



The Top 10 Blunders in Developing E-Learning

and How to Avoid Them

By Joseph Ganci
Dazzle Technologies Corp.





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Joseph Ganci is President of Dazzle Technologies Corp., located in Sterling, VA, just outside Washington, D.C. He has been involved in every aspect of multimedia and learning development with an emphasis in development since 1983. Mr. Ganci has taught classes and seminars at leading universities and in many government facilities, commercial firms, educational institutions, and has spoken at several industry conferences. Mr. Ganci is also a published author, having written several books and articles about elearning, and is widely considered a guru for his expertise in elearning development. He has consulted on a wide range of multimedia and learning applications worldwide for many organizations. Mr. Ganci holds his degree in Computer Science.

Dazzle Technologies Corp., a privately held firm since 1995, was incorporated in 1999 and is headquartered in Sterling, VA. DazzleTech is a full service interactive multimedia shop with a strong emphasis on the development of creative custom e-learning solutions. Our training systems are easy to use, highly effective and flexible to implement and deliver. Our people have developed and managed well over 1,000 hours of courseware and take great pride in our unmatched technical skills in a wide variety of development tools and instructional design. This expertise is not only demonstrated in the creative solutions we provide our clients; it's proven through the training and knowledge we provide the e-learning community. Our reputation is proven through our satisfied clients who employ us again and again.

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Mistakes, Blunders, Oversights



- Interactive multimedia is a tough business.
- Think of making a movie, only it's interactive!
- Even with huge budgets, bad movies are made.
- The potential for mistakes in interactive multimedia projects is HUGE.
- The usual inclination is to JUMP in.
- However, a smart project manager and team will spend a lot of time preparing.

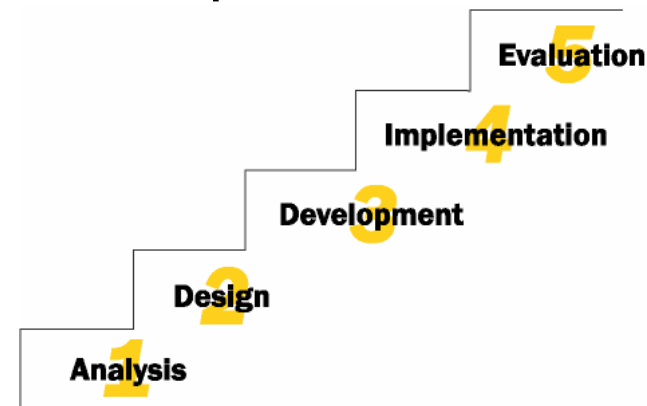
Mistakes, Blunders, Oversights



- When we price a project, we always price the first student hour a lot more than the last.
- Also, the more student hours, the less each hour costs. Why?
- Because all the initial preparation is done in the first hour.
- All initial costs in preparation get amortized over each hour.
- If each subsequent hour in a project is costing the same as the first, something is wrong!
- And now on to the ten blunders!

Blunder #1: Skipping Steps

- There's a reason why the ISD process exists.
- Like it or not, there are steps in the process.
- Usually, they are seen as:
 - Analysis
 - Design
 - Development
 - Implementation
 - Evaluation
- **SOMEONE** must be in charge of each step!

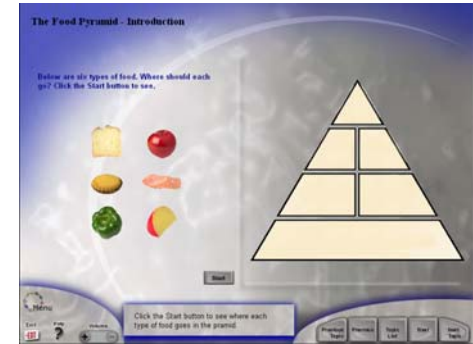


Blunder #1: Skipping Steps



- Too often, the **Analysis** stage is ignored or abbreviated.
- This is one of the biggest mistakes you can make!
- This is a bit like preparing for a vacation but not knowing where you're going. Do you pack a swimsuit or an overcoat?
- You must have several questions answered before you start doing anything else. Get those questions answered. Create an Analysis Document!

Blunder #1: Skipping Steps



- The **Design** stage is also too often rushed.
- A proper Design Guide becomes the Bible for your entire project.
- It contains all of the information regarding global aspects of your course:
 - Screen layout templates
 - Navigation schemes
 - Everything else that isn't screen specific

Blunder #1: Skipping Steps

- Storyboarding follows the Design Guide sign-off.
- Too often, storyboards are rushed and not properly QAed.
- “Oh, the programmers will take care of anything we missed.” NOT a good idea!
- The time it takes to write a storyboard well will save you three times as much later in the project.

