Asking Effective Questions: Transcript

Introduction (Slides 1):

According to the *American Society of Training and Development (ASTD) Learning Systems, Module 2*, *Delivering Training*, “When sitting in a classroom passively listening to a lesson, adults often forget the information delivered to them. One study indicated that approximately half of one day’s learning may be lost during the ensuing 24-hours. In two weeks, an additional 25 percent could be lost.” So to put that reference in perspective, two-weeks after a training course that is delivered primarily by lecture (you know, this where participants just sit and listen to the instructor all-day) participants will forget over 60 percent of the content that was covered. When you take the time to really think about this, it’s pretty scary, especially if you consider the participants your training will return to their work places without the necessary skills to perform the job being asked of them.

So, how do you change all this? Well, if you’re lecturing when deliver a training presentation, start thinking about ways to incorporate active training techniques into your lesson presentations. According to *ASTD Learning Systems Module 2*, *Delivering Training*, “When a trainer uses active training techniques, learners take part in the lesson and are able to construct personal meaning from the presentation. When used correctly, active classroom training techniques increase the longevity and relevance of the training delivery.”

While there are numerous active learning techniques and methods covered in this course, there may be none more important than an instructor’s ability to ask effective questions when facilitating a training presentation in the classroom. Asking effective questions allows you, the instructor, to get your students actively involved in the lesson by allowing them to share their ideas and experiences. Furthermore, asking effective questions allows you to determine if they are “getting it”. It’s always nice to randomly and quickly assess your students to see where they are at in the learning process. Remember, if your students can answer the tough questions in class then chances are they will be better prepared to answer those same tough questions when out in the field. Finally, learning to ask effective questions will provide you greater ability to deal with those challenges in the classroom that can sometimes cause you frustration and embarrassment; for example, dealing with difficult students.

Hello again, this is Kerry Kinslow, an Instructional Systems Specialist at the NTC in Phoenix, AZ. I have been asking effective questions in the classroom now for over 20-years, and I can tell you first hand, asking effective questions in the classroom works like “a charm” in getting your students involved and keeping you “out of hot water”.

Now that you know who I am and why this lesson on asking effective questions is so important, let’s take a look at our lesson objective.

Slide 2

By the end of this lesson (which includes the Webinar 4 Exercises), each student should be able to…

Given a case study involving a classroom question and answer segment, recognize instances where the instructor used/did not use effective questioning techniques based on the types of questions covered in the lesson and the minimum criteria specified in the NTC Instructor Delivery Evaluation Checklist and Guidelines.

Slide 3

Now that you know what our lesson objective is, let's take a look at what we will be covering. First, we will introduce you to Bloom's Taxonomy and his cognitive Levels of learning. Next, we will explore the difference between Knowledge vs. Comprehension-Level Questions. In the next main point, we will talk about the different types of questions that will be at your disposal in the classroom. And finally, we will talk about the impact of asking poor questions in the classroom.

So, without further ado, let's get started by taking a closer look at the thing called Bloom's Taxonomy.

Slide 4: Bloom's Taxonomy

According to the *Federal Government Distance Learning Association (FGDLA), author of A Quick Reference Guide to Developing Cognitive Learning Objectives,* "Following the 1948 Convention of the American Psychological Association…Benjamin Bloom formulated a classification of "the goals of the educational process. This classification is commonly referred to as Bloom's Taxonomy…" The purpose of the Taxonomy is to illustrate how human cognition (i.e., mental operations) exists in stages. There are six cognitive levels in Bloom's Taxonomy: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. The lowest level in the Taxonomy is Knowledge; stemming from this foundational level are higher levels that increase in cognitive complexity but are dependent upon previous levels.

To better understand Bloom's Taxonomy, think about having to train someone at work on a task they have never done before. Furthermore, they have no baseline knowledge from which to begin. Bottom line, this is a new employee who is basically like a "blank slate". Where would you start? Chances are you would begin by going over terminology, roles and responsibilities, and process steps. You then might explain why

the task is important, what the criteria is for successful completion, and what the consequences are if the task and its associated sub-tasks are not performed properly. You then might describe in detail how each task step is carried out by going over the sub-tasks in each step. Next, you might provide your new employee with a job aid or checklist for completing each of the steps in the task process properly. Next, you might show the new employee some examples of completed work products and provide a demonstration of the task. Eventually, you will have the person your training practice the task while you observe and evaluate. You would more than likely give your trainee feedback on his performance; then after he makes the necessary adjustments based on your recommendations, you would probably sign him off on the task after another evaluation.

