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Tips for Teaching Photography

A **Focal Press** Book

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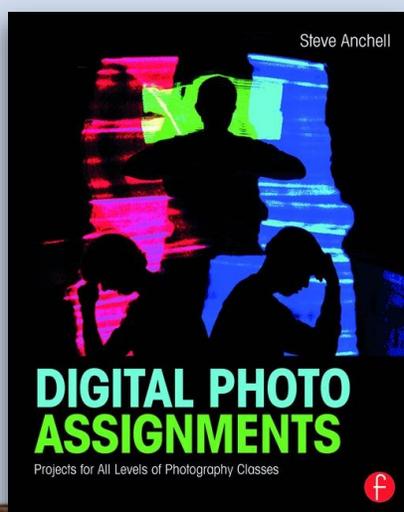
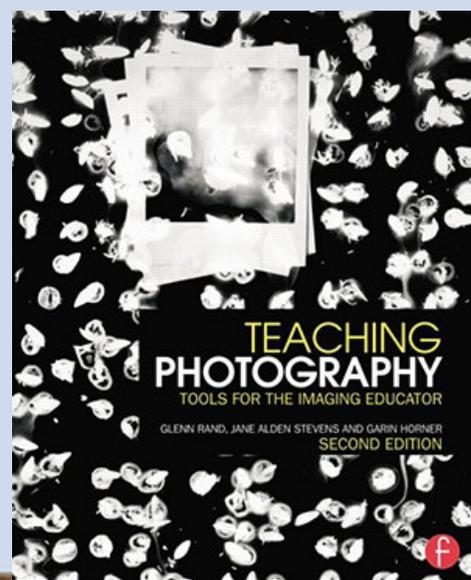
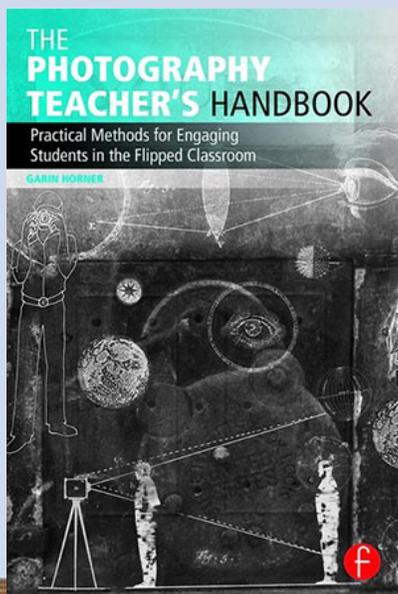
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Introduction

I don't have to tell you that photography is a rapidly changing field. It's filled with innovators and bright, engaged minds, constantly pushing the technology and technique forward. It would be enough to just try to keep up with it alone, but how do you pass that on to your students? Students come from varied backgrounds – some perhaps, are digital natives, some perhaps are lifelong photographers - each with their own needs and skills and learning styles.

Teaching, thankfully, is not an isolated practice, and here at Focal Press we've brought together a collection of resources to help you along the way.

In [The Photography Teacher's Handbook](#), Garin Horner helps you engage your students in dynamic, flipped classrooms. In this chapter, he discusses what might be the most nerve-wracking day of the semester for both students and instructors alike – day 1 of class. There's an old adage that there's no such thing as a bad question; how does a teacher channel his or her answer into a learning opportunity? In [Teaching Photography](#), Glenn Rand, Jane Alden Stevens, and Garin Horner discuss methods for asking questions, and methods for answering questions – which is never so straightforward as a blunt recitation of facts.

If putting together your syllabus is daunting to you, and you're not quite sure where to start, [Digital Photo Assignments](#) by Steve Anchell might just be the thing. A collection of forty photography assignments, keyed from beginner (freshman) to advanced (senior), this book takes you step by step into exploring the "how to" in a practical, useful way. Here, assignment 8 helps the student learn when to use selective focus, and when to use maximum DOF.

If you enjoy these chapters, and want to learn more, you can find these books at www.routledge.com/photography. I wouldn't dare claim to be able to teach you everything you'll need to know as a photography instructor; no tutorial or book could replace your years of experience, your hours in the classroom and studio. In a world moving so fast it seems no shutter speed could capture it, however, I hope that we can help you get started.

Best,

Judith

Judith Newlin

Editor, Photography and Visual Arts Focal Press, an imprint of Routledge Do you have an idea for a book you want to write? If you think Focal Press would be a good fit for your project, you can reach out to me at judith.newlin@taylorandfrancis.com to hear more about our publishing program, and our proposal guidelines.





CHAPTER

1

Tips for the First Day of Class

Chapter 1: Tips for the First Day of Class



The following is excerpted from *The Photography Teacher's Handbook* by Garin Horner. © Taylor & Francis Group, 2016. All rights reserved.

Learn more:



Someone once said, 'There are no second chances at making a first impression' and the first impression a teacher makes is a significant event with consequences that can ripple throughout the semester. It is the goal here to offer evidence-based, effective practices that can influence the nature of those consequences. From the information presented here, educators can choose which methods to use in order to establish an organized, cohesive, collaborative environment where students become excited about becoming part of a community of learners in the study of photography.

What an instructor does on the first day of a course can impact students' motivation in the course. To build upon these prior research findings, we implemented a first-day intervention to influence students' motivation by increasing their perceptions of course interest, course usefulness, and instructor caring.

(McGinley & Jones, 2014)

Student perception plays a big role in the success of the first-day experience. Students collect evidence and arrive at conclusions in order to predict how the course will go over the semester. They look to the teacher to provide that evidence and find it in the way the teacher presents themselves during the introductory class. They also collect data from the materials the teacher has prepared and distributed to them on or before the first day. A positive impression can greatly effect student motivation, performance, and learning. Therefore, there is a lot of emphasis placed on projecting an inspiring, caring, competent, helpful, and enthusiastic image to students. In addition, one must be authentic if trust is to be established. So, the teacher must find these positive qualities in themselves and bring them to the surface for students to see.

