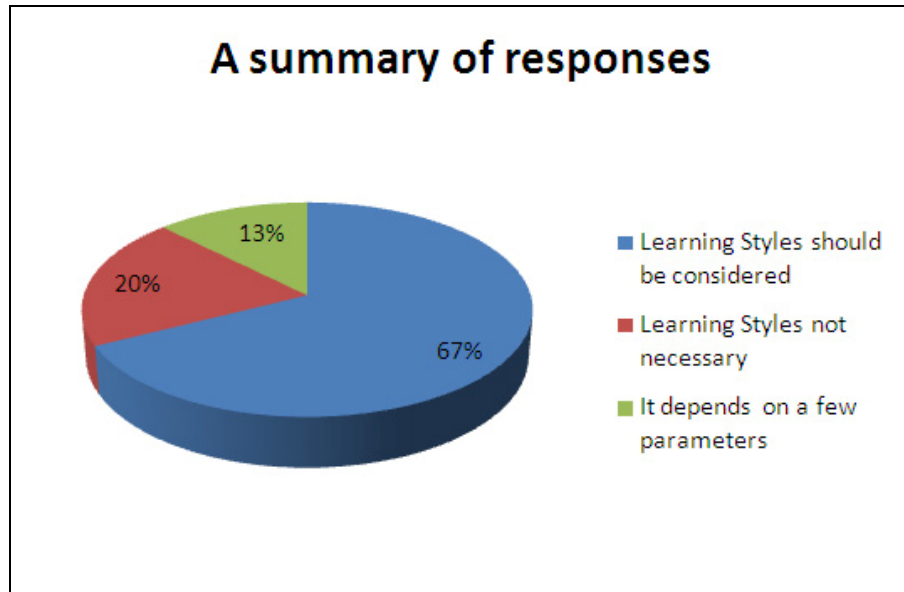


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## A Summary of 80 responses in LinkedIn to “Learning Styles and Instructional Design, do they go hand in hand?”

Here is a snapshot of the responses:



Here are some relatively more detailed/ incisive/ educative responses in verbatim:

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**Theresa S**

Experienced Instructional Designer/Creator of eLearning

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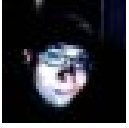
When I design a course, I make sure that my lesson plan includes the different learning styles. While I have found that the majority of people in my classes are hands on learners, I have been surprised by the number of visual and auditory learners I run into. I have set up my lesson plans so that I can easily scan through and make sure that I have something for each learning style in my outline without having to read through the whole thing. This helps me to be aware if I have too much of my lesson planned around only one kind of learner.

I also go through the learning types in my class introductions when possible. This helps me alter my content to adjust to different learning styles if time and topic allow.

Dr. Sarah Church lays out a great learning style summary which points out some differences in learning styles based on age, gender, etc. It can be found at:

<http://www.teresadybvig.com/learnsty.htm>

Thanks for the blog post!



**Rajon Tumbokon**

Sr. Instructional Designer at Weblearning

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When you start thinking about "learning styles" when designing e-Learning, you're usually heading in the wrong direction.



**Raymond Sneed**

Firm wide Training Coordinator at K&L Gates

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I agree about the various theories, but I am more inclined to question whether our learning styles are a function of nature or nurture. As adults, we may have modified our learning style based on the ways we have been taught.

Rather than design a course for specific learning styles, we design materials to reach as many as possible. I use Captivate to create an eLesson for those who learn by "touching things", but I also publish the lesson to a Word document from which we produce our handouts for those who learn by reading. This same document then is used to script a wmv file which is a narrated demonstration for those who learn by listening and watching. In this way, our team gets three products for the price of one. All of these are then published to our Intranet and users have the option of selecting the mode which best suits them.



**David Dubin**

Senior Curriculum Developer @ Sage Software, Certified E-learning Designer, and Expert Explainer

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As I am not an academic, I am also wary of the academic version of learning styles that are not supported by industry-accepted research and analysis. However as an instructional designer with 20+ years of experience, I do believe that there are three principal methods of gathering and processing knowledge that are always found in any group of students: learning by seeing it done, learning by hearing how to do it, and learning by doing it yourself.

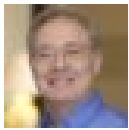
I also firmly believe that every learner uses at least two of these three knowledge transfer methods, and that learning by doing it yourself is always the second phase of either visual or auditory reception. Therefore, in every class/course that I design, there is a visual element, an auditory element, and they are always followed by at least one do it yourself element.

Typically, a strong visual learner will say things like, "I see what you mean," or "I can picture that." On the other hand, strong auditory learners would say, "I hear (or understand) what you are saying," or "That sounds right to me."

Think about your own style of learning, which is usually the same as your style of teaching. Have you ever said, "Do you see what I mean?" or "Can you picture that?" If you have, did your student squint

at you or turn his/her head toward you? Squinting usually means that they cannot see it clearly, but turning the head –actually the ear- means that they don't hear you and are trying to.

Yes, I'm sure that one can breakdown learning styles based on age, gender, ethnicity, or any other similar factor. However, unless you have that specific learning style and only that specific learning style as your target audience, it might be wiser to aim at the great majority of us who either see and try or hear and try.

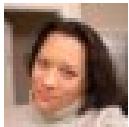


**William Brandon**

Editor, Learning Solutions e-Magazine (The eLearning Guild)

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Personally, I am extremely skeptical about learning styles. There's no data to support any of the various learning style theories, and as a matter of just plain common sense, many of them seem pretty far-fetched. In my opinion, a designer is much better advised to consider approaches that are supported by actual research findings.

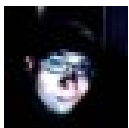


**Ronda Harris**

Instructional Designer and Training Consultant

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Raymond Sneed wrote: "I am more inclined to question whether our learning styles are a function of nature or nurture. As adults, we may have modified our learning style based on the ways we have been taught." That is an excellent point! Can learning styles be taught or influenced? Quite possibly, I suppose.



**Rajon Tumbokon**

Sr. Instructional Designer at Weblearning

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My biggest problem is that most instructional designers try to carry over traditional classroom learning styles to software, which leads to ineffective training. The most effective e-learning is well designed software. Not classroom translations.



**Roger Mundell**  
CEO, Udu Learning Systems Inc.

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In 1998/99 at Royal Roads University we built a number of very interactive self-directed University business courses that adapted to four learning styles, (using Gregorc's definitions) and allowed learners to switch between styles as they took the course. We won a lot of awards and acclaim, and Macromedia touted us and the courses all over the tradeshow circuit for a couple of years.