The example I have just covered is represented in the hierarchy of Bloom's Taxonomy. Let's explore this everyday example in more detail since this is the foundation for asking effective questions. When you think about it, all learning must start somewhere regardless of the concept, principal, or task you are learning; all learning usually begins at the knowledge-level. According to Benjamin Bloom, author of *Taxonomy of Educational Objectives*, "Knowledge…includes those behaviors and test situations which emphasize remembering or recall, of ideas, material, or phenomena". In other words, a student (or trainee) at the knowledge-level should be able to do the following: define, list, name, identify, state, or recall terms, facts, sequences, categories, criteria, methodology, theories, structures, and principles. For example, if you asked a student what the acronym ROW stands for, he would probably delve into his memory banks and come up with, Right-of-Way. All he did was recall the information. Keep in mind he is not an expert on Right-of-Ways; however, he did *know* one term pertaining to topic.

As your students' progress up the cognitive ladder to the comprehension level, they should be able to do more complex cognitive operations. At the comprehension-level they should be able to interpret, translate, and extrapolate. Specifically, when confronted with a communication (Bloom, 1984) a student should be able to explain, describe, interpret, give examples, paraphrase, predict, and summarize. For example, if you asked a student "Why is a ROW permit necessary?" he would have to explain why in order to answer your question. If you think about it, this question elicits a more in-depth response from the student than the question asked at the knowledge-level. He is doing more than recalling information, he is explaining in his own words thus demonstrating true comprehension.

At the next level, the application level, your students should be able to perform the task. As an instructor, you may ask them a combination of knowledge and comprehension-level questions; however, the true indicator that a student has achieved this level is he can perform the task on his own. For example, a student can demonstrate, calculate, develop, write, prepare, operate, solve, and use (these are just a few of the behavioral verbs that can be used for this level). It is at this level where you would have exercises that allow your students to practice the required skill. However, be careful! Many lessons never get the students to the intended objectives because the exercises are still

knowledge or comprehension-level exercises (e.g., matching, fill-in-the-blank, scenario-based discussions, etc.). Bottom line, if your students have to be able to calculate the total ROW area, have them do it in an exercise and check to see if they can do it before they return to their work place!

At the more advance levels, like analysis, students should be able to point out errors or mistakes in the performance of a specific task or associated sub-tasks when observing someone else's performance or analyzing a completed work product. At the synthesis level, your students should be able to create or develop new ways for carrying out the task. For example, think about someone at work who has been trained on a job task and has been doing it for a while; that individual might eventually come to the boss with some suggestions for process improvement. Finally, at the highest cognitive level, evaluation, a person should be able to evaluate someone performing the task and/or the completed work product. For example, they could observe someone taking a water sample, driving an ATV, or delivering a training presentation. Or, they could evaluate a finished work product like a permit request, a right-of-way application, or something even bigger and more complex like a NEPA planning document. In this case, the evaluator is an expert in the task but the entire process. He or she can not only point out deficiencies but can defend his or her position and make recommendations for improvement.

Slide 5: Asking Effective Questions Helps Students

So, at this point you might be asking yourself, "What does Bloom's Taxonomy have to do with asking effective questions in the classroom?" "How does Taxonomy help me to instructor more effectively?" Well, if all you ever do is lecture and/or you never have any interaction or exercises, how are you ever going to know if your students are progressing up the cognitive ladder? Sure, you might ask the occasional closed-ended question (one that requires only a "yes" or "no" response) to find out if they are paying attention or if they have any questions, but to actively engage your students in thought-provoking discussions that promotes growth to higher cognitive levels then you're going to have to learn to ask effective questions. Moreover, asking effective questions is an excellent way to make the training fun for your adult learners because it gets them thinking critically and actively engaged during the lesson. Furthermore, discussion can create an environment whereby the students learn from each other; not to mention picking up a thing or two along the way yourself. I can honestly say in all the years I have been instructing, I have learned just as much from my students as I have on my own. It's pretty cool how the learning process works if you ask effective questions. With that said, let's turn our attention to that part of the lesson you have been patiently waiting for, the different types of questions you can ask in the classroom. We will begin by looking at the difference between knowledge and comprehension-level questions.