Preparation Before the First Day

A successful introduction begins long before the teacher and students meet face to face in the classroom. For the educator the first day begins with establishing the learning goals for the course based on the visual literacy, technical, and intellectual competencies the students should achieve by the end of the semester. Next, the course-design is either completed (for a new course) or updated (for an existing course) according to the desired outcomes. The syllabus and the schedule are completed along with a comprehensive strategy for what will take place on the first day. Donald Greive advises, "You should have a detailed plan for the first class period which will diminish the threats and anxieties of expecting the unexpected" (2011).

To help alleviate student anxiety you should make first contact with students by sending an enthusiastic email two to three weeks before classes. Apart from saying hello and expressing excitement to begin class, the teacher can send the syllabus, the



schedule, and a list of materials students will need for the course. Students will appreciate knowing what books or other supplies, such as a portable hard drive, photo paper, or a camera, they will need for class. An early email will also give them some time to research, find, and purchase items at the best possible price. Students will be grateful that a teacher is concerned enough to reach out before classes and help them save money on required course materials. This one simple act becomes the building block upon which a teacher's first impression is being made.

Once email contact has been made, the teacher is ready for the first encounter with students, striving to build on the positive impression they have already made. A health sciences study supported the idea that impressions matter because "they guide how we initially interact with the person, what information we remember about the person and our predictions for their future behavior" (Wood, 2014). Amy Cuddy, a social psychologist at Harvard Business School, says, "New research suggests that people respond more positively to someone who comes across as trustworthy rather than confident" (Capps, 2012). Whatever perceptions are gathered during introductions, each student will draw their own conclusions about what they should expect out of the course and the teacher for the rest of the semester.

For students, introductions begin with an internet search for their teachers prior to the beginning of class. Students are curious and want to know that their future photo-educator has an internet presence that communicates something about their photography and teaching practices. Students rely on a teacher's internet presence in order to help establish some sense of familiarity and trust. Information on a teacher's personal or academic website can lessen student anxiety created by the feeling that they are walking into a completely unfamiliar situation. This is one of the many reasons why students feel it is important for photo-educators to have websites. Not having one communicates a lack of connectedness with their world, that teachers are detached from contemporary culture.

Without an internet presence, the teachers may unintentionally contribute to a reputation as someone who has chosen to remain hidden from the view of students. And, as far as reputation goes, students will also check teacher rating websites and with former photography students:

When we need to work with a new, unknown person, we can ask people with whom we already have relationships for information about that person. Based on the information we gather, we form an opinion about the reputation of the new person.

(Golbeck & Hendler, 2004)

As a result of these student research methods, a fairly complete profile for a teacher has been collected even before actual, physical introductions have taken place.

Early is on Time

As Jerome Dickey once said, “Early is on time, on time is late, and late is unacceptable” (2007). Many believe the first day of class is no exception, for either students or teachers. Photography is a time-based medium and the awareness of time goes beyond the creation of the image. Teachers should arrive early not only to prepare the classroom to be a welcoming setting, but also to get ready to deliver the plan for what is to take place. It is part of emulating professionalism for the students and it is particularly important for photography classes. This is because the entire photo industry is based on deadlines and being on time, which is early, for photo assignments.

Those working photographers who do not arrive at weddings or other events early will lose credibility, reputation, and clients. Arriving early helps ease anxiety. It also:

Demonstrates that you are diligent and dependable. [It] Indicates that you honor your commitments and you can be trusted. [It also] Shows that you have respect for other people and that you care as much about their time as your own.

(Smith, 2/28/15)

In academia, a study found that teacher punctuality has an impact on student performance. “The indicators regularity and punctuality of teachers . . . are found to be significant. . . Thus, without any hesitation, it can be concluded that these two indicators play an important role in enhancing the academic performance of students’ performance” (Ahmad, Pervaiz, & Aleem, 2010).

Face-to-Face Introductions

Face-to-face introductions finally happen when students walk into the classroom and encounter the teacher for the first time. Researchers at Princeton University found that it takes about a tenth of a second to form an impression from seeing someone’s face. They also found that continued exposure does not change that initial impression much (Willis & Todorov, 2006). In light of this information, it would be beneficial to carry a pleasant demeanor. Media consultant Dorit Uzie explains that, “It only takes a second to get a first impression of someone we meet, and just a four-minute conversation will produce opinions so solid that it will take between 8–10 additional encounters to change them” (Cohen- Arazi, 2/26/15). It helps to enhance student perception and performance when teachers dress professionally on the first day. This advice is reinforced by a study conducted by J. Dean Craig and Scott J. Savage (2014). It is very much like going to an interview, where students are deciding on the quality of the candidate. The first day is an interview-like situation. Students will come to class with a list of important questions they want answered. Among those questions are:

1. Is this class going to meet my needs?



2. Is the instructor competent?
3. Will this instructor be fair?
4. Will the instructor care about me? (Scholl-Buckwald, 1985).

By the end of the first class students will have the answers to these questions, even if the answers are not based on evidence, but on their feelings.

After student introductions are made the teacher introduces him/ herself, knowing that learners are waiting to find out *who this person is*, and, *what I am discovering about them?* Ken Bain recommends that teachers be open, to “talk about their intellectual journey, its ambitions, triumphs, frustrations, and failures, and encourage students to be similarly reflective and candid” (Bain, 2004). Students want to know that they are learning from an expert photographer and accomplished educator, someone with extensive experience and credibility, and who is passionate about being their teacher. Students want to know that the teacher is willing to help whenever help is needed. They want to be roused and excited by the teacher’s enthusiasm, because teacher enthusiasm inspires and gives rise to intrinsic motivation that makes them want to come to class, to learn everything there is to know about photography. Researchers found that, “Among the teacher variables, enthusiasm was the most powerful unique predictor of students’ intrinsic motivation and vitality” (Patrick, Hisley, & Kempler, 2000).

Class Begins

When class begins it is a good opportunity for teachers to give an overview of their experiences as photographers and educators, offering hard evidence that students have made a good choice to learn from someone who is highly qualified. Learners, in turn, could take the opportunity to share something about themselves to the class. Dr Maryellen Weimer advises that, “Expectations for an interactive course should be set from day one and telling students that you want them talking isn’t nearly as effective as getting them talking” (2013). One exercise that will get them talking is the *Interview*. Students break out into pairs and interview each other. Each person in the pair will eventually introduce the other student to the class. While writing the answers down, so they do not forget the responses, students can come up with a variety of questions, such as “Why are you interested in photography?”