However the reality was that despite an initial preferred style, most users switched between styles for different components of the course, and in the end it seemed that engagement and interactivity were generally the most important elements, even for the "abstract" learners who normally prefer theory and concepts prior to actually tackling a problem.

Interestingly, our findings showed no difference between genders. The chief differences related to age and occupation. For example Military and Government employees generally preferred a different style to people from the private sector, and so did young students who had recently graduated but had no work experience. Both of these types preferred what Gregorc calls "Abstract Sequential" presentation of the content.

We took what we learned and transformed it into the "hidden content" feature of our current authoring tool, where an author can build in conditional branching to optional content that other users won't see. This allows a course to be built in a 3-d design where it can be short and to the point for some users and much more in depth for others. It also makes these "adaptive" courses easier to build, because you can focus on the initial simple course, and then keep adding to it as you see the need arise, even using modules and objects from other courses.

I think focusing on engagement and adapting to the learner's motivation to learn is the single most important design consideration.



**David Dubin**  
Senior Curriculum Developer @ Sage Software, Certified E-learning Designer, and Expert Explainer

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Roger makes a very valid point about differences between military learners and civilian learners, which is as much an functional aspect of their working environment as anything else. The U.S. Army's concept is train the way you would fight, and then fight the way you trained. This hold true of other paramilitary organizations such as police, firefighters, and EMS. The reason is that the training MUST not just be earned, but become instinctive.

I was a staff officer for a TRADOC command in the late 1980's and oversaw the development and delivery of several classified courses that were both well accepted and very successful because they were realistic, repetitive, and immersive. The proof of their success was displayed in the performance of Army troops during Desert Shield and Desert Storm. Military learners, as Roger points out, have a totally different motivation for learning than an accountant or HR person, some of it may be institutionally directed, but for most military people today, doing it right and getting it tight is a

conscientious choice, therefore they want to learn and are highly motivated to learn.

At the other end of the spectrum are the HR and Payroll professionals for whom I develop training today. They are motivated to understand the software we make so that they can accomplish all of their business processes and go home on time. No less a valid reason to learn, just a different motivation.

And while I agree that engagement and learner motivation are two principal keys to successful instructional design, I think that a third key is understanding the learner's needs and critical success factors. If we don't design learning against what they need to know or need to do to be successful, all other reasons are wasted.



**Milo Dodds**

IT Analyst at Cisco Systems Inc.

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I agree with Rogers points above...and I am basing this on my own personal experience teaching swimming to children for several years while I was in college. You must have alternatives available because maybe the major example just isn't clicking for a particular learner or maybe that learner wants to learn more about that topic or skill.



**Daya Nair**

Training Specialist, ISD

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Well, I think any design that is developed in consideration with an in-depth Training Needs Analysis works well for the targeted learning group. This is why off the shelf programs are not that effective, and courses need customization based on various factors like the business domain, educational level, and many other components..

In short, whether we consciously do it or not, we do tend to follow a combination of learning styles in the modern instructional systems design.



**Milo Dodds**

IT Analyst at Cisco Systems Inc.

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I believe off-the-shelf does have its place. If you're looking for sort of broad background knowledge like I want to learn the basics of JavaScript then off-the-shelf is a great opportunity. But if you want to know something more specific like how JavaScript is implemented within my company then you're now in need of customization. We have to keep in mind we don't live in an all or nothing world, what's wrong with using everything you might have access to at the appropriate time?

I am also finding that computer textbooks have improved quite a bit. For the longest time O'Reilly was the defacto standard for most IT Professionals but now I see that their text is more used like a reference material while maybe another publisher like NewRiders provides some alternatives (not sure who publishes them). O'Reilly totally got this and now they are putting out different lines of books like "The Missing Manual" and even a new model for books that haven't been published yet. I really like how they stated that you saved \$5 by not adding a CD/DVD to the book but instead go to a particular website for the project examples. Another change in the industry which has been around for quite a few years is the Safari Online Books which provides you access to quite a few books and is even free from some public libraries. I think Tim O'Reilly has done an amazing job in terms of helping IT Professionals and so have many other publishing companies.

It's amazing how much good information is out there that's free and as a self-paced learner I am also inclined to also pay for special services like the Flash Exchange Forum that allows me to ask other programmers how would you solve a very specific problem. This is getting into the "informal" learning but I can't tell you how much time and effort I've saved on a project by asking others for help. Usually I've already spent hours trying to solve the issue and have search Google for answers but it's a comfort to know you have options when you can't figure out something for yourself.



**Peter Graves PMP**

IT Project Manager / PMO Leadership

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The premise of great training is all humans, all learning styles, learn best through active engagement. The ASTD book, 'Telling Ain't Training' should be a valuable resource in answering RK's great questions. Written by two of the thought leaders in practical instructional development for all learners, it is fun to read and packed with training design methods and real-world examples to incorporate into training. Using a combination of their real world experience and academic research, they describe how to interactively involve the students with the material so that it 'sticks.' I could not imagine creating training without this book close at hand. For example, SMEs may not be suited for instructional development and importantly how to leverage the SMEs knowledge into great content. The book is written using the methods described for yet another example.

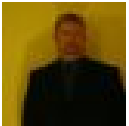


**Paula Brzezinski**

Director Training Services at bvk

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I have actually taken learning style surveys of prospective audiences prior to developing courses. And in fact, have based decisions on the majority rules. Even though learners have a learning style preference, everyone can benefit from any learning regardless of the style, it may not just be their particular preference. Hope that makes sense!



**Bob Daumer (MS, BA)**

Workforce Innovation Architect: Making Change Welcome and Achievable

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I agree with Paula. In fact, I have done some research on this topic. Going into the research I was a practitioner who tried to incorporate course features for all of the learning styles so that no learner had a challenge. This became a strenuous task on my part as the instructional designer, not to mention, a challenge for the facilitators.

In doing my research, I found studies that indicate the accommodation of all learning styles within a course may actually be doing a dis-service to the learner. Because the world is such a complex society, learners (people) eventually encounter experiences that are beyond their comfort zone, but not beyond their ability. So, if instructional designers cater to everyone's unique learning skill, then we may be reinforcing a behavior that at some point may cause the learner severe anxiety.

The solution is to design for the majority and prepare the facilitators with the tools that help those learners adapt to their non-preferred learning style. In the long run, these learners who learn to adapt will be strides ahead when they encounter an uncomfortable learning situation.



