King Lear</td>
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<td>Henry IV</td>
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<td>Othello</td>
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