At some point the teacher will introduce the syllabus, the schedule, any rubric examples, past student work (in the form of a brief slide show with upbeat music), a description of the flipped-class format, and the high expectations there are for students. Also, the teacher should communicate how dedicated they are to helping students be successful in the course. The teacher can also be honest about the fact that, in order to learn, students will have to do the work, that learning is an active principle that students have to actively engage. Active learning means the teacher



cannot just *download* the information and concepts into their minds. Students have to take what they learn and integrate it into their memories, thoughts, and actions.

With all the presented information students will have questions, but may be reluctant to ask. Soliciting questions is the best way to gauge the level of understanding and attentiveness of the group. Students are asked to submit one question they have at this point in the class. The questions can be facilitated by handing out index cards or by a virtual method, using an online backchannel application like Today'sMeet or Tozzl, and asking students to get out their mobile devices to backchannel their anonymous answers to the teacher.

Students will be shocked and amazed by any teacher who says, "Can you please get out your phones?" This question alone will enhance student perception and raise teacher approval ratings. With a digital projection device, questions can be seen in real-time as they appear onscreen anonymously. The teacher can then offer brief responses to student questions. As a follow-up, the teacher can ask students, "Please send me one concern you might have about this course." This kind of formative assessment will offer an immediate snapshot of how much of what is presented is being retained and assimilated by students, while at the same time serves to gauge students' states of mind.

The Class Period: From Beginning to End

Teachers should start class on time even though there may be stragglers who will wander in. Say, "Let's begin, it's time for class" in order to transition students from organizing themselves to bringing focus to class. This practice will let students know that class starts on time and communicates an underlying statement that if you are late you will miss something. Appeal to a sense of student's FoMO (Fear of Missing Out) to get them to class on time. The *Oxford English Dictionary* defines FoMO as, "Anxiety that an exciting or interesting event may currently be happening elsewhere." It is up to the teacher to give students a reason to feel like they might be missing something if they come late.

One misstep that many teachers make on the first day is to dismiss students early. Research shows that this practice weakens student confidence in a teacher, undermining their perceived credibility and supporting the perception that they are less caring (Banfield, Richmond, & McCroskey, 2006). In fact, in research terminology the act of shortening a class period is classified as *teacher misbehavior*, and many studies have been done about its perceived effects on students. The US News and World Report warns that, when class gets out early, students assume "you can be pretty sure that the professor is inexperienced, is a bad planner, or, worst of all, doesn't really give a damn about the course" (Hyman & Jacobs, 2010).



It would seem that students are happy about leaving early by gaining some free time as they ease into their semester, but they actually have complex emotional reactions about it in retrospect. The practice causes a sense of ongoing anticipation and anxiety throughout the semester as each class period nears its end with students wondering when they will be released. Researchers found more far-reaching consequences in that *ending class early* affects students' academic and intellectual development (Braxton & Rogers Mann, 2004; Buttner, 2004). Based on all the studies, it seems more advantageous in many ways to fill class time with meaningful learning activities.

Prior Knowledge About Photography

“The most important characteristic determining student learning is prior knowledge” (McKeachie & Svinicki, 2006). Furthermore, students:

come to formal education with a range of prior knowledge, skills, beliefs, and concepts that significantly influence what they notice about the environment and how they organize and interpret it. This, in turn, affects their abilities to remember, reason, solve problems, and acquire new knowledge.

(Bransford, Brown, & Cocking, 2000)

One collaborative exercise that will help reveal this information is called simply, *What is Photography?*

The goal of this exercise is for students to reveal everything they believe photography to be. They do this by collaboratively creating mind-maps formed on a system of hierarchy where the word *Photography* is the central point from which all other words or concepts radiate. In this exercise students begin by getting into groups of three to four (avoid putting friends together). Groups start by making a list of terms that describe what they think photography is. Then they organize the list into hierarchical categories. Once the categories are formed, they can be organized into mind-maps.

There are a couple of options for creation formats, either analog or digital. In the analog version students simply draw brainstorming results on large sheets of paper or a white-board. In the digital version students use an easy online mind-mapping tool, such as bubbl.us. Students go to bubbl.us to prepare, brainstorm, and mind-map all the things they think photography is.

Next students build a hierarchy of bubbles that radiate off of the central bubble. Each level should be distinctive in the way it describes photography. Students can think about all the ways that photography has touched their lives. Because each learner will bring unique ideas from their personal prior experience, group brainstorming will help collect those experiences while also causing students to think more deeply beyond their initial responses. At the end, the class reconvenes as a group to discuss what they



created. A good example on the topic of Teaching and Learning can be found at: elketeaches.files.wordpress.com/2012/03/teaching-learning-mind-map.jpg. During the discussion, a designated student can redraw a class-collaborative mind-map based on the whole class's results. See a photo of student's mind-mapping on the right.



Another prior knowledge exercise is called the *Do You Believe It?*, where teachers give students 10 (or fewer) true/false statements about photography that are based on misconceptions or myths (Nilson, 2003). Students get into small groups to discuss the questions in order to reach a group consensus about which answer is correct and why. When they are finished groups report back to the class on their answers and compare their answers and supporting arguments to the other groups' responses. As a few examples, statements like:



- The photo files on your phone will last 100 years or more.
- Black & white darkroom prints will last 100 years or more.
- I can take better photos with an expensive camera than with my cell phone.
- Photographs represent exactly what the photography saw.



When answers are presented, teachers can take the opportunity to contribute their ideas about the student answers to the statements.

First Class Data

The information gathered on the first day can be used by the teacher as important baseline data about students' prior knowledge. The information serves as an overall kind of pre-assessment that can be compared to a follow-up assessment at the end of the course. Based on information in the exercise, additional data can also be collected, such as:

- Why are you interested in photography?
- What do you want to learn about photography?
- What obstacles do you foresee preventing you from learning?

Other baseline data can be acquired by asking fundamental photography questions such as, “What is a camera aperture?” or “What does a camera shutter control?” etc.