**Roger Greenaway**

Owner, Reviewing Skills Training and Professional Training & Coaching Specialist

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I know that job type is 'supposed' to shape learning style preference, but in my experience across many sectors people respond best to a rich design that draws on all (major) learning style preferences. Also, a wide range of learning style preferences is usually well represented in each of the occupational groups I have worked with. So I always aim for a rich learning design that engages all LS preferences. When I watch a film I like full sound, music and vision, with camera work that makes me feel part of the action (+ subtitles if needed!). Yes - training should be far more participatory than watching a film, but is the challenge in instructional design not to switch on as many learning abilities as you can - while also developing new learning abilities? And as a bonus - rich designs also assist with the transfer of learning.



**Mary Ganzel**

Consultant at Resources Global Professionals

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It's best to focus on design for the majority. For organizations that actively use preference indicators like MBTI or DiSC, this can be both a great source of data as well as an opportunity to talk about adapting to differences.



**Nina Coil**

Director of Product Development at Linkage, Inc.

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I have found in my work that participants benefit from being stretched out of their comfort zone. The types of programs I design and deliver - focused on change/transition and leadership development - require that people be open to learning and growing, and that means taking measured risks. My aim is always a balance - structure and flexibility, content and experience - so that no one is ever completely "at sea" but everyone has the opportunity to grow.



**Bernice Glenn**

Content Strategist, Information Architect, Consultant: eLearning, Instructional Design

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What is the problem with accommodating major learning styles?

Research in this area over the years shows that delivering the teaching material in several different formats improves the learning for all the learners, regardless of their primary learning style. The majority learn better when words, delivered in print format are accompanied by visuals that coordinate with the message. Often, what is delivered in text is also spoken by a narrator.... Think of the ubiquitous PowerPoint presentations frequently used by trainers. A well-designed PowerPoint presentation uses text coordinated with graphics, and the trainer adds to the slide content using the spoken word.

Distance learning can be delivered in text, alone, but researchers find that adding graphics to the text, using charts and graphs, photographs, videos, and other visuals to coordinate with the message, also enhances the message.

We live in a complex society, true, but our complex society communicates in many formats as a matter of course. The solution is not necessarily to cater to the so-called majority, but, to prepare rich learning materials, using redundant formats that synchronize with the message. The benefit is improved learning for the majority, whatever their preferred learning style.





**Larry Rex**

Technical Trainer and Content Developer

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In a different study, the learning styles were Audio, Visual, Textual, Tactile, and Musical. The Audio learner listens to the spoken word, the Visual learner benefits from drawings and diagrams, the Textual learner likes bullet slides or left page - right page format, the Tactile learner likes the labs and exercises, and the Musical learner may have their iPod on during class.

If you're not familiar with left page - right page layout, the right hand page contains the visual in portrait mode. The left hand page contains technical notes about the visual, and contains (basically) everything the instructor lectures on. The instructor is still very important for the Audio learner, to handle questions from everyone, and monitor the labs and exercises.

Though this layout did satisfy more students, and provide a better learning environment, it has fallen into disuse because of maintenance costs (sigh).



**Didem TUFAN**

Instructional Design Specialist(Project Manager) at enocta

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I also want to share my experience in designing courses for different learning styles. I have taken place in a military e-learning project in which designing courses for two different learning styles, like "converger" and "diverger" according to Kolb, is compulsory. It was a real challenge for our team. Let me explain the challenges in bullets:

-There are several learning style theories. Kolb, Honey & Mumford, Gregorc, etc... And as you might guess none of them is complete and compatible with each other. Firstly, in order to accommodate major learning styles while designing a course, you have to find yourself a solid academic and/or theoretic ground in explaining the question of which learning style theory to use and why?

-The results of studies on instructional design in different learning styles are inconsistent. For instance, one research claims that type 1 shows significant difference whereas other claim the opposite. Which one do you take into account and why?

-Another question is to "divide" or to "multiply" your instructional design according to different learning styles. I mean, do you want to include a solution that fits for all learning styles, if there is any, or to differentiate your learning design accordingly. If you multiply, then you have to include text, sound, music and.... However, if you decide to implement the divide method it means that you are going to have some trouble on instructional design time, coding time, budgeted and etc.

-Another consideration is about copyrights. The tests that you might want to use for defining one's learning style is not always free of charge.

I can even add more bullets on considerations and limitations. I personally think that with the evolution of web 2.0 the "learning styles" concept which classifies people in some classes will disappear. Terms like "semantic web", "learning ontology" "adaptive learning environments" will rather take the stage.



**Dickson Lane**  
Senior Learning & Development Specialist

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It is my experience that the really good instructional designers have to be sensitive to learner styles. Larry and Bernice both speak to this. It is at the core of Neuro-linguistic programming, discovering where people store their memories, their cognitive learning. A good instructional design is about providing hooks for people to be able to recall that learning and apply that to their practical application, or extrapolate critical elements and re-interpret that in a different context.

How do we as Instructors know if what we taught made a difference? One way is to see how well our lessons were applied in real world situations. If we are not "speaking to the listening," those very people we are teaching have not learned anything.

Let's shift the conversation a bit. If you had a blind person in the class, would you only refer to "the picture on the screen"? Would you make any effort to include the deaf person in the conversation? Would you eject people from your class simply because they do not understand the instructions? How is Instructional Design any different from this? Are we not trying to find as many opportunities, as many "hooks," as possible to include all of our students in the success of learning? As Instructors, we can only push that envelope so far. If the Instructional Designer has not structured the class for the broadest range of learning styles possible, the results will be severely limited at best. The fact that many Instructional Designers do not do this, for one reason or another, speaks more about the Instructional Designers themselves than it does the effectiveness of the learning objectives.



**Gordon Svoboda**  
Training & e-Learning Consultant, Nexstage Training Solutions, The "Training Weavers" ®

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Great question and an avenue I happen to be spending time exploring...

I think the answer to your question needs to be answered initially by another question, what are you intending by learning styles? Do you mean touch, hearing, seeing? Or, are you referring to something more sophisticated like a 4MAT approach? In my experience neither are well covered, although understood and occasionally considered in design & delivery.

I do not think there are not sufficient pre-analysis assessment tools to define and distinguish 4MAT learning preferences of our training audiences that can be utilized easily and economically.

