



Train the Trainer: Make Teaching CAD Fun

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CM1346 Do students or coworkers call you Boring Bill, Too Technical Terry, or Monotone Mike? Then this class is for you! Learn how to make teaching CAD fun, not only for your students but for you as well. In today's ever changing technology-based world, we find that there is a need to do more and more training. Whether you are the person in your firm training your co-workers or a professional trainer or instructor, keeping your students interested is critical. Just because you know the technical aspects of CAD, does that mean you are a good instructor? In this class, we look at ways to you make sure your students have confidence that they can use the software after the class is over. Learn how you can get in touch with your class. So whether you've been training for years or have just started and want to pick up some tips, this class can help you out.

About the Speaker:

Tom is a highly experienced BIM/CAD/project manager who has demonstrated the ability to lead teams of design professionals in the highly competitive field of Architecture and building systems. An early adopter of CAD back in the 1980s, Tom's strong technical qualifications have been built on a track record of more than 25 years of hands-on CAD use and implementation of technology in many diverse production environments. His background in industry helps him to optimize the use of design technologies to improve workflow and ensure a positive return on technology investments. Tom is was involved with working on Space Management solutions for Naval Facilities. Tom also holds Professional Certifications in both AutoCAD Architecture and Autodesk® Revit® Architecture. Currently Tom is the BIM manager for Schorr Architects in Dublin Ohio, but still gives talks and does training. You can reach Tom at TTobin@schorrarchitects.com.

About the Co-Speaker

Brian K. Smith has more than 23 years of experience using many different Autodesk products for many different applications. Brian's roles have given him experience as a technician, CAD/BIM Manager, Visualization Consultant, Project Manager, Solutions Consultant and Team Manager. He has hands on experience in the Architectural and Space Management space and has worked in both the Commercial and Government industries. Currently Brian is Solutions Consultant focusing his time helping organizations Deliver on the Promise of BIM. You can reach Brian at Brian@BIM9.com



Professionals/students aren't like school students – there some similarities especially following through on things like homework. The distractions for the professional isn't reading magazines or note passing but smart phones, tablets, and work (issues at the office). So there are a few different things we should keep in mind in creating an interesting and fun learning experience in your class rooms.

Now it doesn't really matter whether you're training class is large or small there are a few philosophies off the top we're going to take a look at.

1. **Generation gap between students.**
2. **Different types of learning styles.**
3. **Prepare and Create a Student-Centered Classroom.**
4. **Distance Learning (online training)**
5. **Lighten Up.**
6. **Understand Expectations and Needs.**



1. **Generation gap between students.**

There is one



It is important to remember that when you are teaching a CAD class you will, for the most part, always have a mix of ages in the class. Many may be young and new to the field and many others are just trying to learn new skills and keep up with the software changes.

There is a difference between how these two groups will learn in your class.

When it comes to the technically in general the younger ones in the class will have a leg up on older students. This is not to say older students aren't technical but in many cases just have kept up with the changes. So how you speak to the different ages in your class may vary. Sometimes the use of slang is more than ok, but what's important is "Motivation" & "Experience".

Motivation

More often than not, you are training adults or young adults and they have their own fundamental motivation to be in a class. Often when a student has made the choice to attend a course, their motivation and effort to learn is usually much higher.

Encouragement.

Encourage this and you're already on the way to having happy students and a more enjoyable class.



Not everyone wants to be there.

Of course, not all students are there by choice, their job requires them to attend, and they're not at all interested. This does happen and may require a little more effort on your part to get them excited.

Experience

Another key point is the experience and knowledge they bring to the subject being taught. Find out about their existing knowledge and incorporate this into the class.

Leaders.

Figure out which students seem to already have an understanding of the topic/class (there are always a couple in every class). Let them share *some* of their knowledge. It makes them feel good to contribute and often others are happy to receive additional information that may not have come from you the trainer.

Just make sure that what they are saying is correct or at the least and good option for doing the task.

Don't be a know it all, mainly because you don't know it all.

Yes you the trainer, don't know everything and should never pretend to. It's OK to answer a question with, "*I don't know*". Once that answer is given you have two options:

You can ask the class (you'd be surprised how many good answers you'll get).

"I'll find out." But you better find out, nothing can kill the fun and respect for you in the class faster than saying that and not following through.



2. Different types of learning styles.

Pay attention to your class. You'll see right away who's getting it and who isn't. This means that the information is received differently. You'll need to help keep the ones who are getting it faster from getting bored. Create some extra lessons for each topic you are covering (*if you've been doing this a while you will already have some*) ahead of time for these students to do while you keep going on with the rest of the class. Then bring them all back together on the next topic.

Social Media – sort of

You will find some members of the class respond to videos or how-to. You can start to create these yourself, it's not hard, or just link to ones on YouTube. Have these videos topic specific. This way students can work through some of the topic's and ask questions while in the class room setting.