By comparing this accumulated data with end-of-course data, the teacher will have analytical evidence of what students learned in the course. These valuable results can be used to think about ways to fine tune teaching approaches for subsequent courses.

My Future in Photography

It is hard to predict anyone’s future in photography but this icebreaker has, at times, made accurate predictions. This activity begins by students circling-up into a group. The teacher distributes a container of fortune cookies and each student blindly picks one. Everyone opens their cookies and, going around the room, reads their fortune aloud. As they read their fortune, they add to the end . . . *in photography*. Here are some actual examples:

- Trust your intuition. The universe is guiding your life . . . *in photography*.
- If you fail to plan, you plan to fail . . . *in photography*.
- You are endowed with strength of purpose and energy of will . . . *in photography*.
- Love in its essence is spiritual fire . . . *in photography*.
- Change your thoughts and you change your destiny . . . *in photography*.
- This is a wonderful time in your life to look inward for answers . . . *in photography* (Baily International Inc., 2015).

As a note, not all fortune cookies are the same quality. Teachers are advised to conduct research by visiting several Chinese restaurants in order to find fortunes of high quality. One recommended company to look for, Baily International Inc. in National City, Illinois, makes a product called the Gourmet Fortune Cookie. Also, teachers should have extra cookies on hand in case a student gets something like “Life is a gift, don’t waste it . . . *in photography*.” Students are advised to save their cookies to see if the fortune comes true. This is a popular first day exercise with students, possibly because they love any activity where they get to eat cookies. Fortune cookie predictions are hard to count on, so it is best if students are inspired and motivated to learn and grow intellectually, technically, and creatively.

Another activity is called *Message in a Bottle*. Former and/or advanced students can support beginning students by offering advice based on their own hard-earned experience. Former students can provide counsel in the form of artifacts, such as a compilation of short video clips or written messages. Beginning students can watch or read aloud the advice offered to them by those who succeeded.

It is a Start

From one perspective, the entire semester is nothing but a continuation of the first



class and the impressions it leaves can have a lasting impact on students. In fact, one clinical psychology study found that, “students with the positive first-day experience reported higher motivation for the majority of the course, and their grades were significantly higher by the end of the term” (Wilson & Wilson, 2007). A well-designed experience for this first encounter will serve to inform students about what to expect over the coming weeks. It will also captivate and entice students in a way that will make them want to be a part of the rewarding journey of learning this profound visual art. By making the first day compelling students will anticipate, with excitement, learning activities that lie ahead. The first day is not just a day for introductions, disseminating information, games, and captivation; it is also the initial day of team-building among classmates. Teachers intentionally communicate that there are opportunities during the first class for students to learn about and connect with each other in order to help build a community. Teachers can ask students for suggestions to help accomplish this goal throughout the semester. The collaborative environment becomes the foundation for building a community of learners that could evolve into a dedicated community of photographers.



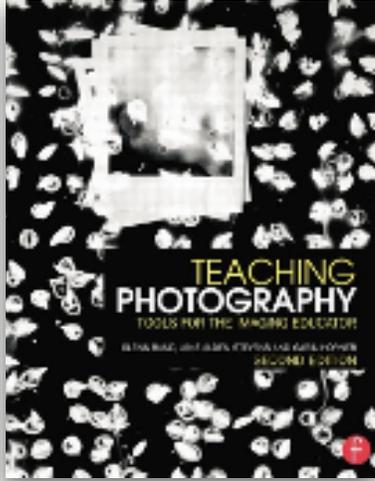


CHAPTER

2

Importance of Questions

Chapter 2: Importance of Questions



The following is excerpted from *Teaching Photography, 2nd Edition* by Glenn Rand, Jane Alden Stevens, and Garin Horner. © Taylor & Francis Group, 2015. All rights reserved.



Learn more:

“Good teaching is more a giving of right questions than a giving of right answers.”

Josef Albers

Too often we assume that individuals are in the class that offers what they are interested in learning. While this is most often the case, there will be times when individuals' attention drifts in and out of the class, all while they are sitting there. This makes helping them learn difficult. There is, however, a key event that can assist the teacher in increasing the opportunity for learning. This is when someone asks a question.

In most situations the fact that a student is asking a question is an indication that his or her mind is open for knowledge to enter. The student has identified a gap in their understanding or knowledge, sees this as a need, and wishes to fill this gap and advance their learning goals.

When students indicate their interest in filling in the gaps and rounding out their knowledge by asking a question, they are usually at the height of their learning potential. They have already identified their need and it provides the teacher with an opportunity to not only assist a single inquiring student but to also assist others. Clearing up one student's question can perhaps expand the audience and/or the subject of the question to include more pertinent information.

“The notion that questions lead to more questioning brought life and progressive movement to my classes.”

Nicholas Hlobeczy

Who Is Asking What?

We hope that students will be asking questions to expand their learning. Primarily the teaching/learning process needs to be open to have questions interjected into the process. While this may be formally structured into the flow of instruction or informally available at random points within the process, the students will benefit from feeling comfortable about asking questions. In most evaluations of teaching there is a query that addresses the students' ability to ask questions, and their comfort level in doing so within the course or with that instructor. The response is indicative of the effectiveness of the teaching/learning process.

“The origin of thinking is some perplexity, confusion or doubt.”

John Dewey



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"I hear and I forget. I see and I remember. I do, and I understand."

Chinese proverb

One of the major problems with "being two weeks ahead of the students" is that the methods to answer clarifying questions may not be within control of the teacher. If the teacher has just learned the material, it may be difficult to have the knowledge to adjust the answering process to enable the student to see and learn from the new descriptive statement.

While being fresh to the materials limits clarifying answers, being stuck creates another problem. Often success, or perceived success, with the presentation of materials leads the teacher to return to this method of presenting the material again. Ineffectual instructors often fall into stressing their original presentation without clearing up the incomplete knowledge. This approach locks the student into a learning pattern that did not provide them with clarification of the materials. If the questions are clarifying, then flexibility in answering becomes important for success, for both the student requesting clarification and for others who will gain from this questioning interaction.