Regards, Gordon



**Rob Wilkins**

Senior Manager People, Communications and Learning – AMP

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Hi RK,

After 20 years in this field I believe that Kolb's and others research is relative only to a particular moment in time and that learning styles change based on other major factors which you can read over at my blog - <http://roalp.blogspot.com/2009/07/why-instructional-design-is-dying.html> .

If we consider the process of thinking, we will soon see that such skills as those listed below are the prime movers in a adult's process of learning, not the adult's learning style. Preferences in individual learning styles, with the exception of cases where the student has a frank learning disability, can usually be understood in the light of these thinking skills.

Focus and Identification:

The process of seeing the subtle similarities and differences between things.

Generalization:

Making a general statement about these similarities and creating new categories. For example, tables and chairs are concrete things that can stand by themselves and need no further explanation — unless you recognize that there are similarities and organize the similarities into a category called furniture. This is generalization.

Transfer:

Using the process of seeing similarities and differences to create new categories in another area. For instance, hockey and bowling are both sports.

An adult who cannot generalize well, or who prefers more concrete concepts, will not understand metaphor well, and will obviously not prefer the more divergent choices that require an understanding of symbols or analogy. This student can thus be identified as a concrete or structured learner by one process (Kaufman) or a concrete sequential thinker by another (Gregoric).

In truth, this is merely a student who, once he or she learns to think more effectively, will begin to generalize, understand metaphor and use analogy. Then, if one tested this very same student, one would miraculously find that there had been a change in learning style.

Extending this reasoning into virtually every model of learning style identification, one soon begins to recognize that underlying these various learning styles is a process of thought that may be shaping the 'style' itself, instead of the other way around.

Instructional design needs to be able to deliver based on the audience that we are presented with at a moment in time and not based on a preferred learning style.



**JoAnn Becker**

Experienced Management Consultant for Results from Changes

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I just completed delivering a 2 day class on project scope management to certified project managers (PMPs) to never-took-a-project-management-class-in-their-life students (25 folks), many under 30. I received very, very poor evals from a few (the under 30's group?) for relating my experiences of what worked, how, why, and how to use what happen to me in their projects. They described me as an egomaniac for relating these experience stories. I have an undergraduate degree in education and teaching math, have taught MBA and graduate nursing students in this area (and related topics) since 2000 and never had this reaction. I was very taken back, and wonder if I should teach the next class completely void of any of my 25-year experiences with being successful in project/change work. Any comments, from anyone? Thanks

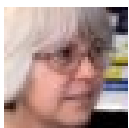


**Stuart Patton**

Out of the box thinker, Visionary Entrepreneur

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RK..you raise an interesting point, I am doing some work with an professional educationalist from the UK and we have recognized 4 learning styles in children, so the starting point is working with learning styles at school. We can move into the left brain, right brain learning argument, in fact we need the whole brain to engage for effective learning. The fact is we all have a preferred style in terms of how we receive information, this preference can change over time, so we cannot really label people, but we do need to be aware of the differences The key point is to always try and make the information you communicate, interesting, memorable and relevant.



**Elizabeth Dorland**

Communications Director at Washington University in St. Louis

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<http://pursuingperformanceblog.blogspot.com/2008/03/learning-styles-bridge-to-nowhere>



**Sandra Wichman, MSM**

Performance Consultant/VP Operations/HR at Wichman & Associates

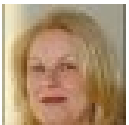
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Another great question RK! I should be working on a learning piece....instead, I do feel compelled to offer my take on an excellent question...

ABSOLUTELY! It is our jobs as instructional designers and professionals that deliver learning and manage the entire process to create learning that is learner-centered. Taking learning preferences into consideration is one of many factors, even beyond Kolb's model, that we consider when designing, delivering, implementing and evaluating the effectiveness of our training pieces. We think that it is critical to make certain that we build in auditory, visual (Kolb's observation, watching, viewing) and kinesthetic (Kolb's active, doing) activities. We also make certain that we offer learning options for those that prefer extraversion (Kolb's feeling, expressing) and those that prefer introversion (Kolb's abstraction, thinking, reflecting). It is most challenging to adhere to our principles in eLearning or virtual instructor led venues....but even kinesthetic preferences can be honored through several on-line and off-line strategies. Honoring those that prefer autonomy is important as well as providing very detailed performance expectations for others is imperative. Keen attention paid to these learning "styles" creates a dynamic learning center....where preferences are stretched (and often non-preferences are ignored....like the extraverts that keep talking during a quiet activity) and where learners find comfort.

I think that we must remember that we have the most sophisticated, self-absorbed and savvy learners of all time....who have access to a dizzying array of learning tools (that are very learner-centered). How could we possibly ignore research-based learning preferences when we design and deliver training?

[www.wick-works.com](http://www.wick-works.com)



**Barbara Andrews**

Regional Training Manager

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Every class cannot perfectly fit the learning styles of each student, but it is possible to find a middle road that will accommodate these different styles.

One example. A virtual class that covers complex material should always have a written handout that can be downloaded prior to class. This allows the learner to read and prepare questions. The presentation hits the important points with lots of participation and graphics for the visual and aural learners.

Virtual or web based classes should always be 30 minutes - 45 minutes maximum to address different attention spans (which are getting shorter for everyone).

Just a couple of ideas among many.



**Sherry Michaels**  
President and Owner, Michaels & Associates

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At Michaels & Associates, we do. One interesting thing is that our company is composed of learners who learn best in all different ways. Why would we design learning that doesn't take into account varying learning styles? Further considerations would be learning opportunity time. For instance, while we are designing learning, we'd find out where the learners will learn. Are they mobile? Are they across several continents? Will translation be involved? Is the learning accessible to handicapped learners? Are there age or gender considerations? In the audience, are there learners more apt to be engaged by experiential techniques or by access to researchable documents they'd prefer to read? These things would be considered among many others.

Moreover, a good instructional designer will assist the business sponsor with determining the most appropriate criteria for the investment, and whether the goals meet the audience analysis results. Without the ability to design with audience analysis considerations and to educate the business sponsor on the criteria, no hope for demonstrating value exists.



**Leslie Orr**  
Owner, Courseware Connection, Inc. I help businesses get the right person in the right job.

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RK,

OH YEAH!! Learning styles and learning modalities. A good course design would include some lecture, practice, and experiential learning. We have to design courses for the visual, aural, and tactile learner.