Blunder #1: Skipping Steps



- The **Development** stage is too often mismanaged.
- Developers must be kept in the loop from the start.
- Assumptions should not be made as to what is possible or not possible in development.
- Never let developers and designers fight!
- Don't let artists have a field day. (BTW, I do love artists).
- Don't wait until the end to QA!

Blunder #1: Skipping Steps

- Too often, we don't think ahead to the **Implementation** stage enough either.
- How, where, how and who?
- The same thing for the **Evaluation**.
- Who's going to do it? When? How? What criteria will be used? What is expected after the evaluation?

Blunder #2: Starting It All Wrong

- If you are an external vendor, make sure you have some questions answered before you place a price on a project. Otherwise, you will overestimate or underestimate.
- Build assumptions into any firm fixed price contract.
- Even if you're creating courseware for your own company, some questions must be answered at the start.



Blunder #2: Starting It All Wrong

- **Not Understanding the Audience and its Needs.**
- Who is your student audience?
- What do they need?
- Not limiting the initial scope.
- What actually needs to be taught?
- What specific requirement?

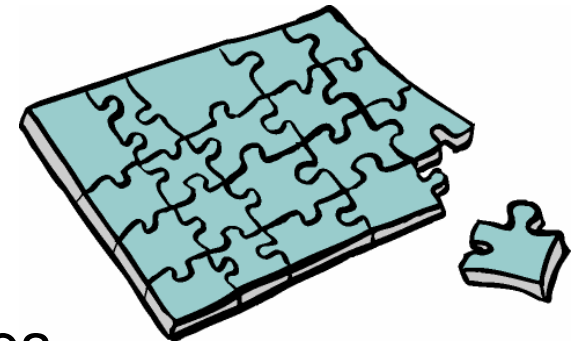


Blunder #2: Starting It All Wrong



- **Not Understanding the Strengths and Weaknesses of e-Learning.**
- Are you sure you want to teach Advanced Philosophy or Conversational German on the computer?
- Are you sure you want to teach Accounting 101 in the classroom?
- Not choosing the right blend.
- Some portions are best learned through books, others e-Learning, others with face-to-face humans.

Blunder #2: Starting It All Wrong



- Not preparing design guides, templates, models, and more.
- Make sure all of your side and corner puzzle pieces are in place before you start filling it all in.
- Have guides, reusable objects built, navigation panels and backgrounds, and everything else that isn't screen-specific.
- Have a review and sign-off of all these elements before doing any storyboarding and programming.

Blunder #2: Starting It All Wrong



- **Creating the Wrong Expectations.**
- If your client doesn't know e-learning, educate, educate, educate.
- If not, clients often will underestimate what to expect or much worse, will overestimate what to expect.
- **Choosing the Wrong Venue.**
- Is this best delivered through the browser? CD? Both?

Blunder #3:

Underestimating the Work



- Remember the movies? How long does it take to make a good movie?
- It takes **TIME** to create a good e-learning project.
- If you let yourself be rushed, be prepared for doom.
- Too often, you'll be given a hard and fast deadline. It is the nature of today's world.
- Work your way back from that to dedicate the right ratios of time to each of the steps.
- If you find it's not enough time, try to limit the scope.



Blunder #3:

Underestimating the Work



- Do not fool yourself into being the eternal optimist.
- Allow enough time for an analysis or you will have chaos.
- Allow enough time for a proper design or your developers will be confused and cause the deadline to be missed.
- If you don't allow enough time for a good design, guess what? The design will take as long as it needs anyway. Next thing you know, development gets crunched because the deadline hasn't changed.

Blunder #3:

Underestimating the Work

- If you let QA suffer, you will lose face and clients.
- Rushing any step will cause subsequent steps to suffer.



Blunder #3:

Underestimating the Work



- Remember those movie budgets?
- It takes **MONEY** to create a good e-learning project.
- Don't forget: time is money.
- It takes money to find and pay good people even in today's economy.
- It takes money to have the proper tools.
- It takes money to do almost anything!

Blunder #3:

Underestimating the Work

- Which movies do people gravitate to?
- It takes the **RIGHT PEOPLE** to create good movies and good e-learning projects.
- You need people who are good analysts, designers, artists, animators, developers, evaluators, and most especially you need...

