# TEACHING DISCIPLINARY LITERACY:
# Strategic Learning in Jewelry Design

**by Warren Feld, Jewelry Designer**

***Abstract:***

*Teaching literacy in jewelry design is a lot like teaching literacy in reading and writing. We want our students to comprehend. We want them to be able to be self-directed in organizing and implementing their basic tasks. We want them to be able to function in unfamiliar situations and respond when problems arise. We want them to make reasonable judgements on marrying aesthetics to functionality. We want them to develop an originality in their work. We want them to think like designers. And, we want a high level of automaticity in all this. The basic jewelry design curriculum does not accomplish this. There is an absence of strategy and strategic thinking. There is a weak commitment to jewelry design as a discipline, with its own vocabulary and ways of thinking through and doing and responding to different, often unfamiliar, situations as they arise. Without a commitment to embed the teaching of a disciplinary literacy within the standard curriculum, we will fail to impart that necessary learned awareness about fluency, flexibility, originality, and comprehension the designer needs to bring to the design process.*

## TEACHING DISCIPLINARY LITERACY

*She said it wasn't her job!*

This prominent jewelry instructor told me that it wasn't her job to teach anything beyond the basic steps for getting a project done. It was not her responsibility to share any insights, choices, compromises, fix-it solutions or design considerations she herself made when creating the original project – now taught as a class with a kit and a set of step-by-step instructions. If a student asked a specific question, she would gladly answer it. But otherwise, *it was not her job*.

This attitude is so prevalent in the standard jewelry making curriculum and education. Teachers stick very closely to the standard, basic curriculum. Facts, not ideas. Absolutes, not what-ifs. Step-by-steps, not creative thinking. Teachers rarely explain the implications for using one bead vs. another, or one stringing material vs. another, or one clasp vs. another, or one material vs. another, or one technique vs. another. They reluctantly dispense limited information, usually only when pressed, about how techniques might be varied. They rarely discuss the deeper meanings and potentialities underlying various problematic situations. They ignore the role and power of jewelry to influence human relations.

They have the student gloss over things as if, once seen and memorized, the student will automatically be able to make the right choices over and over, again and again. The teachers see themselves as easily transferring knowledge, skills and understandings to the student as if inoculating them as you would with a vaccine and a syringe. And the student becomes a star jewelry designer. Or not.

Teachers too often see jewelry making and design as a basic set of skills, easily adaptable and applicable to all kinds of jewelry making situations. They assume that the challenge of improving jewelry making skills would primarily be a function of making more and more jewelry.

This might be true for the novice student, but as the student moves from basic decoding to fluency, flexibility and originality in design, what was learned initially

becomes less generally useful. For example, the student may learn about basic color schemes, but not how to adapt these in different situations, or leverage these to achieve an even more resonant result, or be more deliberate and intentional when choosing colors and determining how to use them.

There is an absence of strategy and strategic thinking. There is a weak commitment to jewelry design as its own discipline, with its own vocabulary and ways of thinking through and doing and responding to different, often unfamiliar, situations as they arise.

Jewelry, in the standard, traditional design education model and curriculum, is understood as an object. We can speak about and learn about it as an object. This object is distanced from the creative spark that created it. It is divorced from desire. Apart from the wearer or the viewer. Ignorant of context or situation. There are no deeper explanations, no pointing out implications, no experimenting with situational contingencies, no debating synergistic or other external effects. The student is run through color theories, materials composition, step-by-step jewelry construction as if learning a basic lexicon is sufficient and enough.

This whole traditional process of standard jewelry designer education ignores the required *disciplinary literacy*. It assumes the student is creative, or not. It approaches jewelry design as if it were a subset of some other discipline, usually art, or more specifically, painting or sculpture. It ignores architectural requirements allowing jewelry to move, drape and flow as it is worn. It forgets that jewelry has personal, situational and social consequences. It pretends that jewelry design does not have any disciplinary requirements of its own. There are no specialized knowledges or ways of thinking unique to jewelry design alone.

It is weak at teaching the student, from a design perspective, how to decode design elements and how to combine them into compositions apart from basic art theory. It pretends there are no architectural issues underlying how jewelry functions. It recognizes most of the anatomy of a piece of jewelry – the strap, the bail, the yoke, the foundation base, the clasp assembly -- as supplemental to the *art* of the piece, as if these were to be understood, designed and crafted the same as a frame on a painting or a pedestal holding up a sculpture.

The standard curriculum assumes that the wearer and viewer have only a passive relationship to objects of jewelry. It ignores the fact that jewelry gains much of its appeal and power only as it is worn, and not as it sits on a mannequin or easel. It totally avoids confronting the fact that much of the power of jewelry results from how it instigates and sustains relationships – artist to self, artist to wearer, wearer to viewer, artist to seller, exhibitor to client, artist to collector, and so forth. And, it fails to impart that necessary learned awareness about fluency, flexibility, originality and comprehension the designer needs to bring to the design process.

*It's not their job*. It's not their job to assist the student's developing creative thinking or applying that creative spark towards better jewelry design.

*It's not their job*.

But, in fact, it is!

**What Is Disciplinary Literacy?**

*Disciplinary Literacy*[1] assumes there are real differences in the way professionals across fields participate and communicate. *Disciplinary literacy* encompasses those techniques and strategies used to teach designers to think like designers (or historians like historians or scientists like scientists, and so forth)[2]. Without this *disciplinary literacy*, students and professionals in a particular field would flounder and fail.

*Disciplinary literacy* refers to how the particular discipline creates, disseminates, and evaluates knowledge. Each discipline has its own way of looking at the world, defining things using a specific vocabulary, gathering information, specifying understandings, posing questions and problems, delineating solutions and using evidence to justify their ideas and conclusions.

An *artist* looking at jewelry, or a *craftsperson* looking at jewelry, for instance, would have different thought and interpretive processes than a *jewelry designer*

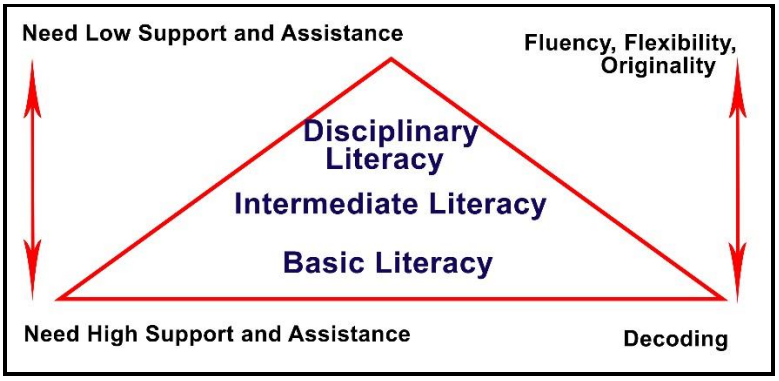
looking at jewelry. Jewelry, after all, is different than a painting or sculpture or simple functional object. Jewelry is only art as it is worn. It must satisfy the requirements of both aesthetics and functionality. It exists in a 3-dimensional space. It is worn on the body. It establishes special relationships between designer and wearer, wearer and viewer, designer and seller, designer and collector. It encapsulates situational and socio-cultural meanings. To evaluate whether a piece of jewelry is finished and successful requires a different thought process than art or craft alone would provide.