Some delivery systems have strengths in one area over another, but again, good course design should accommodate each of the learning styles to one degree or another. Often the choice of delivery systems is dictated by the desired performance outcome. For example, where a skills needs to be practiced, a simulation is often preferred. The choice of delivery systems should be based on learner outcomes.

Some skills seem to need a certain environment. We associate certain skills with face-to-face or classroom environments: giving speeches or learning to speak a language. Technology has provided alternative approaches that seem to work well. For instance, I have seen an online class lately that uses a camera effectively as an audience. I was also impressed lately with an online language course that allowed the learner to record his or her voice for review by a native speaker that I thought was effective for language speaking skills.

As an online teacher, I often get comments from students who have said they did not think they would have much interaction with other students in an online course and were pleasantly surprised at the amount of interaction. Some of the students confess that they would have been the shy, quiet ones in the classroom and were pleased in the online environment at being able to contribute.

RK, good design can make or break a course. Good design is always based on the expected performance outcomes.



**Marlys Arnold**

ImageSpecialist -- Speaker, Author, Consultant -- Corporate Image & Trade Show Marketing

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In addition to various learning styles, trainers also need to keep in mind generational differences. GenX & Y have shorter attention spans (GenY may begin texting or even get up and leave once they've tuned out) and want more experiential learning rather than straight lecture. Trainers should also use Web 2.0 tools (slide sharing, podcasting, Facebook groups, etc.) to extend learning both before and after the actual event.



**Dick Huiras**

Author "How to Build A Bond Of Mutual Trust" & "ICS-Connect Communications Program. Relationship & Business Coach

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It is my belief that ISD and Learning Styles are two very different things, and both should be integrated into learning. ISD is based on four basic areas: Competency, Logical & Sequential, Tracked & Evaluated. A format which is given validity by the experts in curriculum design.

On the other hand there are four basic Jungian learning styles. The learner can learn in any of the styles, however, will have a strong preference to one of those styles. Having a good strong program based on the ISD model and then delivering the training based on the person's learning style is a winner every time.



**Blair Kettle**

Learning Systems and Technology Manager

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It's good Instructional Design practice to do audience, context, and instructional analysis. Instructional Design is an engineering process. Just as an engineer should analyze soil conditions, water flow, wind conditions, traffic requirements, etc. when designing a bridge, an ID should analyze factors such as literacy, education, geographic location, age, task frequency, complexity, and criticality, etc. I don't recall who said this but I believe that an "ounce of analysis is worth a pound of cure" (or something to that effect).

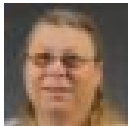
The issue some IDs (particularly those who follow cognitive principles) have with Learning styles is that the empirical evidence that they exist is thin. And, if they do exist, there is even thinner evidence that the prescriptions created have any beneficial effect.

Considering the well-established Adult Education construct of VAK (visual, auditory, kinaesthetic),



does the ID introduce an equal dash of each for a group (regardless of the learned capability - knowledge (declarative), comprehension, application, etc), or does the ID administer a psychometric test for each learner to determine learning style per learned capability. The impracticality and lack of empirically-based guidelines for performing the latter suggests that the former is preferred. If the former or the latter is applied, is the ID's level of analysis and capability called into question when learners say "that's not my learning style".

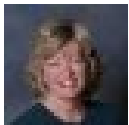
The alternative, which does have an empirical evidence basis, is to design based on cognitive principles for each learned capability. If the performance goal is to type at 45 words per minute on a QWERTY keyboard, you are talking about a psychomotor task requiring automaticity. The "Kinesthetic" learning style in that case appears to be key. What does one say to a learner aspiring to achieve 45 per words per minute on a keyboard who insists that his/her learning style is auditory? Maybe it's possible. I don't know. My empirically oriented intuition tells me that the construct of Learning Styles needs more research.



**Janet Bowen**  
Instructional Design

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Any ID worth their salt is going to incorporate the learning styles of their target audience. It is important to remember this as engagements with the content are designed. In addition, generation, culture and other influencing factors need to be integrated. The whole idea of creating the learning is to do just that achieve learning. If you aren't doing that, then you have failed.



**Sherry Michaels**  
President and Owner, Michaels & Associates

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KAT are not the only styles any more. With cultural affects on everyone, especially learners, we're having to get smarter about designing for shorter attention spans and for shorter bursts of learning for mobile technology. Interactivity has to be planned for these things in order to engage audiences that are distracted to a blur.

We take these things as part of all the analysis, as you said. Our "soil, water, wind conditions..." are all part of it. I will say, however, that it is getting more interesting by the day to be sure we don't exclude any targeted learner.

Note, I mention "targeted." The business sponsor has to determine who the target is, in order to realize the effectiveness of the training. This goes with an analysis of the program's goals and criteria. Rules of pedagogy applied with business acumen go a long way.





**Terri Cheney**

Principal at CONNECT Instructional Design

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I think you will find Daniel Willingham's website useful ( <http://www.danielwillingham.com/> ). He has done some terrific research on learning-related myths, including writing explicitly about learning styles. Scroll down on his home page to the part labeled "Learning Styles Don't Exist" for links to some very good videos he posted about this rather provocative claim.

I also just found this page when I used Google to find info for you about Dr. Willingham's work: <http://www.thepsychfiles.com/2009/03/episode-90-the-learning-styles-myth-an-interview-with-daniel-willingham/> Looks like there are video, audio and print files on the page.

What I like about Willingham's approach is that it is both solidly research based and very pragmatic. He debunks the more extravagant claims -- pretty gently, in my opinion, explaining why the ideas have such appeal and staying power and never coming across as snarky. :)

Brain science fascinates me, so I am always looking for ways to apply the most current findings in my instructional design. Willingham was one of the people who reminded me that we don't have to make extravagant claims. The more constrained claims are plenty powerful without embellishing them.



**Geetha Manoharan**

Experienced in Organizational Development initiatives

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The video was fascinating Terri!! Thank You!! yes.. definitely makes one think. If I have understood it correctly, the implication is it is content that should decide the media and the method. Interesting!!!



**Roberta Budvietas**

Director at Budvietas.com Limited

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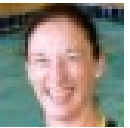
The lovely thing with adult learners is they will choose the content that works for them. A designer of course content like an author of anything needs to recognize that they will never appeal to everyone at this time but that as long as their material is good, delivered well in whatever format they are comfortable in and they are passionate about getting the message across, the learners will come. The rest is marketing both pre and post creation of any material



**Clifton Norton**  
E-Learning Professional

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I would think that for any given subject the target audience would tend to be slanted toward the same learning style. They are likely to have chosen the course themselves and are predisposed to learning the subject. Biasing the course too far in their favor would greatly increase the difficulty for the rest of the class.