Slide 6:

In order for you to be able to differentiate between knowledge-based and comprehension-based questions you need to know two primary things. First, you need to know what they require of the student. Second, you need to know what they look like so you can readily recognize and use them the next time you're in the classroom regardless of whether you're the instructor or student. Believe it or not, students generally ask better questions than the instructor based on my experience. However, as of today, it's time to change that! We are going to help you develop into a "master instructor" who inspires, challenges, and develops your students. Having said that, keep the following in mind: According to the ASTD Learning Systems, Module 2, Delivery, "Classroom facilitation is both a science and an art." Furthermore, "The more often a trainer delivers instruction, the greater the likelihood that asking questions will become an integral part of the presentation."

Slide 7:

As mentioned earlier, knowledge-level questions focus on remembering or the recall of information. When asked by instructors, these questions are easily recognizable because they require very little from the student by way of cognitive complexity or difficulty. Remember, all the student has to do is at this level is to regurgitate from memory. If the student can define, list, name, identify, state, or recall terms, facts, sequences, categories, criteria, methodology, theories, structures, and principles then he or she is exhibiting the lowest form of cognitive ability, *knowledge*. Let's look at some examples of knowledge-level questions.

Here we have some example questions that an instructor might ask in the classroom during Instruction Seminar: "What are the three, main parts of a lesson plan or presentation?", "Who is responsible for lesson preparation and delivery?", and "When is the introduction delivered?" In all three example questions, very little is required of the student in terms of cognitive ability. The answers are simple, short responses involving nothing more than recall from the lesson plan lesson. All a student has to do is identify or name in order to recite the answers these questions.

Slide 8:

However, for comprehension-level questions we want much more from the student. We want them to explain, describe, give examples, summarize, predict, and differentiate (again, these are just a few behavioral verbs that are associated with the comprehension-level in Bloom's Taxonomy). Therefore, an Instruction Seminar instructor might ask the following questions: "What are some examples of different things an instructor could do for an attention-step in the introduction?", "Why is it

important to have a lesson plan?", "What would happen if an instructor didn't have an assessment?"

As you can see, these questions require more from the student. The student has to give examples, explain, and predict. These questions place a more difficult challenge on the student in order to answer correctly.

Here's the moral of the story when it comes to asking questions of your students in the classroom, ask questions that inspire and elicit critical thinking. It's perfectly okay to ask knowledge-level questions; however, include comprehension-level questions to help move them up the cognitive ladder and to determine if they are reaching intended objectives. In other words, develop your student's cognitive ability. They will be challenged in the field; therefore, you should challenge them in the classroom so they are prepared when they return!

Here's one final thought. Remember, knowledge and comprehension-level questions can be asked throughout the taxonomy because higher levels are dependent on lower levels. The difference in higher levels (application, analysis, synthesis, and evaluation) is the student can perform the task, critically look at components of the task, create new methods or ways of doing the task, and evaluate the whole task when accomplished by someone else.

Now that we have looked at the difference between knowledge and comprehension-level questions, let's go over the different types of directed questions you can use in the classroom.

Slide 9: Exercise Time!

Slide 10: Types of Directed Questions

There are many different questions you can ask students in the classroom. Sure, you can ask knowledge and comprehension-level questions, but directed questions are another set of specific types of questions you can, and should, use in the classroom. At your disposal, the following directed questions can assist you in transforming the classroom into a dynamic, synergistic learning environment that is a lot of fun! First, we have the…

Slide 11:

Lead-off questions. A lead off question is designed to stimulate thinking and generate discussion, and is phrased to all students so they *are aware of the main point.* These

types of questions are particularly useful during the discussion delivery strategy where you *want* student input and discussion of the main idea. For example, during a lesson on “Processing Right-of-Way Applications", you may have a general information main point. Therefore, you might lead off with the question: "What’s the purpose of a ROW application?” This focuses students on the topic and gets them thinking. This is how lead-off questions promote learning.

Slide 12: <u>Follow-up questions</u>

Once you've gotten the discussion rolling with your lead-off question, you want to *guide* the discussion. You do this with *follow-up* questions. You should plan follow-up questions that will guide the lesson progression by supplying additional questions that follow your lesson main and sub-ideas that will promote student reasoning. For example, after our lead-off question of "What is the purpose of a ROW application?”, you might follow-up with "Why are ROW applications important?" Well-planned follow-up questions promote learning by guiding the lesson's progression and promoting student reasoning. Add follow-up questions and their associated anticipated responses to your lesson plan.