There are key disciplinary differences in how a jewelry designer…

- Chooses and evaluates evidence
- Relates evidence to a perspective
- Gains understanding
- Visualizes things
- Manipulates things
- Creates a truth and achieves an error- free solution
- Introduces things publicly
- Anticipates the shared understandings of various audiences
- Reflects on experience

Training in jewelry design should teach students the unique challenges they face within their discipline as they think through design and create jewelry. At each increment within the jewelry design process, they need to think like a designer. Not as an artist, nor like a craftsperson. As a designer. Finding evidence whether a piece is finished and successful. Linking causes to effects. Understanding how inspiration resulted in a finished design. Developing knowledge, understandings and skills to the level where they can transfer these to others. Generating a large number of ideas. Making inferences about the implications of any one choice. Producing things which are original. Responding to problematic or unanticipated situations. Finding new ways to adapt existing ideas to new conditions. Anticipating shared understandings about how their work will be evaluated, assessed and judged. Knowing when something is parsimonious and finished, and knowing when something resonates and is successful.

## Types of Literacy




There are three different types of literacy – *Basic*, *Intermediate*, and *Disciplinary*. The standard jewelry design curriculum typically focuses on Basic literacy, with some nod toward Intermediate. These are rooted in rationality, socially-sanctioned logic, and universal understandings.

Disciplinary literacy is usually ignored, but it should be incorporated and integrated within Basic and Intermediate literacy instruction. Disciplinary literacy adds a level of reason, where the individual artist can show his or her hand within the creation, and marry, or even replace, objective with subjective design choices and considerations. It dwells a lot on management and control issues underlying design. It anticipates dilemmas as these might arise from and further influence communication, interaction, and human relationships.

### *Basic Literacy*

Basic literacy refers to the degree the student learns knowledge of high frequency concepts that underlie virtually all jewelry design and jewelry making tasks. These concepts are typically universally recognized and understood by artist and client alike. Here jewelry is understood as an *object*. An object has literal characteristics which the student can identify and list.

The student demonstrates this basic literacy by an ability to *decode*. The student can decode things like color use, rules of composition, materials selection, technique implementation and the like. The student picks up the basic words and definitions, links the vocabulary to relevant objects, and can identify their presence and use within any piece of jewelry. Each element and principle of design can be graphically represented, and the student begins to make connections between word and graphic. The student begins to recognize which design elements can stand alone, and which are dependent on the presence of other elements. The student can identify harmonious and balanced clusters of these design elements within compositions. The goal is an automaticity in *decoding*.

### *Intermediate Literacy*

Here the student develops the knowledge to make more complex jewelry forms and designs. There is more comprehension. The student recognizes that the various design elements and principles have a range of variations in meaning and expression. In a similar way, the student begins to recognize that clusters of design elements and principles can also show variations in meaning and expression.

The student learns about different materials and what they can and cannot be used to achieve. Materials have names, places of origins, stories about how they get from one place to another, processes.

The student is introduced to variations in techniques and technologies. There is more than one way to accomplish things. There are more things that can be created using familiar techniques.

The student learns to problem-solve with various “fix-it” procedures, like re-doing, changing tools, requesting help, looking things up, drawing analogies.

The student learns to process-plan. S/he begins to relate inspirations, aspirations and intentions to more critically evaluate their choices or the choices of others. Students are more able to stick with things and maintain attention to a more extended design process.

The student begins to learn how to design for an audience. This might be a client, or a purchaser, or an exhibitor, or a collector. This begins the developing understanding of how to meld personal held preferences with those of others.

Students monitor and reflect on their own comprehension. The goal is an automaticity in *fluency*.[4] Here jewelry is understood as *content*. As content, the jewelry as designed conveys meanings and expressions which the student can derive, and typically, are universally understood. The jewelry and its compositional design is still, however, mostly viewed objectively, as if sitting on an easel, not as it is worn.

### *Disciplinary Literacy*

This involves a way of thinking and doing specific to the discipline. The student learns specialized literacy skills relevant to jewelry design as the jewelry is introduced and worn publicly. The student learns how *parsimony* and *resonance* as outcomes expressed in design differ from *harmony* and *variety* as expressed in art.

The student learns to anticipate *shared understandings*[5] and the role of *desire* among the many audiences the student works with, works in, and relates to. These include clients, sellers, exhibitors, collectors, wearers, viewers, and the artist him- or herself.

Much of the design process takes on the qualities of *backwards design*.[7] The designer begins the process by articulating the essential shared understandings and desires against which their work will be evaluated and judged. The designer starts with questions about assessment, and then allows this understanding to influence all other choices going forward."

The student has an ability to conceptualize and explain what jewelry means, how it is more an *action* than an *object*, and how this meaning emerges dialectically, as the jewelry is introduced publicly, worn, shared and displayed.

The student learns to recognize the dynamics of *coherency, decoherency, and contagion*. The artist's coherent choices about design become contagious,

attracting someone to want to touch the piece, wear it, or buy it. To the extent others share the artist's ideas about coherence, the more likely the work will be judged finished and successful. Jewelry becomes more than an expression of meanings, but rather, it becomes an expression of meanings within context.

The process of coherence continues with the wearer, who introduces the piece into a larger context. There is more contagion. When efforts at design are less than successful, we begin to have decoherence. Decoherence may come in the forms of bad feedback, inappropriate feedback, less than satisfying feedback, or no feedback at all. The wearer may not get that sense of self s/he seeks. S/he may feel less motivated to wear the piece, or may store it, or give it away.

The student can comfortably and flexibly respond in unfamiliar situations or to new materials, techniques, technologies and requests, and take on larger challenges arising from higher levels of ambiguity, abstraction, subtlety, and contradiction. The student can find new ways to adapt existing ideas to new situations and requirements.

The student learns how to inspire *to*. That is, the student learns how to translate an inspiration into a design in such a way that the wearer and viewer are inspired *to,* not merely inspired *by.* They don't simply react emotionally by saying the piece is "*beautiful*." The piece resonates for them. They react by saying they "*want to wear*" it or "*want to buy it*" or "*want to make something like it*". They come to feel and see and sense the artist's hand.

The student learns how to manage a very involved, and often very long and time-consuming process of jewelry design, beginning with inspiration, then aspiration, then execution, and presenting the piece publicly for exhibit or sale. The student also picks up the skills and attitudes necessary to stick with what can be a very long process.

The goal is an automaticity in *design flexibility and originality*. Jewelry is understood as both *intent* and *dialectic communication*. Here the student can visualize, anticipate, and respond to all the things which might happen when the jewelry is introduced publicly where its value and worth is judged and determined.