**Candice Kramer, M.S., CPLP**  
Certified Professional in Learning and Performance

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As a recent conference presenter declared, "many so-called learning style models exist because someone needed a doctoral dissertation." Learning is a process, and it's about outcomes (or performance). I design audience-appropriate materials that are focused on what the learner is expected to take away from the experience, and there are many ways to do that. The key is not designing to a supposed perceptual modality, developmental stage or ability, but making the content relevant and engaging to the learner, so they see the need and the application.

The only place I find that I design directly to 'learning styles' is when designing for a specific, focused audience that is clearly articulated or when required to adhere to specific SCORM requirements. What IS key is that designers understand the audience and the expectations so they can create useful learning materials with clear objectives that meet stated needs. (Assuming those needs will actually be addressed by training and not some other intervention, but that's another issue entirely.)



**Anders Bark**  
Senior Instructional Designer at Outsmart and Owner, Outsmart

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Thanks for posting this discussion topic. It's one of my favorites.  
In my opinion, I have no doubt that learning styles is relevant for the instructional design, but it is somewhat over rated as a principle for the same.  
I would like to stress that I limit my opinions to that of adult learning in a corporate training context.

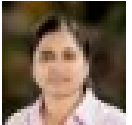


**Melinda Reiter-Schroepfer**

Manager of Curriculum Development and Accreditation at Flexographic Technical Association

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Taking learning styles and preferences in to account is critical to good design. I would argue that adult learners in a corporate setting are no different than any other student - they all have learning preferences. Is it possible to accommodate all style preferences (say Gardner's 7 intelligences) in an online format? Probably not unless you have an away-from -the computer face-to-face and/or lab element built in. However, we all tend to want to teach/design to our own learning preference. I think keeping in mind that any given learning audience will contain a variety of learning styles (visual, auditory, bodily-kinesthetic) is key to making sure we see the learning material from the learner's perspective. As a learner with a preference for digesting large pieces of dense writing, I need to remind myself that not all of the learners I'm designing for are avid readers or that they may need some auditory or visual supplements to solidify any given concept.



**Geetha Manoharan**

Experienced in Organizational Development initiatives

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Learning Styles and Instructional Design - They should go hand in hand and yes it is practical to accommodate major learning styles while designing a course.

For an adult learning process - The actual learning happens only when the adult takes a decision to learn and WANTS to learn. If a module can trigger that interest then half-the-job is done. How can that interest be triggered? Same message - different mode - objective - maybe one mode will stimulate an interest and it is not just VAK or Kolb's model.

Example: a person like me - you give me reading material i will absorb it quickly- you give me a video - after about 5 minutes my mind starts wandering- if I have a learning module only with video then my objective may not be achieved at all or I will have to struggle to achieve that objective.

For a child - almost the same principle - includes activities and games too. I came across this site in one of the discussions on LinkedIn:

<http://www.enviropellathon.com/spellathon/English/html/nav.html>

It is a little slow but a good example of a mix of methods.

The objective of a course is Learning and one method to trigger effective learning in all is utopian. The joy of learning is subdued then.

An Instructional Designer is successful and can consider his job done only if that trigger is activated. Learning styles and how to incorporate it should reflect in the KPI of an Instructional Designer.



**Dr. Trish Ritschel-Trifilo**  
at Hardin-Simmons University

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My research is in learning styles. Based on Gardner's Intelligence (he's up to 9 now), Canfield or READI, and neuroanatomical research I found each person has several learning styles they utilize. Everyone has a dominant one (first choice..how one seems to most easily get knowledge). It includes not only a sense to bring in knowledge (reading, listening, video, touching), but also a method of processing that info in the brain (numeric, qualitative or writing, hands-on, peer interaction). If the dominant one doesn't work so well, we choose an alternate method.

It is essential that students (adult or otherwise) KNOW what their learning styles are. Just that alone helps them focus on finding appropriate learning strategies. (A person who is a dominant reader with hands-on will sit at a lecture and have it "go in one ear and out the other" for example). I design with a variety of strategies included so my learners can choose what works for them.

That said, designing 8 different strategies for each lesson is time consuming and expensive. What I like to do is have a 3 minute overview that I present in different learning styles (my video learners watch a video, my listeners can hear the summary, etc.) Then, create learning modules that have different strategies interspersed. I might have text with a graph (for those numeric learners) that summarizes the text. Or a video that shows a "hands on" demonstration. I don't use all styles everywhere, but I do include all styles at least two times depending on the length.

My research shows a statistically significant difference in exit scores when the learners know their styles and accessing learning strategies appropriate to those styles. Knowing the styles but not accessing them using dominant style first leads to lower scores. Having no knowledge of styles and just poking around the lesson leads to poor choices by students and often failing scores. My research shows that without style evaluation students really have no idea how they learn. 70% of my college students (out of a 200 person population) did not learn dominantly by reading or listening. What do we do as college profs? Lecture and show power point slides. No wonder there is often a disconnect!



**Roger Greenaway**  
Owner, Reviewing Skills Training and Professional Training & Coaching Specialist

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RK initial questions asks: 'Is it practicable to accommodate major learning styles while designing a course?'

At one level this seems to be about the variety of ways in which you can communicate to learners - using as many channels/hooks as possible through multimedia presentations (where 'practicability' mostly depends on time and budget).

At another level, I would want to ask 'What major learning styles is it most difficult to engage through multimedia presentations?' - because there is a risk that learners faced with top quality presentations become the equivalent of couch potatoes passively watching TV. Engaging preferences for learning in more active, participatory, responsible and creative ways is more of a challenge for the designer because you are designing for more fluid and unpredictable situations.

How 'practicable' is it for a 'designer' to cater for such uncertainties - unless the designer also happens to be the person providing the training course?



**Jan Schwartz**

Founder and President, Education and Training Solutions, LLC

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Interesting clip from YouTube on this subject. Created by a cognitive psychologist/neuroscientist from the U of VA.

<http://www.youtube.com/watch?v=slv9rz2NTUk>



**Roger Mundell**

CEO, Udu Learning Systems Inc.