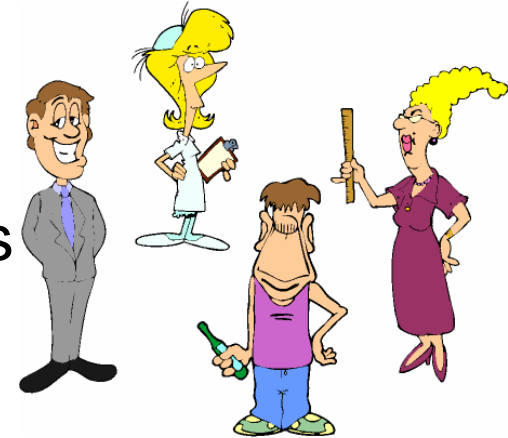


A GREAT PROJECT MANAGER

Blunder #4:

Choosing the Wrong Team Members

- **A GREAT PROJECT MANAGER**
 - Knows how to make hard decisions
 - Knows how to stick to a budget and schedule
 - Knows when to stay yes and when to say no
 - Knows how to resolve team member disagreements



Blunder #4:

Choosing the Wrong Team Members

- **A GOOD ANALYST**

- Knows what questions to ask the client
- Knows how to write properly and clearly
- Knows how to limit the analysis to just enough



- **A GOOD DESIGNER**

- Knows how to take the analysis and design to it
- Knows how students learn on a computer
- Knows how to write so that all other team members understand

Blunder #4:

Choosing the Wrong Team Members

- **A GOOD ARTIST AND MEDIA SPECIALIST**

- Knows how to create for a browser or a CD app
- Realizes that there are limitations and not everything can always be 24-bit or high quality stereo
- Knows how to stick to a consistent design and a schedule



Blunder #4:

Choosing the Wrong Team Members

- **A GOOD DEVELOPER**

- Is not a newbie expected to do it all
- Knows how to follow a design
- Knows how to make suggestions without being antagonistic
- Does not make assumptions
- Knows how to keep to a schedule
- Does not wait until the end to discuss a problem



Blunder #4:

Choosing the Wrong Team Members

- A GOOD EVALUATOR
 - Knows it's not OK to overlook items
 - Is kind of nitpicky
 - Is very patient and doesn't mind looking at the same screen twenty different ways
 - Knows how to properly write evaluation results so that they are understood
 - Knows how to keep to a schedule



Blunder #4:

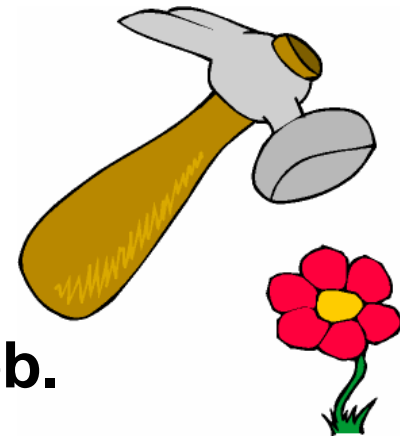
Choosing the Wrong Team Members

- **A GOOD CLIENT**
 - Knows that good e-learning can't be created in a day
 - Knows that good e-learning takes money
 - Knows how to read and adhere to a contract
 - Remember, you choose your clients



Blunder #5:

Choosing the Wrong Tools



- **Choose the Right Tool for the Right Job.**
- Don't let your developers always use the same tool just because it's the one that they know.
- There are great tools on the market. Each has its own strengths and weaknesses.
- Authorware, Flash, RoboDemo, Dreamweaver are all examples of tools used for e-learning development.
- All of the above can be used in combination as well, and usually should!

Blunder #5:

Choosing the Wrong Tools



- Don't let a tool's price tag determine whether you will use.
 - A tool that costs \$300 or even \$3,000 may make it so fast and easy to do the work that you save that money quickly.
 - A tool that costs \$30 may make it so hard to create a simple screen that you end up spending ten times more in creating a course

Blunder #6:

Choosing the Wrong Media Elements

- **Choose the Right Media!**
- Media can include video, audio, simple text and graphics, and animations.
- Choose the media according to the **CONTENT**.
- If you're teaching accounting, do you really need video?
- If you're teaching heart surgery, wouldn't video be important?