**Literacy in Jewelry Design**

Teaching literacy in jewelry design is a lot like teaching literacy in reading and writing. We want our students to comprehend. We want them to be able to be self-directed in organizing and implementing their basic tasks. We want them to be able to function in unfamiliar situations and respond when problems arise. We want them to make reasonable judgements on marrying aesthetics to functionality. We want them to develop an originality in their work. We want them to think like designers. And, we want a high level of automaticity in all this.

Using literacy techniques, goals and concepts, we teach students to *read*, *write*, *express* and *express in context* when understanding jewelry and its design.

We teach the student to "*read*" jewelry. That means learning a basic vocabulary, as well as the various design elements, and how these design elements can either function on their own, or be arranged and clustered together within a design. They learn to describe the piece, including the name of the artist and the name of the piece, the style of the piece, when the piece was created, the materials used, the construction technique, and the use of design elements such as point, line, shape, form, space, texture, color, value and pattern.

We teach the student to "*write*" jewelry. The student constructs (*or anticipates how a particular designer has constructed*), then reflects, upon the choices made. That means learning various principles of composition, construction and manipulation. These affect arrangements as well as the juxtaposition and clustering of design elements, materials and techniques. They learn how the placement and organization of elements, materials and techniques results in things like harmony, balance, contrast, variety, unity, emphasis, movement, depth, rhythm, focus, and proportions.

We further teach the student to be more "*expressive*" with jewelry. That means learning how jewelry signifies various meanings and evokes emotions. They learn to question and ponder through answers to questions like What did they think the designer was trying to say? Or What kind of reaction(s) would you expect to this piece of jewelry? What feelings does the jewelry convey? In what context would wearing the piece be especially relevant and appropriate? Are

there things in the piece which might be symbolic or otherwise signify things which transcend the piece of jewelry itself?

Last, we teach the student to be "*expressive within a context*". That means understanding how jewelry functions communicatively, socially and psychologically within any context or situation. That means learning how various artists and various audiences use jewelry as a means of self-identity and self-esteem, and how the interaction of the artist with various audiences affects the success (or failure) of their continued relationship oriented around (and perhaps anchored to) the jewelry. It means delving into the how and why the jewelry would be valued or worth determined or evaluative judgements made, and, furthermore, how such judgements and determinations might be contingent in their expression. It also means understanding what jewelry is as it is worn, and the required artistic, functional and design choices and compromises which must be made, if the piece of jewelry is to be judged finished and successful.

Literacy in jewelry design includes such things as:

- Learning art and design vocabulary, including design elements, principles of composition, manipulation and construction, and basic vocabulary words
- Developing an understanding of a range of materials, how these are selected, and the possibilities for their use, or mis-use, in any one project
- Developing a range of technical and technological knowledges and skills, how to vary them, and when to apply them and when not to apply them
- Translating inspirations into aspirations into specific designs and execution
- Choosing media, technique and strategy to convey concepts, forms and themes
- Organizing, managing and controlling a jewelry design process, from start to finish, especially over an extended period of time
- Deciphering the graphic representation of ideas
- Communicating these ideas through critique and analysis of jewelry genres, styles, media use, and artist/designer intent
- Reconciling tensions and conflicts between appeal and functionality, especially as the jewelry is worn
- Introducing their work to others, coordinating artist goals with marketing goals, and exhibiting or selling publicly

- Working with various client audiences, and translating, influencing or mitigating their understandings and desires about jewelry with those of the designer, whether a piece should be judged as finished and successful
- Figuring out "fix-it" strategies where things do not turn out as desired, are uncertain, or things go wrong
- Reflecting on one's own thought processes and choices, increasing that metacognitive awareness of what things lead to better design
- Developing a personal style and originality and strategies for how these get reflected in the artist's finished compositions

**Why Do We Need More Fluent Designers?**

The standard curriculum and approach for teaching the making and designing of jewelry is commonly viewed as teaching *basic literacy*. This includes teaching a basic set of skills, widely adaptable and applicable to all kinds of jewelry making situations. These basic skills are highly generalizable and adaptable.

In the standard curriculum, it is assumed that the challenge of improving jewelry making skills is a function of making more and more jewelry. The designer, thus over time, would automatically evolve into a better designer with better, more satisfying, more appealing designs.

In some sense here, these ideas about teaching basic literacy are partly right. All students need a basic vocabulary. All jewelry designers need these basic perceptual and decoding skills which are very connected to their early progress in making jewelry. These skills are entailed in all jewelry designs and crafting tasks.

However, as the designer moves from basic decoding to fluency, flexibility and originality, the basics which were learned become less generally useful. For example, the designer may learn basic color schemes, but not learn how to adapt these in different situations, with components which do not easily match colors on the color wheel, and which present differently when used in combination, or under different lighting or contextual situations.

Our standard teaching curriculum, if that is all we teach, becomes less than useful. We rely on a bad assumption: *If we only provide adequate basic skills, so we assume, from that point forward, the student with adequate background knowledge will be able to design and make anything successfully.* When the emphasis is on giving out more information and instructions rather than on discussion and challenge, students have little chance to learn to think as a fluent jewelry designer.

But this also begs the question: Why do we need more fluent designers?

Isn't turning out basic technicians sufficient? Aren't there enough designers meeting everyone's jewelry needs? Even if there are not, will there be enough clients and customers who would want to see and purchase better, more insightful, jewelry designs?

My answer, obviously, is Yes! We need more fluent designers who have been taught and are fluent in a disciplinary literacy. That is because there are many things going on around us which increase the need for all this.

These include,

- The need to adapt to more global competition, better ride the ever-faster waves and changes of fashion and style trends, and more strategically confront and challenge global "sameness" in design
- The need to adapt, and adapt more quickly, to changes in technologies and materials
- Automaticity in how designers more easily and successfully meet their various client needs – self, wearer, viewer, seller, exhibiter, and collector
- Creating a clearer, publicly sanctioned professionalization of the jewelry design discipline
- Expanding the connectedness and networking of jewelry designers in today's world
- Increasing opportunities for more attention, visibility, communication, support, demand and income
- Encouraging individual student pursuits, diversity and experimentation

## How Should Disciplinary Literacy Be Incorporated Into Jewelry Design Education?

Jewelry Design is rarely taught at this disciplinary level.

There is a need to identify what an advanced literacy curriculum in jewelry design might be, how it differs from that in art or craft, and how best to implement it.

We need to move away from the ideas of "*teacher of art"* or "*teacher of craft*", and begin to understand the role of teacher as "*teacher of disciplinary literacy in jewelry design*". How can we best prepare all jewelry design students for the thinking, the making, and the critically reflecting upon required by more intermediate and advanced work? How can we prepare students to be independent thinkers? Self-starters? What program of authentic learning more closely reflects what a jewelry designer does in the field?

