Guidelines for Developing Assigned Studies

Assigned studies in UGME pre-clerkship courses are a form of independent learning in which responsibility for learning shifts to students. Independent learning provides students with the opportunity to develop their own learning strategies and to go at their own pace, as well as facilitating alternative learning approaches to account for students’ different learning style preferences.

Below are several guidelines for developing assigned studies in your course that will increase the benefits of independent learning for your students.

1. Know your learners

Consider what students already know and their previous experience. Students’ knowledge, skills, attitudes, and experience will develop over time and, thus, over time they can take on more responsibility for and independence in their learning. Knowing students’ prior knowledge and experiences can help determine what topics and materials are appropriate for assigned studies and how much guidance you may need to provide.

2. Determine appropriate topics for assigned studies

Different learning formats (e.g., WGS, SGS, AS) lend themselves better to different topics depending on students’ prior knowledge and/or the complexity of the topic. Choose topics that can be integrated well into the overall structure course.

- Choose topics for assigned studies that build on prior knowledge either from the course or program rather than new concepts.
- Design and schedule an assigned study to build on material covered in a previous lecture or review material covered in an assigned study in a subsequent tutorial.

3. Define the purpose and learning goals of the assigned study

Having a clear purpose for an assigned study will help determine appropriate design and resources. Designing a study to achieve that purpose will also minimize the time students spend on peripheral tasks.

- Determine the knowledge, skills, or attitudes students are expected to acquire through the assigned study. For example, is the purpose of the assigned study for students to increase their knowledge of a particular topic, to learn how to find and apply government guidelines, or to learn to read peer-reviewed journal articles?
- Develop learning objectives that reflect the purpose of the assigned study.
- Communicate the purpose and goals of the assigned study to students.

4. Choose resources that align with the purpose and objectives

The choice of resources that you provide to students will influence how an assigned study is structured and what types of learning strategies students will use. Choosing appropriate materials involves more than providing the content required to achieve course and assigned study objectives. Choose or create resources that align with the purpose of the assigned study. For example:
• If the purpose is for students to learn how to read peer-reviewed research articles, provide peer-reviewed research articles that are appropriate for their level of knowledge, e.g., they are familiar enough with terminology or concepts to be able to engage critically with the article.
• If the purpose is to learn new knowledge, choose or develop resources for students that focus on the content that meets the objectives for the assigned study and less on other skills such as learning new terminology that is peripheral to the objectives.

5. Consider different learning style preferences

One of the purposes for assigned studies is to provide a variety of ways of learning in each course. When designing assigned studies, consider incorporating different ways of learning that are not already used in lectures and tutorials.

• Videos or voice-over PowerPoint presentations are similar to lectures and do not provide alternate methods for learning than already provided in a course. Use only when necessary for the purposes of the assigned study.
• Consider including more written, visual, and kinesthetic forms of learning in an assigned study to introduce additional ways of learning to the course for students who do not prefer learning through listening and interacting with others.

6. Respect time constraints

Students will be able to read and cover material faster when they are familiar with the content and the format of resources. If they are learning new concepts or are unfamiliar with the format of a resource, they will need more time to work through the assigned study. For a one-hour assigned study, choose material that can be covered by students in one hour to increase student engagement and learning.

• Provide less material, easier tasks, or more time to students when a new topic is being introduced.
• Minimize lengthy readings and videos for new or complex information.
• Students will be able to cover less material on their own than can be covered in a lecture or tutorial. If you are turning PowerPoint slides from a lecture into an assigned study, consider shortening the presentation.

7. Provide guidance

Providing clear expectations for an assigned study will facilitate student learning. The less experience that students have with assigned studies in your course or the program, the more guidance they will require.

• Provide explicit directions for completing the assigned study.
  o Newer students might need more detailed instructions than more experienced students.
  o If you are providing third-party material (e.g., peer-reviewed journal article, textbook chapter, YouTube video) students will benefit from a clearer understanding of why they are reading/viewing a resource and how they should approach the material and what information they should focus on.
• Provide more guidance and information for an assigned study in Med 1 and for the first assigned study in a course so students will learn expectations for the program and for specific courses.
8. Provide context

Students will learn material better when they understand what and why they are required to learn particular topics and concepts. Students with less experience might need more help determining the relevance of information than more experienced students.

- Ensure that content aligns with course and assigned studies objectives.
- Explain the clinical relevance of assigned study topic, when possible.
- Refer explicitly to previous modules in the material (e.g., “review UT203”) or explain that the information presented in an assigned study will be required or taken up in a future class (e.g., “to be discussed further in UT223”).

9. Format content to facilitate learning

Written material needs to be more explicit about the relevance of and connections between information than material presented orally or when there are opportunities for interaction between teachers and students.

- Consider presenting information in sentences and paragraphs rather than point-form when creating your own materials.
  - Sentences and paragraphs often allow for more nuanced connections, relationships, and relative hierarchies than point-form.
  - Point-form may be appropriate large amounts of concrete information, such as guidelines.
- Provide explicit connections between graphics and explanatory text. For example, label figures (e.g., “(See Figure 1)”, “As shown in Figure 1,...”) and explain the contents of the figures in the text.
- Use formatting judiciously. Students will interpret highlighting, underlining, italics, etc. as important or relevant material. Formatting that highlights the importance or relevance of material should be tied to learning objectives and exams. Too much special formatting can lose its effectiveness, and students may ignore it.
- If providing a voice-over PowerPoint presentation, include additional information in the voice over than is written on slides.
- Consider providing a summary of key points at the end of an assigned study to reinforce relevance of material.

10. Make learning active

Active learning leads to a better understanding and retention of material. Being able to apply new knowledge helps students learn the material.

- Offer opportunities to apply new knowledge from the assigned study. Choose activities that correspond to the learning objectives and directions for completing the assigned study and that emphasizes material that is relevant for the exam and for clinical practice. Examples include:
  - For memorizing key terms and definitions, provide an MCQ or similar quiz
  - For comparing and contrasting ideas and approaches, create a table for students to complete.
For understanding pathways and processes, provide a diagram for students to label or have students draw their own diagram.

For making decisions about choosing medications or diagnostic tests, provide a case study.

- Start with tasks that are lower on Bloom’s taxonomy\(^1\) and move upwards through the course and program.
- If new or complex information is presented in the assigned study, include opportunities for students to interact with teachers or classmates, for example, reviewing an assigned study in a tutorial.

11. Create opportunities for self-assessment

Providing methods for self-assessment allows students to check their own understanding of the material before an exam and to target their weaknesses more effectively.

- It is important for students to know when they have achieved the objectives of the assigned study and when they need to continue working towards some of the objectives.
- Self-assessment can be facilitated through providing answer keys to quizzes or case studies that explain the reason for the correct response, a completed table or diagram for students to reference after they complete their own, or opportunities for students to interact with each other, tutorial leaders, or instructors by setting aside time in a tutorial or lecture to review an assigned study.

12. Maintain consistency

Providing a consistent format for assigned study throughout a course will reduce the amount of time students spend trying to understand the expectations for an assigned study and more time focusing on achieving the objectives of the assigned study.

- Create a template for assigned studies if there are multiple instructors involved in developing assigned studies for a course.