There will also be times when questions become avenues to assist students with their learning by being a diagnostic tool. Often students will be in a class that is beyond their preparation or abilities. In these situations, defining the students' potential problems while they are traveling further through the course provides an opportunity to help them either to understand what avenues may assist them in their learning goals or to choose to take a different path.



From the outset we find that not all questions are designed to evoke answers. Beyond the concept of the rhetorical question, there are questions that are asked to prove the asker's knowledge or the respondent's ignorance. The reasons for these questions have little to do with improving the learning process but more to do with establishing status. Here, the teacher must avoid being provoked and deal with the question in a way that sets an example for the rest of the class.

"He must be very ignorant for he answers every question he is asked."

Voltaire

Though the intent of the student may not be to increase their or others' learning, questions can still be used to assist learning. If there is a caveat, it is not to get trapped by the situation. Though the instructor may not be able to satisfy the true intent of the questioner, it will be best if a similar approach to first learning or clarifying questions is taken. Consistency in approach may defuse the situation when a provoking question is asked, and it still allows the teacher to address others and their needs.

We can see that in some cases the question is an end and becomes the answer. Potentially well-constructed questions become prime avenues for self-actuating answers. As in the game of "Jeopardy," the "Jeopardy Question" is one where the answer appears before the question. The answer exists and then there is a definitional choice to find the question that fits with the answer just given. Frequently the answer placed in the question is incorrect and compounds the problem that the question is required to solve. This may simply be a need for interaction, and not an attempt to fill a gap or clarify learning.

Regardless of why and which students ask questions, questions are important to effective learning. Therefore, one of the important roles of the teacher is to stimulate questions.

"If you do not ask the right questions, you do not get the right answers. A question asked in the right way often points to its own answer. Asking questions is the A-B-C of diagnosis."

Edward Hodnett

In his book *Big Russ and Me*, Tim Russert wrote about a high school experience that supports the importance of asking challenging questions. During his first class in English, the students were asked to take out a sheet of paper and to describe what they observed when they walked into the building for the first time. The question stunned him. He was not being asked to memorize something, as in many of his classroom experiences, but rather to "think, to remember, and to *observe*."



A Method to Ask Questions

It is curious, with the importance of question asking in education, that seldom is there any instruction in how to ask them. There is of course the admonition to “raise your hand” but little or no discussion of how to formulate a question, when to ask, or what to expect as an answer.

While this book is addressed to teachers, the “question asking” discussed here is the students’ portion of the learning process. It will be the students’ learning and their questions, thus it is their responsibility to ask and assure that their questions are answered. It may be an important part of the teacher’s ability to assist students by giving guidance how to ask questions. As an approach we can look at four ideas to effectively use question asking as a benefit to learning.

“Computers are useless. They can only give answers.”

Pablo Picasso

One...Ask Early

It is important that questions are asked when the learner becomes aware that there is a misunderstanding or gap in the learning flow. The more vertical and sequential the learning, the more important it is to use a question to clear up missing or misconstrued information. Some students are hesitant about asking questions because it shines the light on them as either “not knowing” or “lacking understanding” or because they just do not want to stand out.

It is significant that if one student is missing the point, then it is likely that others in the class will also be having some problems grasping the learning objective. Thus the student who asks the question will be assisting others, and often assisting the teacher by identifying a point that was not clearly explained.

“Students should be reminded from time to time that asking questions in class is an important part of learning, just as good test questions on an exam are.”

Hollis Todd

Asking a question to clarify the learning objective gains in importance as the information becomes embedded in other objectives. If the gap in learning happens in a concept that has sequential objectives, then missing the knowledge in an early step may make learning the entirety difficult or impossible as the learning objectives progress.

Two...Use Understandable Words

Photography and its education use specific language and jargon. This means that some students will not always be familiar with the words used to explain and answer questions. Because of the flow of instruction, subject-specific words, concepts, and jargon may all cause some learning problems for some students. While the conceptual area of learning will be what we want to address with questions and answers, the words may get in the way of both the learning and the understanding of the answers to questions.

It is important that the language of questions and answers be within the comprehension of the students. This is accomplished in two ways. First the student needs to ask questions in their own vocabulary. If a student does not know the meaning of the word “chromatic” it is unlikely that they can successfully ask a question using words such as “apochromatic lenses” or “chromatic aberration.” The jargon just gets in the way and students should be encouraged to ask the question so that they understand the verbiage of the question.

Likewise it is unlikely that learning will be complete if the answer to a question is in terms that the student does not understand. It is important for the question answerer to modify their answer to form the answer in the language that will be understood by the student asking the question. If the student asks the question that misuses the jargon, then the question needs to be answered without the jargon.

“No matter how good teaching may be, each student must take responsibility for his own education.”

John Carolus, S.J.

Three...Get an Understandable Answer

The expectation of an answer is a particularly important part of becoming skilled at asking questions. In too many situations, students ask questions that are or are not answered, but seldom expect more than words from the teacher. Because of the teacher/student relationship the expectation is often that the teacher will give an answer but that it may not expand knowledge or fill in the gaps in learning. In many situations there is an expectation for an answer but not necessarily for an understandable answer.

As simple as it seems, the quality of the experience for the student depends on their repeated fulfillment of getting usable information from their question asking. It is easy for students to give up on an answer when the teacher speaks the terms but does not connect with the students. This happens for many reasons, but fine-tuning the

understandability experience will help both the asker and answerer.

Just as it is common for students to use jargon and vocabulary to ask questions that are beyond their understanding, it is also quite common for answerers to use terminology beyond the students' level to understand totally. It becomes important for both parts of the questioning dialogue to be using the same language. It is incumbent on both parties to be aware of the issues of using understandable and meaningful words. For this reason it is best if the level of language used in the answer is the same as was used in the question asked.

Another common problem comes from the teacher's side of the questioning process. Since questions open such a great potential to expand learning, teachers often jump in with information beyond the students' readiness to take in the new materials. The

opportunity is lost when the material extends beyond student readiness for the new materials, and instead puts up a new barrier to effective learning. In this situation the student may even tune out the answer to their own question because they are overloaded with information that confuses or pressures them.