A disciplinary literacy program should not, however, be understood as a separate curriculum. It is not something supplemental. Rather, disciplinary literacy should be a part of and embedded within all existing instruction, from basic to advanced. Disciplinary literacy should support the standard curriculum with literacy tools uniquely tailored to jewelry design.

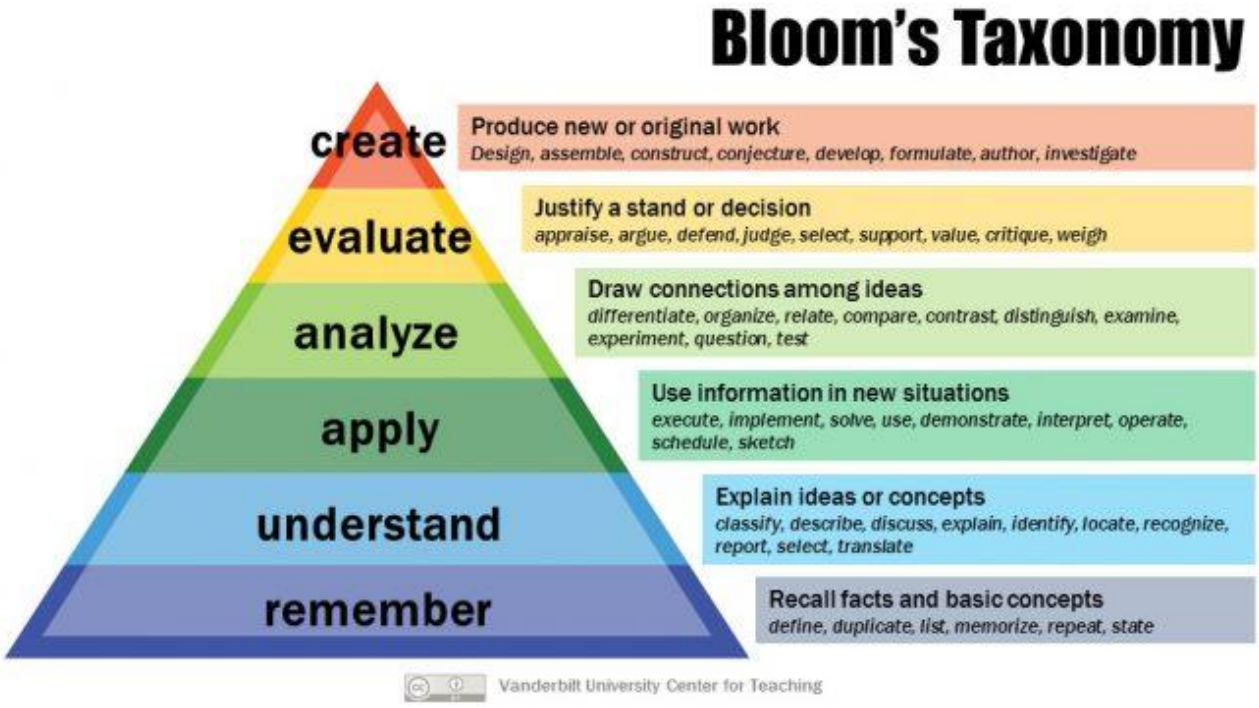
Some ideas for integration…

1. Build more depth into what is already taught and increase student engagement
2. Leverage a wide range of resources – popular articles and images, academic articles, interviews, gallery exhibits and their presentation and marketing materials, online videos, bead and jewelry making magazines
3. Task students with communicating what they read, viewed, experienced and attempted to do, and elaborate more on their understandings
4. Ask questions which encourage students to think like jewelry designers
5. Model design strategies and fix-it strategies
6. Allow students to do more problem-solving and experimentation

| *Students should be encouraged to…* | | |
|---|---|---|
| Experiment | Problem solve | Comment |
| Perform | Read | Communicate |
| Demonstrate | Write | Ask questions |
| Discuss findings | Debate options | Seek evidence to inform their work |
| Anticipate the understandings of others | Compare their work to others | Gather information |
| Monitor their thinking | Challenge assumptions | Detect bias |
| Deal with ambiguity | Go beyond the ordinary and obvious | Expose their ideas and works to others |

**BLOOM'S TAXONOMY**

If you are not already familiar with Bloom's Taxonomy (1956)[6], and its model's evolution and various adaptations in different disciplines, I urge you to do so. This is a particularly useful tool when teaching higher level thinking and creative problem solving. Are your lesson plans, assignments, projects, questioning strategies touching on each progressive level in Bloom's Taxonomy? The Taxonomy helps you evaluate the level of rigor in your instruction and the degree you are presenting your students and involving them in learning higher level thinking skills in a subject or discipline.




*In jewelry design, we might adapt Bloom's Taxonomy like this…*

***Creating:*** designing, constructing, developing, producing, manipulating, translating inspiration into aspiration and aspiration into a design

***Evaluating:*** judging, evaluating, appraising, defending, challenging, showing connections, linking design choices to emotional and resonant outcomes or sense that piece feels finished

***Analyzing:*** comparing, contrasting, experimenting, testing, questioning, examining, what happens when analyses with different materials, techniques, technologies, and construction and composition strategies

***Applying:*** dramatizing, sketching, using, solving, illustrating, writing, demonstrating, instructing, diagramming, arranging, using different techniques and technologies in making jewelry

***Understanding:*** classifying, describing, discussing, explaining, paraphrasing, locating, translating, decoding

***Remembering:*** memorizing, listing, recalling, repeating, reproducing, copying, building up a specialized vocabulary

As teachers of jewelry design, we want to build up our students' design knowledge and skills through literacy – that is, disciplinary thinking. This means such things as,

1. Building prior knowledge – showing connections between what they are expected to do now with what they have done or experienced before
2. Building a specialized vocabulary and how to use this in context
3. Learning, applying, varying and experimenting with different materials, techniques and technologies
4. Practicing translating inspirations into aspirations
5. Learning to deconstruct complex visual representations of ideas which each piece of jewelry encapsulates
6. Using knowledge of artistic design elements and genres to identify main and subordinate ideas expressed within any piece
7. Articulating what the graphic representations mean and how they are used within a piece of jewelry, and how this supports the artist's intent
8. Posing disciplinary relevant questions
9. Critically comparing one piece of jewelry to others
10. Using reasoning with jewelry design, such as searching for alternatives, or selecting evidence to evaluate claims of finish and success

11. Enabling students to be metacognitive – that is, become aware of the ways in which they think, learn, create and problem-solve, and aware of how they overcome those times of creativity block
12. Anticipating shared understandings about what it means for a piece to be judged as finished and successful
13. Bridging creative learning to the creative marketplace

**What Are Some Specific Useful Techniques?**

We should teach students to design jewelry, not draw it, not sculpt it, not craft it. And that should be our primary goal as teachers: *developing our students' Fluency, Flexibility and Originality with design*.