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I think you have to know your audience and build in what might be their motivation for taking the course and play on it. Engagement is about making the learner constantly make decisions, choices, etc. Keeping them involved in more than just clicking "next". For example an element of mastery is what drives people to keep trying with computer games, and the same strategy often works with training courses for web generation people, so scenarios and even gamelike flash exercises that allow them to fail and retry work well, whereas a health professional might be more interested in learning a "best practice algorithm" and have no patience for an exercise where they can fail. Engagement can be built in with the simple trick of an opening storyline, or case study, where they won't learn the outcome until they have completed some elements of the course. The tried and true techniques of clearly outlining at the start what the outcomes will be, and how long it should take, etc., are also key ingredients, and another strategy is an opening scenario that most people will inevitably fail, with a chance to re-take the scenario at the end of the course, etc.

For salespeople I have found that it is sometimes best to transform the training into a sales tool that they can use with customers, while simultaneously training themselves. So there are lots of ways to motivate, but it all starts with knowing the learner audience as several people have pointed out on this thread.



**Don Diekneite**

Producer / Designer / Audio Developer / Educator

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I think it depends on what you are preparing students for. If it's highly specific and targeted, you can focus on a particular learning style. In my job preparing undergraduate college students to enter the workforce, I would be doing them a disservice by catering to their individual learning styles. The

professional environments they will have to survive in will not do that. Their ability to acquire knowledge and skill via a number of different ways will significantly affect their ability to succeed.



**Barry Smith**

Certification Program Manager at Acme Packet

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It is not only practicable, it is critical.

Any good instructional designer can quickly accommodate the major learning modalities with an array of simple instructional techniques: Big picture drilldowns, bulleted lists, tables, illustrations, examples/non-examples, right way/wrong way, etc. These are buttressed by frequently reversing the flow of information with pointed, concise questions that require some thought to answer. Then wrapped up with challenging simulations and practice. Easy-peasy (ha)



**Susan Tait**

Instructional designer with a passion for games as competency assessments

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Actually, they don't have to; too much attention to the LSI will slow both you and the students down.

Steve Trautman from Microsoft global training & development invented a method to optimize the time required to transfer specific competency from a subject-matter expert to a colleague in extremely fast cycles--competency acquisition can be measured in hours by either the SME or the student. The method has been demonstrated to work in nursing, IT, and public utilities fields. It's well-documented in his book "Teach What You Know." I personally can attest to its efficiency; I used it to break a project deadlock after a technology acquisition. The SME knew everything but could only tell the story one way. Using Trautman's method, we had usable documentation in 3 days, a curriculum drafted in less than two weeks, and target training objectives isolated with some enabling objectives done before a month was up. We made up the lost time on the schedule and we had something good to offer.

Best of all, since we have a variable audience that we can't compel to take a test, we needed to work around the fact that this information wasn't normally available to us anyway.

I also took the one-day class his current company sponsors at graduate schools and in trade associations to get some of the theory behind the book.

Trautman argued that people don't have time or inclination to take the Learning Style Inventory, or any other "profiler"--but they do know what they like. His system accommodates all four styles (thereby making them irrelevant) because he recognized that a preferred style is associated with "how you want to start learning" not "the only way you do learn."

The methods he uses cycle easily through all the known styles, are technology-independent, and frankly have made me a much better designer. Further, they make it possible for more experts to actually teach what they know.

I recommend that you look at his book. You'll see some of the techniques used intuitively by two other masters I respect immensely, Roger Schank and William Allen. They didn't identify them as clearly, although they use the techniques nearly as well.

Feel free to contact me if you have any questions, or just want to talk shop.



**Ronald Cline**  
Healthcare Consultant and Interim Executive

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That's a great article and a great question. I have always tried to incorporate multiple learning mediums. The problem is that most people fit into one category of what works best. The rest are left to struggle. Wouldn't it be great if each learner was evaluated and then the training was delivered in a customized format. There are many techniques that can categorize individual learning styles and, thanks to computers, deliver content the learner will best understand.



**Gloria Nelson, CSEP**  
Owner, Gloria Nelson Event Design, LLC

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Knowing your audience is always key to the successful design of any instructional material. We know there are three key learning styles. Integrating these elements with visual, auditory and kinesthetic learning is imperative. There's also a relatively new study that is taking education of all kinds by storm referred to as 'educational bursts'. Studies, not sure who conducted them, show there is about a 15 minute maximum window to capture a person's attention before they begin to wane. If you have them do something else away from their learning environment, or change up something to engage them, this is said to help with learning and retention. Fascinating things going on with 'open learning' as well, however, there is a great deal of paperwork and documentation required on behalf of the person who is the moderator of that type of group.



**Yogi Anand**  
Principal at Energy Efficient Building Network LLC

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I have in my own teaching tried to customize the learning experience for each student. Customizing courseware or learning experience for each student needs an innovative approach and well laid out plans regarding what is to be accomplished and how best it can be implemented. Multiple intelligences theory suggests that we do have multiple intelligences -- so the best way is to invoke all or most of these intelligences to come into play.



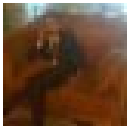
I have designed my Learn-in-Play technology on the basis that all kids -- kids of all ages from under eight to over 80 like to play. So I design my courses to be playful -- so the learner while enjoying the playing session is indeed learning.

In my Learn-in-Play technology, LEARN stands for ...

- o Leading
- o Energizing
- o Actualizing
- o Rewarding
- o Nurturing

So, my Learn-in-Play technology courses are Leading, Energizing, Actualizing, Rewarding, and Nurturing for the learner ... and I believe the LEARN environment can be very conducive to effective learning.

I don't have any formal research data to present, but in my own experience at university level teaching, in both in-class and on-line courses, I found most students to have been more receptive and more interested in learning when offered a course based on my Learn-in-Play technology.



**Kamran Rashid**  
Regional Head-North UBL Fund Managers

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It should go hand in hand, but I think most trainers don't do it, as they have plain vanilla solutions and they just throw that knowledge to the audience. Mostly it could be practiced in tailor made trainings in which you have some identified training need and an identified audience, whom you can even interview before training to know more about them and further adjust the learning style. The learning styles also differ with culture of company as well. Training senior people in corporate is not like teaching in schools, where as learning styles mostly resemble the school learning and teaching styles.

I personally feel that trainer while in corporate trainings need to act as facilitator and should allow the participants to discuss on the need identified, is the best training and learning style known as "Sharing".



**Fabienne Salimi**  
Process Safety Expert

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It is a very interesting subject. For professional training programs we are often focus to train for a specific subject and measure the results by exam and certificate delivery. I do believe that we should work beyond of just a mechanical procedure.