*Light Dance; by Crystal Tursich,
student of Brian Steele*

Four...Sequencing Questions and Answers

Though questions should be asked early, students need to understand that sometimes the answers to their questions will come later in the learning sequence. For many learning situations the sequence of the learning process assists, and asking questions out of the proper time-frame can make learning more difficult.

Although not a step in the questioning method, an answer must materialize from the question. There are times when the teacher will not immediately have the answer for the student. In

these situations the teacher needs to give the student an assurance of an answer in the future and stick with that arrangement. If the teacher cannot answer immediately, there should be an answer later.



Answering Questions

Just as there is logic to how to ask questions, there is a reasonable scheme for how to answer the questions. This includes the time required, how to answer, relation to previous learning, who should answer, and the level of the answer.

Time

Within the discussion of time requirements are considerations of the amount of time and timing situations for answering. In course planning, it is important to include time for questioning. Though such time can be placed at the end of a lecture or meeting, this will sometimes move the answer away from the moment when the learning needs to be cleared up or reinforced. The more formal the presentation of materials, the more likely the questions will be moved to the end, if planned for at all.

“The shorter the time between stimulus and response [question and answer] the more effective the learning.”

B.F. Skinner

When there is an expectation that there will be time for questions at the end of a session, questions during the session can be avoided altogether. But time must be allotted and questions then encouraged as planned. In a public lecture a notorious photographer stated at the end of their presentation, “I don’t need to answer questions...do I?” This stopped the audience and ended the discussion that could have been promulgated by the lecture. This same type of reaction can happen when question periods are pushed too near to the end of a class meeting, leaving an inadequate amount of time to address questions.

The first time the material or class is taught, the flow and relationship between instruction and questioning is not clear. In this situation the material should be viewed as providing an open, temporal approach to allow for questions to work their way into the instruction. The questioning time will assist in developing stronger courses. The areas of the material that promote questions may become part of the future instructional structure, because the questions reveal problems that the learners have with the materials. This also allows for an encore presentation and teaching that gives a better understanding of the materials. However, even if the material’s subsequent presentation is changed to answer questions brought up in a first presentation, the need to answer questions indicates that some part of the course material presents a potential learning issue for the students.

For the most part, questions are better answered when first asked. As mentioned earlier in this chapter, this is where you want vertical information questions to be asked...early.



Providing time for questions and answers within a class structure does not mean that the instruction is improper or lacking, but is part of realizing that those coming to learn may have differing abilities. The questioning time allows evening out of the learning pace for all in the class.

One of the most useful times for questioning is prior to presenting sequential material. This is true whether within a class or between classes. The concept of relating previous materials to subjects to be learned provides the vertical learning paradigm needed in much of image making. Particularly after breaks in the flow of instruction, times provided for questions bring back the train of thoughts required to increase learning.

How to Answer

Perhaps the greatest difference in the perception of teaching is the way questions are answered. Answering needs to be more than just a response. Often the answer relates the response to how the person asking the question got to the point of asking the question. For the best effect, the answerer needs to incorporate an understanding of the history of learning to this point, the basis of the questioning, and how the answer can be used to expand learning.

“I would want a student to ask a question that I could answer with a question that would cause them to come up with the answer. They could figure it out with what they already know. My question is aimed at getting them to realize that they have a knowledge base that they can draw upon.”

Jane Alden Stevens

Successfully answering requires adjustment to the type of answer within the situation. Questions and thus answers take on many styles, ranging from the simplest form of the direct answer to paradoxes. The main elements of effective answering are relating the type and level of answer to the type of learner, their expectations, and the learning affective nature of the answer.

As with the original presentation of the material, answers can range from direct to abstract. The easiest to consider in terms of time and complexity are direct answers. These give the asker a short but complete description, to fill the gap in information or learning. While reinforcing, seldom does an answer in the same words as the concept that was originally presented satisfy the asker. In many situations a simple, direct answer will suffice. This is particularly true when the question is checking a fact or correctness of a method. The earlier in the learning, the more appropriate a direct answer will be.

Direct answers are efficient but not always the best way to stimulate learning in the



long run. While often the asker wants only a direct solution to their immediate problem, in the long term this can frustrate further learning. With a single-problem solution, the learning stops with the answer. This answering paradigm limits potentials outside the direct application to the question asked. The answerer needs to see this potentiality, to avoid stopping learning with a correct response.

“One of the root things I immediately get at in all of my classes is how to ask questions. I ask the students about asking open-ended questions and closed-ended questions. With closed-ended questions you get no real information. So I tell the students to ask open-ended questions that lead to real information and a larger understanding of their own work.”

Steve Ashman

For these situations, approaches to answering other than direct, factual, or method-based answers may net greater results. Preparation to answer in this situation requires looking ahead to the learning that will follow, and pushing the answer into those sequential or related realms.

More involved are the sequential answers that can move the askers from where they are, through the vertical learning steps, to fill in the requested information. One of the greatest aids to effective question answering is using concepts that the learner already knows or owns. In this way the questioner’s learning history can be used as a platform to build the answer and the questioner can categorize the answer into their existing knowledge. Since photography is normally a sequence of steps, answering process questions with a sense of the linearity of the process facilitates stronger answers, particularly when the questioner can be encouraged to ask the question based on their knowledge of steps in the sequence. This allows the answer to be framed from a point of existing knowledge.

Answering within the sequence of learning or a string of problems also shows how understanding the purposes and placement of the answer solves problems. At a lecture, the noted designer R. Buckminster Fuller was asked, “How do you order the details and parts of a complex set so that you can find a way to a solution?” Fuller dismissed the question as not that hard, and said “I only ask *the* right question.” While it might have seemed arrogant, it was the best answer that could be given. In complex sequential-based problems, only ask the “right,” the correct, the most important question and then other facets can fall into place. If the questioning and answering return to the earliest place of misunderstanding or gap in the sequential learning string, likely the right question has been asked. In this situation the answerer needs to assist the learner to move back through the string of related questions to the base, the “right” question, to facilitate a motion of learning, enabling the vertical learning to



happen in an easier way.

“To be on a quest is nothing more or less than to become an asker of questions.”