This involves:

(1) a *developmental approach* and organization of knowledges, skills and understandings to be taught, usually taught as sets of interrelated, integrated skill sets, rather than one skill at a time
(2) a *multi-method teaching plan and program* with a shared goal of teaching disciplinary literacy,
(3) a *rubric specifying degrees of accomplishment* and the criteria of evaluation – all shared with the student
(4) a *willingness to adjust teaching styles* because different students rely on different senses and strategies for learning

*I am going to touch on each of these below, but you will find numerous articles in print and online which go into much more detail.*

## Developmental Approach

Think of jewelry design as a large matrix. The rows are the various knowledges, skills and understandings students need to master. The columns represent ordered stages of learning, indicating what needs to be learned first, second and third, etc.

In the example below, learning objectives were specified for an introductory bead stringing class. The learning objectives were characterized by skill level needed. These objectives were clustered together and taught as a set. The student could identify what things were learned at what level, and what things (and at what skill levels) still needed to be learned in another class. Emphasis was placed during the instruction to visibly point out to the student how each learning objective was interrelated to the others.

At the conclusion of the class, students were asked to self-evaluate what they learned about each learning objective, and what else they would like to know or learn about it. What were their take-aways, and what would they like to do next.

| **EXAMPLE MATRIX**<br>LEARNING OBJECTIVES | **BEAD STRINGING**<br>**Crimping** | | |
|---|---|---|---|
| | BEGINNER | INTERMEDIATE | ADVANCED |
| **TECHNICAL MECHANICS** | | | |
| 1. Holding Your Piece To Work It | BEGINNER | | |
| 2. Reading Simple Pattern, Figure and/or Graph; Diagramming | BEGINNER | | |
| 3. Selecting Stringing Materials | BEGINNER | | |
| 4. Selecting Clasps and other Jewelry Findings | BEGINNER | | |
| 5. Selecting Beads and other Components | BEGINNER | | |
| 6. Laying Out Your Piece | BEGINNER | | |
| 7. Identifying Areas of Potential Weakness, and Strategies for Dealing With These | BEGINNER | | |
| 8. Selecting and Using Adhesives | | | |
| 9. Use of Tools and Equipment | BEGINNER | | |

| | | | |
|---|---|---|---|
| 10. Determining Measurements and Ease, including Width and Length of a Piece, Especially In Relationship To Bead Sizes | BEGINNER | | |
| 11. Finishing Off Threads, Cable Wires or Other Stringing Materials in Piece or Adding Threads/Cable Wires/Stringing Materials | BEGINNER | | |
| **UNDERSTANDING CRAFT BASIS OF STRINGING METHODS** | | | |
| 1. Starting the Piece | BEGINNER | | |
| 2. Implementing the Basic Method | BEGINNER | | |
| 3. Finishing Off Your Piece With A Clasp Assembly | BEGINNER | | |
| 4. Managing String/Cord/Thread/Wire Tension | BEGINNER | | |
| 5. Crimping | BEGINNER | | |
| 6. Making Simple and Coiled Loops Using Hard Wire | | | |
| 7. Making and Using Connectors; Segmenting; Directional Control | | | |
| 8. Adding Dangles and Embellishments | | | |
| 9. Making Multi-Strands Piece | | | |
| 10. Making Twist-Strands Piece | | | |
| **UNDERSTANDING ART & DESIGN BASIS OF BEAD STRINGING** | | | |
| 1. Learning Implications When Choosing Different Sizes/Shapes of Beads, or Using Different Stringing Materials | BEGINNER | | |
| 2. Learning Implications When Choosing Different Kinds of Clasps, or Using Different Jewelry Findings and Components | BEGINNER | | |
| 3. Understanding Relationship of this Bead Stringing Method in Comparison to Other Types of Bead Stringing Methods | BEGINNER | | |
| 4. Creating Support Systems Within Your Piece In Anticipation of Effects of Movement, and other Architectural considerations | BEGINNER | | |
| 5. Understanding How Bead Asserts Its Need For Color When Stringing Beads | | | |
| 6. Creating Your Own Design with This Bead Stringing Method, in Reference to Jewelry Design Principles of Composition | | | |
| 7. Creating Shapes, Components and Forms To Use With This Bead Stringing Method, and Establishing Themes | | | |
| **BECOMING BEAD STRINGING ARTIST & DESIGNER** | | | |
| 1. Developing A Personal Style | | | |
| 2. Valuing or Pricing Your Work | | | |
| 3. Teaching Others Bead Stringing Methods | | | |
| 4. Promoting Yourself and Your Work | | | |

When taking a developmental approach, you teach groups of integrated knowledges, skills and understandings. You teach technical mechanics concurrently with art and craft history, and concurrently with discipline-specific literacy. You introduce ideas of the things which come into play during the design process, and when the jewelry is introduced publicly. We want our students to be able to think strategically and critically, deal with unfamiliar or problematic situations, and be self directed.

In the Developmental Approach, you start with a cluster of a core set of skills. You show, demonstrate, and have the student apply, communicate about, and experiment with how these skills inter-relate in jewelry design.

You then introduce another cluster of knowledges, skills, and understandings. As with the core, you show, demonstrate, and have the student apply, communicate about, and experiment with how all these inter-relate. Then you repeat all this by teaching how this second cluster of things inter-relates to the core.

And again, you introduce a third cluster, and link to the second, then link to the core. And so forth.

Jewelry design covers a wide range of factors beyond the physical and structural aspects of jewelry. It incorporates aesthetics, structure, value systems, philosophies, sustainability, technologies, and their integrations. Thus the jewelry designer has to know some things about art, and some things about architecture, and about physical mechanics, and anthropology and psychology and sociology, and engineering, and be a bit of a party planner. Here, this developmental approach serves them well. It helps the student learn the inter-connectedness and inter-dependencies of them all, in a gradual, developmental, building-up-to-something sort of way.

## Multi-Method Teaching Plan

Students need to come at jewelry design problems from different angles. Within each lesson, teachers need to gradually relinquish control over the learning process to the student. Using a single teaching method, such as having students keep rehearsing a series of steps, or relying on a single textbook won't cut it. We also need to infuse opportunities for reflection within virtually every activity.

Some of things I find especially useful include,
(a) Guided Thinking
(b) Thinking Routines
(c) Developing an effective questioning strategy
(d) Application, practice and experimentation

**One approach is called "*Guided Thinking*".** Here, within each lesson, the teacher begins with controlling the information and how it is presented. This involves some lecture, some demonstration, some modelling. The teacher never insists that there is only one way to accomplish any task. Over the course of the lesson, the teacher gradually relinquishes more and more control to the student for directing the learning activity.

For example, we might encourage students to construct and feel and touch similar pieces made with different materials, beads or techniques, and have them tell us what differences they perceive. We should guide them in thinking through the implications for these differences. When teaching a stitch, I typically have students make samples using two different beads – say a cylinder bead and a seed bead, and try two different stringing materials, say Fireline and Nymo threads.