Listen to the class

This sounds like a no brainer, but remember to listen. This will tell you as well how the class is doing and if you need to do a change up in the way you are teaching. Each class is different.



3. Prepare and Create a Student-Centered Classroom.

Make sure the class room is up and running before any students show up.

Nothing can suck the life out of the class faster than equipment that isn't working. Even little things will get used as the reason why they're not learning. "I can't figure this out because my computer isn't working right". There goes any good reviews.

Have all equipment moved if necessary the night before.

Make sure there's enough work space between students (you don't want them on top of each other).

Note pads and pens.



How not to run your class:

The way most trainings are set up is this: the trainer stands/sits in front, has a book and many times just starts reading to you.

This is definitely a buzz kill and sucks all the life out of the class. This is the main reason why you're "Boring Bill or Monotone Mike".

In most classes the students have the same book, they don't need to be read to, and they can read the material themselves (this is the homework part I mentioned above).



What you need to do is:

Explain the tool/command using everyday language.

Many times the tech explanations in the book are not clear to the end user.



Use real world examples of how to use the tool/command.

Nothing and I repeat nothing gets your class more excited than knowing where and how to use the tool when they get back to the office in their production environment.

And most important, if possible, relay how you have used this tool/command.

It's very helpful for your class and gives them the confidants that you understand the real world applications and not just what the book tells you.



4. Distance Learning

Online Training

If you are training within your own organization (or if you're a consultant, training for a particular company in their office) there may be instances where you will need or want to include other employees from other offices. There are several services such as WebEX, GoToMeeting, etc. that will allow you to share your "instructors" screen and audio via Voice over IP (VoIP) or speaker phone.

If you have ever sat through a live online training before, remember what it was like and what YOU were doing. Were you also checking email? Working on something else? Taking other phone calls? Consider they may WANT to do the same things.

Here are some tips to help keep their experience as best as possible:

Technology

As with your normal classroom preparation, be sure your meeting tools are all working the way they should to provide the best END USER experience. Test the environment prior to the beginning of the class to be sure people can hear you and you can hear them. If necessary, use a moderator to bring details to your attention if need be.

Be Interactive

Be sure you know who's on the other end of the line and in the other desks or conference room(s). Include them in your conversations often and ask direct questions.

Stretch

Allow Online folks to get up and stretch from time to time.

Hit Record

Most web presentation tools allow you to record your session. Record the session to share with both the in-person group and the online group(s) to reference later.



Groups vs. Individuals

There are mixed opinions about this. Considering the people in your remote group(s), use your best judgment when it comes to presenting to the group or having each person log on individually. Groups may encourage collaboration however individuals may become even more interactive and ask more questions.

If you are presenting to groups, assign a moderator for each group to type in questions, answer poles and speak for the group if the audience is too big for speakerphone.

Whiteboards

If using a whiteboard to explain concepts, use a webcam to focus on the board or use the blank PowerPoint screen to doodle on. When PowerPoint is in full screen mode, Control-P (Command-P for macs) activates Pen Mode for doodling. Be sure to capture your important doodles to circulate.

Chat it Up

When asking general questions, have the online users type in their answers in the chat box. Others may or may not be able to see responses, so to be sure to verbalize what others should hear.

Run Questions up the Pole

If available, use online poles when asking questions of your in person group to keep them engaged and to feel like part of the in person group.

Just remember to remember your online students. Don't forget they are there. Encourage them to be a part of the group and expect them to participate in the class.



5. Lighten Up

Lighten Up and Have Fun

Tell some humorous stories, laugh a little even show some funny videos during the lunch break when the class is coming back in. **Just remember** it is a class and you need to teach & educate. When I use the word fun, what I mean is keeping everyone engaged and interested, you have to be excited. Whether you are or not. A large part, if not all, rests with you and your excitement level.

There are a couple of idea's I've used:

Pipe cleaners.

What! Why? This falls under the area of doodling, but a little more hands on. No matter how interesting you are, sometimes minds will start to wonder.



There have been studies that have shown that people who doodle are still listening and taking in new information over those who don't doodle. This is not to say that people who don't doodle don't learn.

<http://www.time.com/time/health/article/0,8599,1882127,00.html#ixzz2dBiP0nit>



No Daydreaming:

What we don't want is daydreaming, people who start to daydream are checking out completely. Daydreaming may seem absentminded and pointless, but it actually demands a lot of the brain's processing power. You start daydreaming about a vacation, which leads you to think about potential destinations, how you would pay for the trip, whether you could get the flight upgraded, how you might score a bigger hotel room.



These cognitions require what psychologists call "executive functioning" — for example, planning for the future and comparing costs and benefits. Doodling, in contrast, requires very few executive resources but just enough cognitive effort to keep you from daydreaming. Pipe cleaners have the same effect.

