



Tips and Tricks for the Teacher's Toolbox



FLIPPED LEARNING TERMINOLOGY

Instead of having students gain their first exposure to new concepts and material in class (often through a lecture), we set up ways for students to have that first exposure prior to class, along with ways to guide them through that first exposure. Because all this is taking place before class, it frees up large chunks of time during class that can now be spent on the activities where students typically need the most help, such as applications of the basic material and engaging in deeper discussions and creative work with it. This “*flipping*” of the contexts of student work—first exposure to new concepts before class, then deeper and higher work during class instead of the other way around.

Flipped Learning is a pedagogical approach in which first contact with new concepts moves from the group learning space to the individual learning space in the form of structured activity, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter. There are cogent arguments that the flipped model’s effectiveness comes from being able to utilize class time for active learning that engages higher order cognitive processes.

Individual Space refers to the context in which students operate when they are working mainly by themselves, or perhaps in a small informal group that meets apart from a formal class meeting. A student encounters individual space when working alone in a dorm room, library, or coffee shop. The student also encounters individual space when working in a tutoring center receiving help on demand, or meeting after dinner with a study group, or working with a friend on Skype or Zoom. Work done in the individual space is focused on the individual student’s efforts, even though there may be more than just the individual present.

By contrast, **Group Space** refers to the context in which students operate when they are working with a formal group as part of the class itself. Group space is what students encounter, in other words, when they are learning with the entire class or some intentional, regulated subset of that class such as small groups formed during class by the instructor or a designated breakout group in an online course. A student is encountering group space when attending a scheduled class meeting. The student is also encountering group space during a meeting in a scheduled tutorial session run by the instructor, or in an online class interacting on a discussion board or video chat as part of a scheduled group activity. Note that group space does not always involve group work.

Guided Practice is an approach to individual space work in a flipped learning environment that provides structure to student learning experiences as students are preparing for the group space. A Guided Practice assignment may consist of the following parts: (a) an overview and introduction for the lesson coming up; (b) two lists of learning objectives for the lesson, one “basic” (to be learned before group space activities) and the other “advanced” (to be learned during and after the group space activities); (c) a list of learning resources, pulled from a variety of media (e.g. print, online text, video, audio, quiz games, simulations); (d) a list of exercises for students to do that instantiate the basic learning objectives; and (e) a system of submitting responses, along with instructions and deadlines for doing so. The purpose of Guided Practice is to guide student practice as they come into contact with new concepts for the first time. It is a way to provide structure so that students have a framework for making sense of concepts independently, and the structure serves as a kind of proxy for the instructor as students work in individual space.

Direct Instruction has many definitions and interpretations. For our purposes, we will define direct instruction as any teaching technique in which information being taught is presented in an organized, sequenced way by a teacher, explicitly directed toward the student. Direct instruction can look like many different things:

- The stereotypical lecture, given in a one-way oral transmission from a professor to students who sit listening and taking notes in a lecture hall, can be a form of direct instruction. It is not necessarily direct instruction, because direct instruction presupposes organization and logical sequencing, and we have all experienced lectures that fail on these fronts. In order to be direct instruction, the pedagogy must at least attempt to instruct.
- Students who watch a (well-organized, sequenced) lecture that has been recorded to video are receiving direct instruction.
- An instructor whose students are working in small groups in a class meeting who notices that one group is falling behind and briefly gives a fully worked-out example to that group to get them back on track is engaging in direct instruction.

The counterpart of direct instruction is active learning. For our purposes, we will include as active learning any instructional method that engages students in the learning process, in an active way, as part of the group space activities.

Think-Pair-Share/Think-Pair-Share-Square

Think-pair-share refers to a learning exercise in which students are given a question or some other item to think about. Then they are asked to think about it for a certain (short) period of time. Next, students form pairs and then share with each other what they were thinking in a small-group discussion. In the variation think-pair- share-square, there is an additional phase in which pairs pair up to form four-person groups (i.e., squares) and the pairs take turns sharing their ideas with the other pair. Think-pair-share(-square) is a technique to spark effective small-group discussion in a group space situation. It could be used at the beginning of group space in a flipped learning environment, for instance, to help students solidify' and express what they learned during the individual space or pre-class work, ask questions of each other, and provide help to each other.

Entrance/Exit Tickets

Entrance tickets are short activities for students to do upon arrival at a group space session (e.g., class meeting) in which they are presented with one or more short prompts and then asked to respond to those prompts. The responses give instructors a brief dose of formative assessment on student knowledge at the beginning of class. For example, students might be given the following prompt: Based on the readings and video for today, what are the top one to three big ideas of this lesson? or What is one specific question you have about today's lesson? Instructors then collect the responses as entrance tickets to register student attendance at class. Their counterparts, exit tickets, accomplish the same purpose but take place at the end of class and can contain appropriate prompts such the following: What was the least clear idea from today's class? (The previous prompt specifically is sometimes called a muddiest point question.) Entrance and exit tickets provide benefits across all course design paradigms, instructional methods, and levels of technology. In a flipped learning environment specifically, entrance tickets can provide a way for students to bring focus to their understanding of the learning activities done during Guided Practice and can provide a layer of accountability for students to complete those assignments. Using technology such as Poll Everywhere or other classroom response systems that allow text input, entrance tickets can even be assigned to be completed prior to class. Exit tickets can be used after group space activity to allow students the chance to sum up the day's activity and engage in metacognitive activities, such as evaluation of their work and planning and forethought for the post—group space work.

Self-directed learning (SDL) is an instructional method that can be defined as the amount of responsibility a student accepts in ownership of learning. A curriculum that emphasizes opportunities for students to develop self-directed learning behavior promotes lifelong learning. Since students are required to preview materials before coming to a flipped learning class, the ability to regulate one's own learning is crucial for success. SDL allows students to design their own learning goals, adopt appropriate strategies for learning, and evaluate their learning results.

The mnemonic SMART—Specific, Measurable, Attainable, Relevant, and Time-bound—can be used to describe the elements of a well-written learning objective.

SMART learning objectives are:

Specific: What action will be performed and by whom?

Measurable: How will success be measured?

Attainable: Can this objective be achieved within a given time frame and with available resources?

Relevant: Are the objectives aligned with the instructional method and assessment?

Time-Bound: When will this objective be achieved? Objectives should provide a time frame indicating when the objective will be met.

(See Issue 26 for more information on writing SMART objectives.)