Sam Keen

Returned restructured questions can also be used to have the learner revisit their own learning to answer their own question. This type of question can be used with any level of learner. For newer learners the returned question lets the asker gain confidence by relying on their own knowledge. However, this method of answer can become tiresome and ineffective if overused. With overuse, learners with the need for direct answers will avoid asking rather than face the task of answering their own question.

Particularly with more advanced learners, answering questions can be used to move the question/answer dialogue to a change from filling in gaps in knowledge to increases in education. Abstract answers define subject without a finite answer. These are aimed at a larger scope of education rather than either simple process or information. The intent of an abstract answer is to direct the thought toward the subject in general terms and allow the asker to learn by discovery or synthesis.

Last and most complex are paradoxical answers. These advanced questions use problems or questions to engage the learner with a conundrum that will tweak the learner’s interest in developing his or her own answers. The paradox is the type of question that either has an apparent solution that through common sense seems contradictory but nonetheless is perhaps true, or is unanswerable under the structure that is used to define the problem. Paradoxes are common and they add an unusual amount of complexity to problem solving. The paradox often promotes or requires creativity for solution to make it past the common sense aspects of solution.

“I still remember, as a student some 50 years ago, a question put to me by Professor Hollis Todd. He asked me that if I was out in the rain without an umbrella, would I get wetter if I ran or if I walked. I still puzzle over the question on occasion.”

Richard Zakia

The classical paradoxes—such as Epimenides’ Paradox, “I am a Cretan; all Cretans are liars”—pose logical quandaries that make solution difficult. The purpose of using a paradox, like koans from Eastern thought, can be used to move the advanced learner to inner examination that expands knowing and owning.

It can be frustrating when questions go unanswered. It is one of the roles of the answerer to ease the frustration as much as possible. The frustration happens when learning is close and it is stopped after the questioner requests information needed to continue understanding. Good answers normally go a long way to help in these situations and poor answers increase frustration.

Who Answers?

All types of answers are appropriate for most learners; however, younger learners, both young in age and early to photography, may not function as well with more abstract or leading questions. But there is an issue of who should answer which questions. There are advantages to having the asker, as mentioned in the preceding section, or other sources in a group answer the question.

Within the classroom situation, opening the answer to other students to answer can have positive and negative implications. On the positive side, when another student answers the question it reinforces the learning for both the asker and the answerer. If this approach is to be used, then it needs to be specified as to how and when another student answers another student's question. The real benefit to using this paradigm is that the vocabulary and method of answering may be more apropos for the class.

"No man becomes a fool until he stops asking questions."

Charles Steinmetz

However, allowing one or a small number of students to always answer can set up a hierarchy, causing envy and distrust toward those answering regularly. Even if the questions and answers are spread around, there will be a need for the instructor to answer. Particularly when time lags between the asking of a question and response, it becomes important for the leader of the class to put the class back on track by providing the answer.

In situations where there are multiple levels of learners present, such as in an open lab, it is likely that students will turn to other students rather than approaching the teacher. This is both for convenience and to avoid being seen as not knowing or being perceived as troublesome. While seldom seen as a concept of most educational strategies, this is one of the most common and most effective learning methods. Since this method of learning will happen anyway, the role of the instructor is to maintain control, as much as possible, such that students do not answer others' questions in ways that will injure their learning process.

An external resource for answering questions is to refer to the text-book. Since the book and reading in it are required, when the answer is clearly in the pages, the book can answer. If the answer is not satisfactorily found in a book, one can easily search the Internet for more information.

Learning from Questions

While the concept is to answer the question, it is important to listen when the question is asked. It is possible that the question may be the root of the misunderstanding. When the question asked is incorrect, the misunderstanding needs to be cleared up before answering the question. This will often answer the question by itself.

In another way, many questions start the same way, and thus listening is important to assure that the question answered is the one that was asked. If the answer is not appropriate to the question asked, it will further muddle the knowing of the learner.

Questions often are more essential in the presentation of materials than simply clearing up misunderstandings. Since questioners are often formulating thoughts as they ask their question, they can give assistance to the teacher on how to approach the subject. The learner is trying to put together how their mind is accepting the instruction. Then they base their questioning on that learning activity. Through listening to the question's structure the instructor can restructure presentations to better address the subject matter of the material being asked about and either not being understood and/or causing confusion.

The Answering Imperative

Above all, for learning to be effective, when the learner's mind is open the teacher needs to proceed. Since a question normally means that the mind wants a gap in their knowledge filled, the teacher needs to be sure that an answer is given. While there are many ways that an answer can be given or directed, it needs to happen. The answering process affords teachers the opportunity to reinforce, reintroduce, and/or present new learning to the student.

Therefore, one of our most important tasks as teachers is to get students to ask questions.

"The wisdom of the wise and the experience of the ages are perpetuated in questions."

Benjamin Disraeli



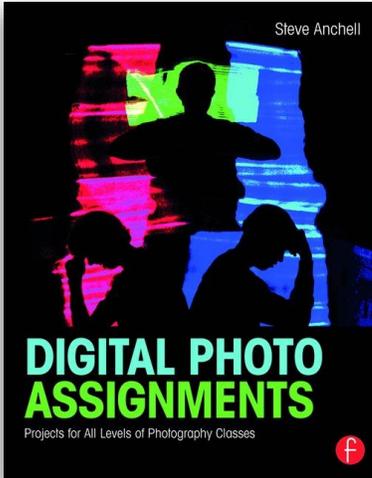


CHAPTER

3

Assignment: Selective Focus vs. Maximum Depth of Field

Chapter 2: Importance of Questions



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Learn more:



“Beauty can be seen in all things, seeing and composing the beauty is what separates the snapshot from the photograph.”

—Matt Hardy

PURPOSE: TO LEARN HOW TO USE SELECTIVE FOCUS TO DRAW THE VIEWER’S ATTENTION TO A PARTICULAR SUBJECT. TO USE MAXIMUM DOF WHEN NO SINGLE OBJECT IS THE CENTER OF ATTENTION.

SELECTIVE FOCUS

PART 1

A good photograph draws the viewer’s attention to what you want them to see. Selective focus is used to draw the viewer’s attention to a particular subject, such as a single person in a crowd, a specific cactus in the desert, or an object you want them to notice.