Slide 13: <u>Spontaneous questions</u>

As your lesson progresses, you may notice students are getting off track. Instead of focusing on the ROW application, they may start discussing problems associated with processing the application. However, you’re not ready to go there yet. Therefore, you need to get them back to the point under discussion. You do this by using a *spontaneous question.* By the very nature of the term, you've probably already guessed you *can't plan* these! You have no way of knowing ahead of time if someone is going to get off of the subject. What you need to do when it happens, though, is to ask a question that will bring the discussion back to the lesson, such as: "That's a very interesting point about processing problems but let's first focus on the why the application is needed. “So, what might be some other reasons why the application is needed?” You've given the student positive feedback ("interesting point") to ensure you don't shut him or her off, and then repeated the follow-up question to get the class back on the subject.

Another example of when you would use a spontaneous question is if you need to seek clarification of a student's response. Let's say during the discussion, a student gives an answer that isn't really clear to you. Chances are, if it's not clear to you, it's probably not clear to the other students. At that point, you could say to the student, "What do you mean by that?" or "Could you explain your answer in more detail?" or “Why would you say that?” or “What is the justification for your answer or solution?” These spontaneous questions allow the student the chance to make himself (or herself) clear.

Slide 14: <u>Rhetorical questions</u>

When an instructor asks a question for which no response is required, it is a *rhetorical* question. Either the question goes unanswered or the instructor answers it himself (herself). In this sense, rhetorical questions are *self-directed* since they are not directed to the students.
(Rhetorical) Why would an instructor ask questions for which no answer is expected? Because rhetorical questions are useful throughout the lesson, they inspire thought. For example, in your attention step in your introduction you could ask "Have you ever wondered why…?" Or, during the hook you could ask "How can you use this information?" Or, in the conclusion you could tie back to your attention-step, “Now do you see why it is important to process ROW applications properly?” During the lesson you might ask a rhetorical question to begin a new topic, “So, how do you process a ROW application correctly?” Remember, rhetorical questions promote learning by focusing students on a new angle or by getting them ready for a new direction in the lesson.

Slide 15: <u>Direct questions</u>

Direct questions are the ones most of us as students dreaded! These are the ones the teacher asked us to answer -- *by name!* But now that you're on the other side of the classroom, direct questions can help you in many ways. Direct questions promote learning by getting a quiet student involved in the discussion, by seeking an opinion or by drawing support from a student. For example, if a student in your class has expertise in the area under discussion, you might ask, "Jim, you've some experience in this area. How have you seen these types of ROW issues handled in the past?" Notice this questioning technique *begins with the student's name.* Of course, you might occasionally do this to ensure the student is paying attention to lesson; if you do, be careful. Surprising a student with a direct question can be embarrassing for both you and the student. However, as a facilitative instructor you do need to check in from time-to-time with a student to make sure he or she is grasping a hold of the content or task your training them on; you don’t want them leaving the course unprepared!

Slide 16: <u>Reverse questions</u>

There may be times when a student will ask you a question that you feel he could answer if he really thought about it. In that case, instead of answering the question yourself, you might want to turn it around and ask a *reverse* question. You ask the student the same question he/she asked you. For example, Jim asks, "Why are we required to process the ROW application that way? You reverse it and ask Jim, "Why do you have to process it that way?”. Chances are, he'll think about it and come to the answer. This type of question really helps the instructor determine whether a student actually comprehends a particular concept or not. In this case, reverse questions promote learning by getting the students to think about the issues they’ve raised and see if they can come up with the answers themselves.

Slide 17: Relay questions

Another way to keep the students involved is by using a *relay* question. If a student asks you a question you may not want to answer, you can redirect the question to another student or to the entire class. Jim may ask, "I know that's the proper way to process the application, but is there another way to do it legally?" Your reply might be, that's a good question. [*Looking at the entire class*] "What might be another way to process the application?" Relay questions promote learning by keeping the discussion among the students and helping you, as the instructor, evaluate where there are weaknesses in student understanding of the material so you can clarify these areas. Remember, you don't have to provide all the answers. Give your students a chance to grow and develop.

Slide 18: Ineffective Questions

Of course, as instructors, we sometimes ask ineffective questions. Let's take a closer look at those so we may begin to limit their use.

Closed-ended questions

These are questions that require no more than a yes or no answer from the student. If you asked, "Is a ROW application required?" What would the students discuss? The answer is either yes or no. You could follow-up with 'Why?" to have the student expand on the answer, but a more effective question would be, "Why is the ROW application required?" This requires student thought and will generate discussion. The closed-ended question did *not* promote thought or discussion. It's not *always* possible to avoid closed-end questions, but don't *plan* these types of questions in your lesson plans if you can help it; if you accidentally ask this type of question, always follow-up with "why" or "how". Also, remember that a question that begins with "Can anybody tell me…?" or "Can anybody give me an example…?" is inviting a YES or NO response. Therefore, watch your phrasing! Most students will respond to a closed-ended question in a comprehension level manner; however, you might have a "smarty pants" in class who will give you a yes or no response and put you on the spot.