We also should guide them in thinking through all the management and control issues they were experiencing. Very often beginning students have difficulty finding a comfortable way to hold their pieces while working them. I let them work a little on a project, stop them, and then ask them to explain what was difficult and what was not. I suggest some alternative solutions – but do not impose a one-best-way – and have them try these solutions. Then we discuss them, fine-tuning our thinking.

After some trial-and-error and experimentation, I begin to introduce some goals. They had identified some management and control issues, and had some observations about what they were trying to do. I link these developing discussions to these goals. These are issues because…. And I let them fill in the blanks. What do they think needs to be happening here?

I begin to put words to feelings. I guide them in articulating some concrete goals. We want good thread tension management for a bead woven piece. We want the beads to lay correctly within the piece. We want the piece to feel fluid. We want an easier way to work the piece and hold it, so it doesn't feel so awkward.

We return to Guided Thinking. I summarize all the choices we have made in order to begin the project: type of bead, size of bead, shape of bead, type of thread, strategy for holding the piece while working it, strategy for bringing the new bead to the work in progress. I ask the students what ideas are emerging in their minds about how to bring all they have done so far together.

At this point, I usually would interject a *Mini-Lesson*, where I demonstrate, given the discussions, the smarter way to begin and execute the Project. In the Mini-Lesson, I "*Think Aloud*" so that my students can see and hear how I am approaching our Project.

And then I continue with Guided Thinking as we work through various sections of the Project towards completion. Whatever we do – select materials, select and apply techniques, set goals, anticipate how we want the Project to end up – is shown as resulting from a managed process of thinking through our design.
In "Guided Thinking", I would prompt my students to try to explain what is/is not going on, what is/is not working as desired, where the student hopes to end up, what seems to be enhancing/impeding getting there.

As the lesson proceeds, I reduce the amount of direction and information I provide. I relinquish this responsibility gradually to the student. The student is asked to try out a technique or strategy, then try an alternative. The student is asked to communicate the differences, their preferences, their explanations why, and what they might try to do next.

Experimentation with evaluation is encouraged. The student is asked to develop a more concrete jewelry project, and explain the various choices involved. What-if and what-next questions are posed. The student is allowed to follow a pathway that might be not as efficient, or even a dead-end. More discussion about what occurs begins. If the student asks me *what would happen if*, I tell them to try it and see, and then discuss their experience and observations.

Towards the end of the lesson, I prompt the student to communicate what they have done and what they have discovered. I ask them, in various ways, what take-aways they have from the class, or how they think they might apply what they learned in the future. I suggest the "what next." I identify different options and pathways they might pursue next. Metacognition and reflection are important skills for any jewelry designer to have.

And we're ready for the next lesson.

**Another approach is called "Thinking Routines".** With guidance, demonstration and repetition, it is my hope that these experiences become a series of *Thinking Routines* my students resort to when starting a new project. As students develop and internalize more *Thinking Routines*, they develop greater *Fluency* with design.

Thinking Routines are different strategies for structuring a set of steps which lead a person's thinking. "*They are the patterns by which we operate and go about the job of learning and working together in a classroom environment. A routine can be thought of as any procedure, process, or pattern of action that is used repeatedly to manage and facilitate the accomplishment of specific goals or tasks. Classrooms have routines that serve to manage student behavior and interactions, to organizing the work of learning, and to establish rules for communication and discourse. Classrooms also have routines that structure the way students go about the process of learning. These learning routines can be simple structures, such as reading from a text and answering the questions at the end of the chapter, or they may be designed to promote students' thinking, such as asking students what they know, what they want to know, and what they have learned as part of a unit of study.*"[3]

Some examples:

1. What Do You See…..What Do You Think…..What Do You Know
2. Think – Pair – Share
3. What Makes You Think That?
4. I used to think… Now I think…
5. Connect – Extend – Challenge
6. True for Who?
7. Look – Score -- Explain

We use Thinking Routines which mirror the kinds of thinking and analytic practices common to the discipline of jewelry design. We encourage students to reflect on what they were thinking. We ask how they were anticipating getting to the point where they would call their piece finished. We ask them whether there was some kind of order or routine to their process. We ask them what criteria they would use to know that they were successful. We ask them to anticipate what others would think, and whether others would agree that the piece was finished and successful.

These are some of the kinds of situations we want our students to develop thinking routines for:

a. Exploration of experience for a purpose; translating inspiration into designs

b. Selecting materials and techniques in recognition of how they might enhance or impede design goals.

c. Search for meaning as conveyed by various design elements alone, clustered together, or arranged within a composition

d. Formulating how to deal with unfamiliar tasks or roadblocks preventing the finishing of a task

e. Completing well practiced technical tasks

f. Varying well practiced technical tasks

g. Contingent thinking and fix-it strategies

h. Incorporating the shared understandings of others into the thinking about what

constitutes a finished and successful design
i. Introducing jewelry publicly, such as for exhibit or for sale

**Another approach I want to point out is having an Effective Questioning Strategy.** Students need to be engaged in thinking and talking about jewelry and its design and its powers when worn. The questions we ask them, and the way we phrase them, can have a big impact on this.

Questions should lead the student towards greater understanding. Ask questions which encourage students to think like jewelry designers and understand jewelry design as a series of problems to be solved.

- Decode piece of jewelry; measure jewelry's impact; relate to artist intent
- Correlation or causation when explaining and identifying design issues
- What q's weren't answered; ability to assess the information at hand relevant to the design problem
- Do the results solve the design problem and support the conclusions
- Other explanations for the results
- Given an artist intent, sketch a jewelry design
- Given a piece of jewelry to be sold, develop a sales pitch

Some pointers:

1. Avoid questions with Yes/No answers
2. Avoid questions which contain the answers, such as "don't you think the designer did a good job?"
3. Avoid questions which seem to have a particular answer in mind, such as "how did the designer use materials to represent the upper class?"
4. Do elicit questions with multiple answers.
5. Do elicit questions which incorporate each of our senses, not just the visual, such as "what sounds do you think this piece of jewelry would make?"
6. Do elicit questions of varying levels of difficulty and rigor.

7. Do elicit personal interpretations of ideas and feelings, coupled with questions about what evidence the student used to come to these conclusions.
8. Do elicit questions about how to value or judge worth, and how such values might differ among different audiences, and why.
9. Do elicit questions about contingent situations --- if such and such a variable or piece of information changed, how would our thoughts, feelings and understandings change?
10. Do elicit follow-up questions.
11. If no one responds immediately to a question, pause and wait about 5 seconds.
12. Encourage conversation among all participants in the room.
13. Encourage students to generate their own questions.

When looking at a piece of jewelry, students might be asked (*in reference to Bloom's Taxonomy*)[6] to:

**DESCRIBE IT:** What do you see? What else do you see? If you were describing this to another person who has not seen it, what would you say?