Figure 1. By using f/8 and a long lens the photographer was able to blur the background and selectively focus on the sparrow. Photo by Donna Conrad; Minolta Maxxum 7D, 300mm lens, f/5.6 at 1/2000.



Figure 2. Selective Focus. Photo by Dianni Freeman; 55mm lens, Canon EOS Digital Rebel XS.

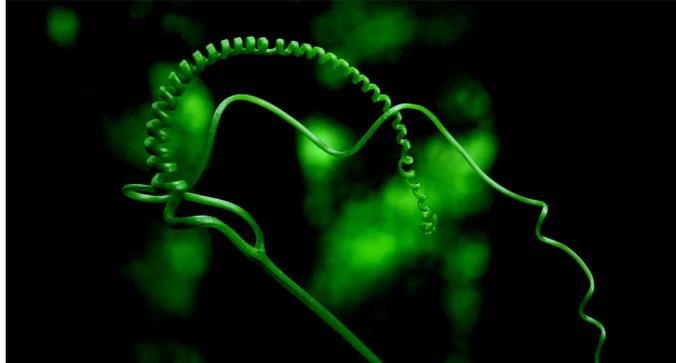


Figure 3. Selective Focus. Photo by Jeff Hume; 55mm, Canon EOS Digital Rebel XTi.

In order to achieve selective focus you need to focus carefully on the subject you intend to emphasize, and use a wide aperture setting. When photographing people, that means focusing on their eyes.

- Find a location where there are lots of people. This could be a dining hall on campus; a busy downtown street or mall.
 - You need a crowd so that you can focus on one person in particular and see how selective focus makes them stand out from the crowd.
 - Butt shots of your main subject (photos taken of people walking away) are absolutely forbidden on this assignment. Anyone can take a photo of someone's butt—as a photographer you must learn to photograph their face.
 - If you are not comfortable photographing strangers, then take a friend with you. Have them walk in and out of the scene and photograph them at the predetermined distance. You should still photograph this in a busy area so you can gauge the effect of the selective focus technique. And no butt shots!
- Find a vantage point with a good background and settle in.
 - In photography, the background is nearly as important as the subject. Unless the subject is unusually intense or simply unusual, the choice of background can make or break an image.
- Use a focal length between 50mm and 85mm.

PART 2

Pre-focus the camera on an area approximately eight to ten feet away.

1. Use Aperture Priority. Set your aperture to $f/11$ or $f/16$. Set your ISO so that the shutter speed is $1/30$ or faster. When your subject walks into the zone of focus snap the photo. To get the eyes in focus takes speed and practice.
2. Set your aperture to $f/4$ or 5.6 and repeat number one.

Do one and two as many times as needed to get your subject in focus and without motion blur.

- Change your zone of focus to twelve to fifteen feet and repeat.
- Change your zone to fifteen to twenty feet and repeat.

REVIEW

Select the best images from each of the three zones and compare them against one another in an editing program.

1. What difference do you see between the photos of each set using a small aperture and the photos using a large aperture?
2. In which of the three zones does the subject stand out the most from other people?



MAXIMUM DEPTH OF FIELD

Maximum depth of field is used to make everything in the image appear in focus. You would use maximum DOF when the scene is more important than any single subject. For example, a landscape, an anonymous crowd scene, or a field of flowers.

Figure 4. Everything from the flowers in front to the tree in the background appears to be in focus. Photo by Leslie Mason; 35mm lens, Canon EOS Rebel T3i.





Figure 5. Maximum DOF. f/25, Minolta Maxxum 7D, 20mm lens, f/25 at 1/30.

In order to achieve maximum depth of field you should focus approximately one third into the composition and stop down one f/stop less than the smallest f/stop on the lens. For example, if the smallest aperture is f/22, use f/16. This will prevent diffraction at the smallest aperture that can cause an in-focus image to appear unsharp.

- For this assignment, you need a landscape, vista, or other scenic area. You also need to locate a composition in that area with a prominent foreground subject. This could be anything from a bench, large rock, cactus, patch of flowers, etc.
- Alternatively, you could have a friend sit on the grass with a building or tree approximately thirty feet behind. Stand far enough away so the foreground subject or friend is approximately 1/3 of the way into the composition.
- Use a normal to short telephoto focal-length lens—no wide-angle lenses.
- Set your camera on a tripod or a stationary object—the roof of your car, a park bench, a sleeping tortoise.
- Stop down to one f/stop larger than the smallest f/stop on the lens and take the photo (e.g., f/11, f/16, or f/22). The shutter speed is not important except for camera vibration, see box at the end of the chapter.
- Without moving the camera or changing focus, expose the second image at f/5.6.

Locate two more subjects to practice maximum depth of field for a total of three subjects and six images.

REVIEW

Based on what you have learned so far, what do you expect to see in the first image? In the second?

DSLR cameras have mirrors that cause vibration when they flip out of the way to allow light to reach the sensor. While this vibration may seem minimal, it is enough to cause camera shake when the camera is handheld at shutter speeds slower than the reciprocal of the lens focal length.

For example, a 135mm lens should not be used at less than about 1/100 or 1/125 of a second or blur will appear from mirror vibration and normal body tremors. This rule can be mitigated somewhat by using anti-shake technology now found on many DSLR cameras and lenses, but usually not by more than one stop (e.g., a 135mm lens can be handheld at 1/60 second using anti-shake technology).

However, tripods are another matter. Surprisingly, mirror vibration can cause vibration blur with tripods, especially but not limited to aluminum, because the tripod transmits rather than absorbs the vibration. This will almost always occur at shutter speeds between 1/2 second and 1/30 second. Slower than 1/2 second and the overall exposure is long enough that the vibration doesn't usually appear; and 1/60 or faster is too fast for the vibration to record on the image.

More than one photographer has discovered this the hard way.

Finally, there are two kinds of anti-shake technology—in the lens and in the camera body.

Anti-shake in the lens should always be switched off when the camera is tripod mounted. This is because in-lens anti-shake systems create a small oscillation of their own, meant to counter handheld shake that blurs the image if there is none.

Anti-shake systems in the camera body don't usually do this. When in doubt, switch off the anti-shake system when the camera is tripod mounted.

