The design process has been defined through five steps:

⋅⋅ Define the Problem

⋅⋅ Learn/Research

⋅⋅ Generate Ideas

⋅⋅ Design Development

⋅⋅ Implementation

The first step helps designers better understand the root of the problem, while the second step drives understanding and empathy through research. When the problem has been defined and there is good understanding of what surrounds it, then concept development can commence in the idea generation stage. Once a strong concept has been developed, then sketching commences. Design development is typically a student's favorite part of the design process as they get to use their artistic abilities. This is where aesthetics should be addressed. Eventually a design is chosen and implemented through the last step. All these steps are essential in developing successful design.

**Step 1: Define the Problem**

In order to solve a problem designers need to understand it. Sometimes what is presented and described as the problem actually is not. Designers must learn to figure out (evaluate) for themselves (and their clients) what the root problem is and then proceed to solve it. The tendency is to blame the easiest scapegoat. This is called the band-aid solution—temporarily cover it up only.

Defining the problem is the first step in the design process. If the designer doesn't understand the real problem, there isn't much that can be solved and the status quo stays the same. Evaluation leads to understanding, which leads to action.

Students need to understand the real problem in order to look for appropriate solutions. The tendency is to do what has been done in the past because that is easy to see and do. By learning how to search

out and define the problem, students will be better prepared to come up with unique solutions.

These skills can be useful not only with design and art making but also other areas of their lives as well. Let's take a look at interpersonal relationships for example. Though this is especially important in the business world, communication between people and building relationships can sometimes be bumpy. Students can learn to "define the problem" in an effort to understand, define, and keep healthy relationships.

**Step 2: Learn/Research**

Learning is understanding, a deliberate systematic search for knowledge and advancement. Most people do this subconsciously in almost everything they do. When they shop for the best new cell phone, video game, or even food—they learn about the product(s). Learning informs our decisions. It is no different in the graphic design process. Learning takes on many forms from simply Googling something, asking a friend's opinion, or watching peoples' behavior on a street corner. If something is learned, it can be used

to better inform design decisions. Often, designers use the term research as a synonym for learning.

Through learning, designers figure out what is needed. As graphic design is visual problem solving, the more a designer knows about a product, service, company, etc., the better prepared they'll be to come up with a useful solution to the problems they're presented with. Learning (research) should influence design decisions from simple color choices to the form of a final solution—all decisions. Through learning, designers orient themselves to better understand everything—the assignment, the client's needs and requirements, products, services, the organization, audience(s), competition, etc. This analysis allows

the designer to better prepare and interpret the presented problem— the real problem, as discussed in the previous lesson. Learning leads to better understanding and if a designer truly understands the

problem, they are more likely to solve it effectively.

The more questions are investigated the more informed the end design will be. This is also a fall back when educating a client about the work a designer is producing. For example, a client wants a logo for a new hiking shoe brand and asks why the color green was chosen (their favorite color is pink). A prepared designer who did their research could respond that green was chosen because it represents nature, freshness, renewal, and energy—all reasonable qualities that support hiking in the woods. Again, research is learning.

Most have heard the aphorism, knowledge is power. This holds true in design. Learning and research can help persuade the most bullheaded boss or client to see reason because design has the potential

to affect perception, persuade consumer habits, and influence a company's bottom line (profits).

**Step 3: Generate Ideas**

Coming up with uniquely original ideas may be the most difficult part of the design process. Ideas are dependent on and require the first two steps in the design process. Only after the problem has been truly defined and learning (research) has taken place should a student move on to this step in the design process.

Students tend to wait around for an idea to simply arrive. This may never happen (or take a long time) and generally is fruitless. Designers must actively generate ideas. The goal is to use existing research outcomes (Learning—Step 2 in the design process) to form a concept or concepts that lead to possible solutions. These concepts are possible visual expressions or directions a project my go in. Ideas can be unique and effective. This is the goal. If preliminary steps in the design process are accomplished, students are more likely to find unique solutions. The opposite is true when steps are skipped—

student's ideas tend to be generic, formulaic, and cliché. Generating ideas is an active exercise. It takes motivation and discipline to find original thought. As a rule of thumb, don't settle on the first idea. Consciously search further and seek for richer results. The list below offers some useful methods to help trigger, evaluate, and connect what designers like to call "creative spark":

⋅⋅ ask yourself questions

⋅⋅ make lists

⋅⋅ make mind maps—word associations

⋅⋅ create thumbnail sketches

⋅⋅ make studies and comparisons

⋅⋅ brainstorm

⋅⋅ collage and montage

⋅⋅ play

The last one on the list (play) is often overlooked as it seems childish or a waste of time. The reality is that play fosters creativity. Research is showing that marginal amounts of time spent doing things considered play actually promote more and deeper concentration along with creativity. Examples in business include game playing breaks (card games, ping pong, skateboarding, etc.) and adult coloring books. These type of diversions bring about more direct concentration that can lead to creativity.

The classroom can be a great place to experiment with creativity building activities. These are important when generating ideas or coming up with a useful concept. Students often get stuck on this step, as it requires thought, connections, and artistry all mixed together to form a unique outcome. The next step in the design process is design development. Without great ideas, students will default to the expected or cliché when they start to develop their design. It's important to emphasize the impact of ideation on design development and explore multiple methods to encourage this.

**Step 4: Design Development**

This is also where young designers want to call it good because they now have a picture of what their idea could be. They want to digitize it and be done. It's difficult for young designers to realize their work still requires refinement. It's easy to ignore a design's flaws, especially when it's starting to come into focus, but often it needs just a little more attention (see Figure 1). Emphasize the need for refinement and that refinement only makes their design more effective.

Once a designer has many thumbnail sketches to choose from, they can now start making design decisions. This is where all the previous steps in the design process again come into play. A designer must make choices based on their findings, not personal opinions, likes/ dislikes, or biases. This is difficult for beginning designers, especially classically trained in the arts, as they typically want to make choices based on their personal wants (or client's wants).

Design development requires constant refinement. Refinement comes through exploration and talking about the work with others. This critique can be formal or informal and can involve anyone. It's actually a good idea to ask someone who is not familiar with the design as this can bring about a fresh perspective on the work.

The typical design development process starts with thumbnail sketches. These visualized ideas are a great place to start. They must be analyzed for content and message using the learning previously completed. Teachers can help students analyze their thumbnails sketches. Choices concerning which thumbnails to refine must be made. Once thorough analysis has taken place, refinement can occur. This is often referred to as rough sketches (roughs).

The goal is to pretty much finalize the design so most, if not all, design decisions have been made before taking the design to the computer for implementation. This process also helps teach students that computer applications don't create design, designers do. The last step would be final compositions. This is a completed design that could be digitized.

Don't forget that analysis and refinement throughout lead to the final composition. In the end, the final comp shouldn't merely be a pretty picture but a unique and direct piece of communication that solves a

presented design problem.

**Step 5: Implementation**

The end is attained when the design problem has been solved and the project handed over to the client—in other words, implemented.