**RELATE IT:** What things do you recognize? Do you feel connected to the piece in any way? Would you buy it? Would you wear it? How does this piece of jewelry relate (to any other piece of jewelry)? What interests you the most in this piece? If you passed this piece of jewelry onto your children or grandchildren, do you think they would relate to it in the same way you did; explain? Would this jewelry be successful or appropriate in any culture or situation; explain with examples?

**ANALYZE IT:** What can you tell me about the design elements used in this piece of jewelry? About the arrangement and composition? About its construction? What type of person would wear this piece and why? What is the most critical part of this piece of jewelry which leads to its success (or failure)? What questions would you want to ask the designer? What internal or external forces will positively or negatively impact the piece? What about the piece creates

good support, enabling it to move, drape and flow? What about the piece creates good structure, enable it to keep its shape and integrity when worn?

**INTERPRET IT:** What name would you give this piece of jewelry, and why did you pick this name? What sounds do you think this piece of jewelry would make? What role(s) would this piece of jewelry serve for the wearer, and why? Why do you think the designer made this piece of jewelry, and made it this way?

**EVALUATE IT:** Does this piece seem finished; explain? Would you see this piece as successful; explain? Would this piece evoke an emotion, and how? Does this piece resonate, and how? Does this piece feel parsimonious – that is, if you added (or subtracted) one more thing, would it make the piece seem less finished or successful? How has the artist selected and applied materials, techniques and technologies, and could better choices have been made and why? What do you think is worth remembering about this piece? What do you think other people would say about this piece? If you were selling this piece, what would be the selling points; explain? In what ways might this piece have value and worth for various audiences? Anticipating the artist's purpose and intent, to what degree was the artist successful? What would make the piece better, and what would make it worse?

**RE-CREATE IT:** If you were making a similar piece, what would you do similarly and what would you do differently; explain why? If you wanted to re-create something similar, but for a different audience or context than you thought it was originally made, what kinds of things might you do; explain? What would you change about the piece to make it more appealing to you? What would you change about the piece to change the "sound" it seems to make? How could we make the piece more Traditional? Or Avant Garde? How could you build in more or better support or structure? How might your own work be influenced (or not) by this piece? Have you learned something from this piece that would influence you to do something differently in your own work in the future? If a particular color / material / finding had not been available, what could you substitute instead?

**One last approach is encouraging lots of opportunities for Application, Practice, and Experimentation**.

Jewelry design students need time to create various understandings, correct or not, and to put these understandings to the test. They should be encouraged to imagine, experiment, play, practice and apply their emerging knowledges and skills. We need to ween them off the standard design-by-number curriculum. We should provide opportunities for students to develop the skills to work intuitively and practically in context.

Towards this end, we should

a. Provide space/time for artistic creativity and discovery
b. Provide opportunities to discuss, reflect and critique about the design, management and control issues which arose
c. Have students actively anticipate, through discussion and/or writing, what kinds of reactions various audiences might have to various design and composition choices
d. Ask students to compare and contrast various designs or design approaches, including what is appealing (or not) and wearable (or not) and representative of an artist's ideas and intent (or not)
e. Students should be given various pieces to decode; that is, breaking them down into their essential design elements and compositional arrangements
f. Students should be asked to reflect upon how the jewelry would hold up or be evaluated in different situations or cultures
g. Students can be given different open-ended design tasks, such as creating a piece of jewelry that celebrates the student; or having students write "recipes" for the ingredients in a piece of jewelry and give these to other students to see what they come up with; or creating jewelry with social or political content; of develop a marketing and promotion strategy with a sales pitch for a particular piece of jewelry; or write a poem or short story about a piece of jewelry

**A Rubric**

**RUBRIC[8] AS THINKING ROUTINE**

Students who plan on becoming jewelry designers need a simple map to all these ideas about literacy and fluency – something they can easily review and determine where their strengths and weaknesses are, what kinds of courses they need to take, what kinds of learning goals they need to set in order to grow within the profession and gain proficiency and fluency in design over time. One type of map is a *rubric*.

A rubric is a table of criteria used to rate and rank *understanding* and/or *performance*. A rubric answers the question by what criteria *understanding* and/or *performance* should be judged. The rubric provides insightful clues for the kinds of evidence we need to make such assessments. The rubric helps us distinguish degrees of *understanding* and/or *performance*, from the sophisticated to the naïve. The rubric encapsulates what an authentic jewelry design education and performance would look like.

Here is one rubric we provide students to give them insight to the educational curriculum we offer in our program. We divide the program into Skill Levels, from *preparation* to *beginner*, *intermediate*, *advanced*, and *integrated*. We identify how jewelry is defined and conceptualized at each level. We specify the kinds of learning goals at each level – that is, what the students needs to have mastered before continuing on to the next level. We list the classes a student could take at each Skill Level.