Blunder #6:

Choosing the Wrong Media Elements

- Budget and schedule must play a part in choosing media elements.
- However, do NOT let those be your primary reasons for choosing video. Better to limit the scope of your learning than to cripple the ability of your students to learn.



Blunder #7: Designing Incorrectly

- Create a design that makes sense for your CONTENT.
- Make sure there is enough interactivity to make the learning interesting and worthwhile.
- Don't have so much interactivity that the student feels overwhelmed.
- Make your media elements work towards your content.
- Keep screens simple and easy to navigate.



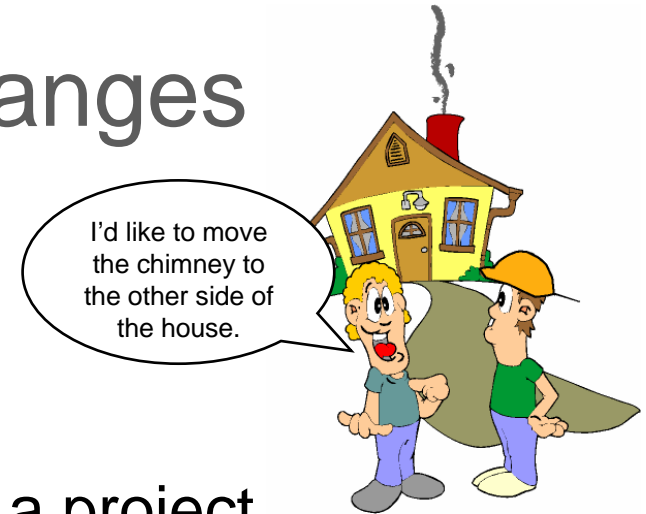
Blunder #7: Designing Incorrectly

- Put yourself in the student's seat and ask yourself what you would need.
- Now realize there are many different times of students!
- Don't forget to blend your learning using different means.
- Use proper instructional methodologies.
- Do give feedback to the student all along the way; involve the student as much as possible.

Blunder #8:

Allowing Later Scope Changes

- The client is your reason for living.
- However, the client will not always know what is reasonable to ask on a project.
- Know what to say when changes are requested.
- Will it impact cost and schedule?
Best to say so.
- Don't let the client assume all is well if it isn't so.



Blunder #8:

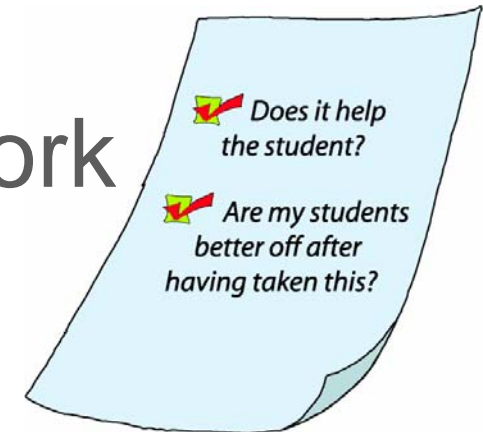
Allowing Later Scope Changes

- Your credibility and reputation are your most important assets.
- Make sure you adhere to your schedule and budget first.
- Make sure your contract assumptions are rock solid.
- Make sure you listen to all change requests.
- Say yes to simple things that won't impact time and schedule.
- Say why you can't do other things right away and why.



Blunder #9:

Not Evaluating the Coursework



- What good is the courseware you're creating if you don't know if it helps the students?
- Always have a follow up plan that will ensure that your students are better off after they've taken your course than before.
- If you're afraid of what you might find out, something is very wrong.
- Always expect some feedback you won't like.

Blunder #10:

Not Expecting the Unexpected



- Murphy lives and thrives on e-learning projects.
- If you don't prepare well, he will jump ALL OVER your project.
- Even the best-laid plans will allow Murphy to creep in at times.
- Have a strategy in place for all of your stages. Then have a back up strategy.
- What if someone gets ill?
- What if the software doesn't work as advertised?
- There are many things that can go wrong. Be ready to deal with those things!

The Top 10 Blunders

1. Skipping Steps
2. Starting It All Wrong
3. Underestimating the Work
4. Choosing the Wrong Team Members
5. Choosing the Wrong Tools
6. Choosing the Wrong Media Elements
7. Designing Incorrectly
8. Allowing Later Scope Changes
9. Not Evaluating the Coursework
10. Not Expecting the Unexpected



Thank You!

- If you would like to contact Joe Ganci:
jganci@dazzletech.com
www.dazzletech.com