Doodling

See above. When you are setting up the classroom make sure there are paper and pens at each spot.

Interaction.

I like to start off with a little bit of my Bio. Not to brag but to one: let the class know who I am a little. Two: so they know I've been in the trenches just like they are or will be. And Three: for them to see that I have the background in order to train them in this class. I then go around the room and ask them to share a little bit about themselves. Even if the group is from the same office you'll be surprise at how little they know about each other.



6. Understand Expectations and Needs.

Not all CAD classes are the same even if the name of the courses are. As we all know there many different levels a CAD class can be on. And many different ways to complete the same function. This leads us to real expectations and needs. Many times the professionals/students whom attend these classes have specific things they want to learn. You need to find out at the offset what the bulk of the class is expecting.



Real world.

Some tools are nice to know about but the fact is there are many tools you more than likely will never use. Educate (especially in a beginners class) on what is needed in the real world to do their jobs. Explain yet again how you used these tools or how they are to be used in the real world of production.

Production

If you are training one company, ask questions as to how their production works. Then direct the training in a useful way for how they work. Make the knowledge you are passing on as useful and friendly as possible.



List of Ideas for Successful Training:

*(Excerpts from an article wrote for Augi in 2012
Bought to you by Brian Andresen)*

1. Provide Flexible Options
2. Support Options: Being Flexible Helps
3. Team-Focused Communication
4. Templates That Get the Job Done
5. Recurring Seminars
6. Centralize the Resources
7. Tip of the Week
8. Video Recordings
9. Social Media Outlets
10. Local User Groups

1. Provide Flexible Options

Take a full 3 day class and turn it into 5 half day classes. This allows busy users to spend half the day on the training, while getting their work done the other half. Users who do have the entire day available can spend the first half in class, and the second on their own getting accustomed to the software or going back over anything they missed the first time.

This can be cut down even more to create multiple 1- to 1.5-hour sessions to allow for brown bag lunches. This was an option for the users who couldn't even spare half days, or those who missed a specific section or wanted to cover it again.



2. Support Options: Being Flexible Helps

You can offer three different options: *On-call, an hour a day, and a week at a time*, depending on the circumstance. Some need a dedicated time slot to focus and get through it and others just want to know they can call on you at any. By setting up specific times and dates, it allows you to be ready for support in a more organized approach.

3. Team-Focused Communication

The Team Focus solution allows you and your staff to dedicate one solid week (or a predetermined amount of time) toward a group (or team) of users to work on projects, coordinate workflow, standards, implementation, or anything else CAD/BIM management related. You would obviously allow for emergencies or other deadline-oriented events to come about, but more or less you should stick with that specific group for that specific week or time.

4. Templates That Get the Job Done

IF you have a solid template *AND* family content available, it is much easier to choose from that than to create anything else. So anytime you hear of someone creating something or not following the standards, it's usually not because someone wants to be difficult, but because you haven't set it up ahead of time or made it available for them to use. That right it might be your fault, but don't beat yourself up to bad, you be able to think of everything.

5. Recurring Seminars

Lunch seminars are nothing new, but take the opportunity to offer users the chance to learn a new set of tips and tricks, or cover a workflow process, or dive into an issue you've seen multiple people encounter.

6. Centralize the Resources

All you have to do is create a centralized database, and simply start collecting anything you find online, anything you've discovered, questions you've been asked, tips and tricks you've learned over the years, and so on.

7. Tip of the Week

These are simple, straightforward emails sent to the entire firm giving tips and tricks, workarounds, shortcuts, and anything that helps efficiency, progress, and solidifying users' understanding of the software or hardware

8. Video Recordings

You may think it's too expensive, time consuming, and more work than it would be worth to offer this more advanced form of CAD/BIM support. Well it's not, and you will be surprised at how easy it is to create a quick, five-minute (or less) video. And how useful they can be.



9. Social Media Outlets

There is some amazing stuff out there and I highly recommend it for any level user. I know teachers using Twitter just to get their students class assignments, companies doing Facebook and LinkedIn searches for resources, and more users looking to Meet up, You Tube, and other sites to get information, seek out resources, and gather information themselves.

10. Local User Groups

These are the core of what allows users to come together and learn the latest and greatest their software has to offer. If you have 30 members and everyone shares one tip or trick they've learned over the past month, technically you just gave away one secret, but in that same meeting you will have gained 29 new tips or tricks!

To see more of Brian Andresen's article that he wrote, search for it on the AUGI web site

CONCLUSION

Remember –

P.M.A

(Positive Mental Attitude)

"The Right Attitude is Everything"

Most of the attitude of the class is up to you. If you're happy to be there then the class will be enjoyable and **FUN** for you and the students.



Well that about sums it up.

Thank you for your time

I hope you enjoyed this session and learned something

Looking for more information

Contact us at:



Structuring your idea

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