Vague questions

These are questions that are unclear to the students; they aren't really sure what it is you're asking. For example, "Why should you do that?" or "What's the best way to make that happen?" or "How is it done in Arizona?" The context of the classroom lesson might give them a clue, but why not just ask the question clearly. Give the students as much *specific* information as you can so they're providing thought-out responses versus trying to "guess" what you meant.

Multiple questions

Think about a presidential news conference where a reporter wants to ask as many questions as she can since she knows she'll only have one shot. So she asks, "Mr. President, what is causing the deficit, how are you going to deal with it, and why have your initials plans to decrease it not come to fruition yet? Holy Mackerel! Which one of those is the president supposed to answer first? Multiple questions are confusing! So help your students by not asking multiple questions.

Catch or "Gotcha" questions

A *catch* question is one where you imply the answer in the question itself. For example, "The NTC is part of BLM, isn't it?" There isn't really a response required to this question, so the students will probably just nod their heads. You certainly won't generate any discussion with that question!

A *loaded* question is a type of catch question. An example is: "Have you stopped bouncing checks at the mall?" No matter what the answers, it's bad! "Yes" means they *used* to bounce checks; "no" means they're *still* bouncing checks. Avoid these questions because they reflect bias!

Slide 19: Impact of Asking Poor Questions

If you really take the time to think about it, asking no questions or poor questions can have an immediate and lasting impact on you, your students, and the Bureau. Not asking your students' questions creates a passive learning environment. Also, poor questions or a lack thereof limits their growth and development; your goal should be to prepare them to do the job! Remember, if you don't get them involved they may forget as much as 60 percent of your lesson content two weeks later.

As for you, when you ask ineffective or no questions, you're in the dark. You have a huge responsibility to train BLM employees to do their jobs properly. If you don't ask questions, you don't get that immediate feedback that you need that lets you know if your students are moving up the cognitive ladder.

Finally, when you ask ineffective questions or no questions, the BLM suffers. A lack of effective questions creates a situation where your students may not be able to perform the job when they return to the work place. If your students leave the training environment unprepared, that is primarily on you!

Slide 20: Exercise Time!

Slide 21: Conclusion

In conclusion, the objective for this lesson was for you to be able to…

Slide 22: Objective

Given a case study involving a classroom question and answer segment, recognize instances where the instructor used/did not use effective questioning techniques based on the types of questions covered in the lesson and the minimum criteria specified in the NTC Instructor Delivery Evaluation Checklist and Guidelines.

Slide 23: Summary

In order to get you to that objective we covered several topics. First, you were exposed to Bloom's Taxonomy whereby you learned about the cognitive levels of learning. Remember, the knowledge-level is only the first level. If you want to get your student to higher levels you will have to employ other strategies, like asking effective questions to generate discussion and facilitating exercises that allow your students to grow and develop. Next, you were introduced to the difference between knowledge and comprehension-level questions. Keep in mind that comprehension-level questions require much more from your students than just remembering. These questions require students explain, describe, give examples, summarize, and predict. Next, you were made aware of the different types of directed questions you can use when you train others. Remember, lead-off questions get the discussion started and follow-up questions keep it going. Reverse questions place the responsibility on the student to answer and they promote personal growth and development. Relay questions invite others to add their ideas, opinions, and experiences to a question already posed to an individual. Next, you were introduced to ineffective questions. Remember, closed-ended questions require only a "yes" or "no" answer from the student; therefore, use them sparingly or to set-up a follow-up question. Finally, you were reminded there are consequences to asking poor questions. Poor questions don't inspire critical thinking, generate discussion, or provide you feedback on where your students are at in the learning process.

Slide 24: Transfer & Close

Now that you have been provided the foundational knowledge needed to ask effective questions, look at your lesson plan to see what kind of questions you have been asking in the past and make the necessary updates so you can get the discussion flowing the next time you instruct. If you don't have any questions in your lesson plan, add them immediately! This simple modification to your lesson plan will make huge difference. Not only will you be making adjustments to help your students grow and develop, but you will be making the necessary changes to make the learning more engaging and fun for them. If you're an Instruction Seminar student don't forget to review and print out Exercise 1 & 2 for this lesson on the KRC before attending the exercise webinar.