Your blog is started by the following paragraph:

"Kolb's learning theory introduces us to four distinct learning styles (or preferences), which are based on a four-stage learning cycle – learning by feeling, watching, thinking and doing."

To me feeling and watching are the same category and I would like to call it "observation".

Observation is the most step of learning process. The second step is "desire" to understand what we observed. The third step is to take "action" upon this desire.

The good students follow the above steps by themselves. For their case the trainers just save the time and effort to point what they must observe first. In the other words, the trainer prioritizes what must be "observed". Very often the main problem of mediocre student is "lack of desire" to observe, understand and therefore take action. A good trainer can provokes the required desire with different means. Today the advanced technology for communication and presentation enable us to achieve this phase much better and more efficient than before.



**Andi Roberts MBA**

Bilingual Spanish & English Facilitator Coach Trainer

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Nice article and an excellent, excellent graphic.

I, and many others I guess, are still unsure of the "science" behind learning styles and not just David Kolbs. For me the important several important things stand out from "learning styles":

- 1) Trainers should look to deliver a range of experiences focused on any topic.
- 2) We should be aware of our personal learning styles and ensure we don't design and deliver how we like to learn.
- 3) We should get feedback during a course on how we are addressing participants learning style. If we do this at the end of the course with a "happy sheet" we have lost the opportunity to adapt and improve.



**Matt Johnson**

Manager of Church Relations at Youthville

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I believe that they should. As a presenter with the knowledge that people have different learning styles, I need to reflect on my presentation and does it meet these many styles. The Brain Mode learning style assessment tool is an excellent resource that is soon to be released in a commercial version. This tool identifies how people physically take in information. Kinesthetically, Visually or Auditorily. The instructor should create a presentation that meets each of these styles. 10% of people are auditory and yet we spend much of our time being talked to. The majority of us are doers (kinesthetic).

However, I think being informed of your learning style can be a hindrance as much as a help. It is nice to have an "aha" moment about how you process information and can help you to understand past experiences, etc.

The issue I find is that once you are aware of your learning style you seek to criticize a presenters style because they haven't done something that fits your style.

Despite our style, we need to focus on strengthening our weaknesses. We should never use our learning style as an excuse for not participating.



**Lani Zielsdorf**  
Sr. Tech Writer at Covidien

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I believe it's an imperative. Your link references Kolb, but you may also consider work by Gardner on multiple intelligences and the Dreyfus model of skill acquisition. The vast majority of adult learners subconsciously reject the linear presentation of instructional materials in favor of a modular style providing content in easily accessible chunks, answering the questions they have, rather than focusing on what the instructor knows. Investigative and collaborative learning provide much higher retention rates, particularly when addressing individual learning styles and allowing for self-pacing within a structured environment.



**Christopher Golis**  
Australia's expert in practical emotional intelligence

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Unfortunately the scientific evidence is that it is a waste of time. Go to [http://www.willatworklearning.com/2006/08/learning\\_styles.html](http://www.willatworklearning.com/2006/08/learning_styles.html)



**Sathyanarayana TMS**  
PMO & Operations Integrator

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I am of the firm opinion that the learning styles of the target group will have a huge bearing on the way the instructions need to be designed. Firstly, this gives a lot of comfort to the user of the instruction since s/he is familiar with the style and to that extent is not threatening to them. Secondly, it will have greater acceptability among the target group and hence would contribute to the success of the course itself.

After all we design courses meant for the target group and not for oneself!



**Andrew**

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As I am a doctoral learner (EdD), my research is taking me in this area. Research that indicates courseware needs to be designed around the one and two sigma area. While I have always believed that maximum flexibility is the answer, what I have found over the last 25 years of courseware design, is that as the learner learns, their learning style can change. I am extremely interested in the field of integrating brain and social patterns. Following Andrew Meltzoff of University of Washington's Institute for Learning and Brain Science, I believe we may have missed the point. We need more studies to confirm interaction of computational and social learning to determine how our brain circuitry adapts in different environments to produce learning.



**Felice Tilin, PhD**

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I use Kolb's model in designing all of my educational and training programs and have done so for years. When working with adult students, on line or live, I find it helpful to give them an overview (or review) of this model at the beginning of a course or program. The first benefit is -they gain awareness of their own preference  
The bigger second benefit is that - they learn to use styles that are NOT their preference! At the very least, they have more patience for the fact that others have different preferences. Assignments/material/discussions and stories that do not resonate for them are probably resonating for others. This understanding transfers at work where adult students find they have a much richer understanding of co workers. When I design curriculum I often find Bernice McArthy's interpretation of Kolbs Model very useful. Writing curriculum to answer the questions WHY, WHAT, HOW and IF is simple but highly effective. <http://www.aboutlearning.com/what-is-4mat.html>



**Michael Sadowski**

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I have found in my experience that when they design courses they do not take into culture variations and all too often and constructing a generic brand course. That is one size fits all and that is not true. Also it is often the mindset that only one model can be used instead of having them interact. They have blinders on that once they decide on a model they vary little or not at all from it no matter what the circumstances are.



**Margaret Meloni**

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I do believe we need to create content with the different styles in mind. We need to flex the way in which we create and present materials. I also believe that when we are in front of a group we need to try to take the pulse of the group and be flexible with our style on the spot.



**Roger Greenaway**

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I believe that learning style preferences arise from averaging out how people say they like to learn across a wide range of situations. So even if you happen to know people's average preferences, a rich design that taps into a wide range of learning styles may well create a 'situation' in which people learn well whatever distance they happen to be from their notional 'average'. My understanding is that styles are average preferences and are a weak guide for creating an optimum learning design for what the individual wishes to learn



**Jeannette**

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This article made me think of the four domains of instructional objectives (cognitive, psychomotor, affective and interpersonal). I think the domains in which we instruct offer more influence to how we design than the learning styles (that we cannot always predict) of our learners. I think it depends on how you approach design.



**Margaret Meloni**

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My heart goes out to you. I have survived a similar experience. I had one group dislike my stories. Then with the next group I really reined it in and instead of telling my stories, I used made up examples and involved the class in those examples. The class where I used the made up examples complained that I probably had real life experience worth sharing and that made up examples were not valuable. My take away, I went back to real life stories and as long as I felt like they were being well received and that I was being authentic in their delivery I stuck with it.

**Note:** "I have included the names and photographs of respondents to make it more personal. If it is not OK, please let me know – RK"