| **BE DAZZLED BEADS: EDUCATIONAL RUBRIC: *Learning How To Think Like A Jewelry Designer*** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Learning Stage** | **Jewelry Defined As…** | **I know I've mastered this level when…** | **BEAD WEAVING CLASSES** *Using needle and thread with seed beads to make things which approximate cloth* | **BEAD STRINGING and HAND KNOTTING CLASSES** *Putting beads on stringing material to make necklaces and bracelets* | **WIRE WORKING and WIRE WEAVING CLASSES** *Incorporating wires and sheet metal in jewelry by making shapes, structural supports, or patterns and textures* | **BUSINESS OF CRAFT CLASSES** *Bridging creative learning to the creative marketplace* | **JEWELRY DESIGN CLASSES** *Using creative skills to conceptualize, construct and present jewelry pieces* |
| **PREPARA-TION** | | I have assembled basic supplies and tools, and set up a workspace | **ORIENTATION TO BEADS & JEWELRY FINDINGS CLASS** *(**Required First Class)* *Here we teach you about the choices you will need to make when buying or using different kinds of beads, metals, findings, stringing materials, tools, and various jewelry making techniques. Focus on quality issues, contingencies and implications of making one choice over another* | | | | |
| **BEGINNER** *(Decoding)* | *Object* – defined apart from the maker, wearer and viewer, and apart from any inspiration or aspiration | I am familiar with the range of materials, beads, jewelry findings, components, stringing materials, tools and types of techniques used in jewelry making, and all associated quality issues and issues of choice.<br><br>I can identify and list the basic design elements present in any piece of jewelry.<br><br>I can explain which design elements are independent – that is, can function on their own, and which are dependent – that is, require the presence of other design elements<br><br>I have mastered the mechanics of the major techniques in the interest area(s) I have chosen | * Bead Weaving Basics<br>* Basic Wrap Bracelet (laddering)<br><br>Clinics/Mini-Lessons:<br>- Flat Peyote<br>- Tubular Peyote<br>- Right Angle Weave<br>- Ndebele<br>- Petersburg Chain<br>- Brick Stitch<br>- Square Stitch<br>- Kumihimo<br>- Attaching End Caps | * Basics of Bead Stringing and Attaching Clasps<br>* Introduction to Pearl Knotting<br>* Mahjong Tile Bracelet<br>* Cozumel Necklace (micro-macrame)<br><br>Clinics/Mini-Lessons<br>- Crimping<br>- Elastic String<br>- Using Fireline<br>- Simple and Coiled Wire Loops<br>- Adjustable Slip Knots | * Wire Mix N Match Bracelet<br>* Viking Knit<br><br>*Wire Weave I: 2 base wires<br>*Wire Weave II: 3+ base wires<br><br>* Basic Soldering<br>* Intro to Silver Smithing<br><br>Clinics/Mini-Lessons:<br>- Simple and Coiled Wire Loops<br>- Let's Make Earrings on Head Pins<br>- Let's Make Earrings Off of Chain | * Getting Started In Business<br>* Pricing and Selling<br>* So You Want To Do Craft Shows<br>* Naming Your Business / Naming Your Jewelry<br><br>Clinics/Mini-Lessons:<br>- Pricing Formula | * Beads and Color |
| **INTERMEDI-ATE** *(Comprehen ding)* | *Content / Expression* – conveys and expresses meaning; reflects ideas about how inspiration is to be translated into a design; inspires someone to respond emotionally | I can select and arrange design elements into a pleasing composition.<br><br>I can anticipate both aesthetic and architectural requirements of my piece as it is to be worn.<br><br>I am comfortable self-directing my design process.<br>I know 1 – 2 variations in techniques I use.<br>I am beginning to develop "Fix-It" strategies when approaching new or difficult situations. | * Various Workshops during year<br>* Aztec Wrap Bracelet<br><br>Clinics/Mini-Lessons:<br>- Peyote Cabochon Bezel | * Mala Necklace w/Tassel | * Cold Connections Bracelet<br>* Wire Wrap Bracelet w/Beads<br>* Wire Wrap Cabochon Pendant<br>* Wire Sparkle and Shine Necklace<br>* Wire Swirled Pendant w/Earrings<br>* Wire Contemporary Pendant<br><br>* Wire Woven Mayan Pendant<br>* Wire Woven Curvy Bracelet w/Beads | * Branding | * Jewelry Design I: Principles of Composition |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ADVANCED** *(Fluent, Flexible, Original)* | *Action / Intent / Communica-tive Interaction* – conveying content in context; design choices understood as emerging from interaction between artist and various client audiences; jewelry reflects artist's intent; recognize shared understandi ngs about finish and success | I have well-developed tool box of "Fix-It" strategies for dealing with unknown situations, with a high degree of automaticity in their use.<br><br>I understand how parts of the mechanics of every technique I use allow the piece to maintain its shape (structure), and how other parts allow the piece to maintain good movement, drape and flow (support).<br><br>My jewelry reflects both parsimony in the choices of elements, and resonance in its expressive qualities for the wider audiences; I understand how this differs from traditional art concepts of "harmony" and 'variety"<br><br>I can anticipate shared understandings as these are used to judge my piece as finished and successful; I understand how wider audiences affect the coherence – decoherence-contagion impacts of my designs<br><br>I am very metacognitive of all the composition, construction, and manipulation choices I have made, and constantly reflective of the effects and implications of these choices | * Various Workshops during year | | * Wire Woven Cabochon Pendant<br>* Wire Woven Pagoda End Cap | | *Jewelry Design II: Principles of Form, Function, Structure, Body, Mind, Movement<br>*Architectural Bases |
| **INTER-RELATING AND INTEGRAT-ING ALL LEVELS** *(Disciplinary Literacy)* | How we begin to build and expand our definitions of jewelry and design | I am learning how all these things inter-relate, leading to better design and construction:<br>- art<br>- craft<br>- design<br>- architecture and engineering<br>- physical mechanics<br>- anthropology, sociology, psychology<br>- perception and cognition<br>- management and control<br>- systems theory<br>- party planning<br>- creative marketplace | **JEWERLY DESIGN DISCUSSION SEMINARS** | | | | |
| | | | 1. Good Design<br>2. Contemporary Design<br>3. Composition<br>4. Manipulation<br>5. Resonance<br>6. Beads and Color<br>7. Points, Lines, Planes, Shapes, Forms, Themes<br>8. Architectural Basics | | 9. Contemporizing Traditional Jewelry<br>10. Mixed Media / Mixed Techniques<br>11. Designing An Ugly Necklace<br>12. Backwards Design<br>13. What Is Jewelry, Really?<br>14. Is Jewelry Making Teachable, or Merely Intuitive?<br>15. Can I Survive As A Jewelry Artist?<br>16. Creativity Isn't Found, It Is Developed | 17. Jewelry Design Management<br>18. 5 Questions Every Jewelry Designer Should Have An Answer For<br>19. The Multiple Responsibilities of Being a Professional Jewelry Artist<br>20. Your Work Space<br>21. Design Theater<br>22. Overcoming Designer's Block<br>23. Fashion, Style, Taste or Art?<br>24. Threading the Business Needle |

**Willingness To Adjust Styles To The Different Ways Students Think**

Students learn in different ways. Some are more visual, some more oral, some more tactile, some more experiential. It is important that teachers vary their styles within each lesson.

For example, better instructions are presented not only with written steps, but also images illustrating each step, and diagrams or patterns explaining each step.

It is important to provide opportunities for students to reflect on what they did, and evaluate the thinking, management and control issues they confronted, and what they attempted to do to overcome these.

Last, it is just as important for the teacher to model (and think aloud) their own thought processes when attempting to design or construct a piece of jewelry.

**Why Should The Teacher Be Motivated**
**To Take A Disciplinary Approach?**

The unwillingness of instructors to break out of that mold of standard craft or art content curriculum is rooted in many things.

For one, it is not very lucrative. Teaching disciplinary literacy on top of the standard content curriculum is more work. It requires more thought and integration. Initially, it requires more effort and planning. Yet the earned instructional fees would remain the same had the instructor not made the additional effort.

Teaching disciplinary literacy involves making very public and visible the teacher's design thinking and choices. The teacher is expected to model design behaviors. The teacher will introduce think-alouds, experimentation, thinking routines. The teacher, within each lesson, gradually relinquishes control of the teaching task to the student. The student takes over the design process, making more and more choices, whether good or bad, right or wrong. The student then evaluates, citing evidence, what appears to be working, what not working, some reasons why, and some possible consequences. These disciplinary literacy techniques might make

the teacher feel very exposed, vulnerable and uneasy where such thinking and choices of the teacher might be questioned or challenged, or where the student begins to take over and assert control over learning about design.

Teachers must also expand their training and learning to go beyond art and craft. They must more clearly incorporate ideas about architecture and functionality into their teaching. They must make students aware of things related to physical mechanics, anthropology, sociology, psychology and situational analysis. They must train their students to be aware of how jewelry design is a process of communicative interaction. And they must make students aware of how the prospects and realities of introducing their work publicly also influence their design thinking.

Teacher reluctance to incorporate disciplinary learning into the standard curriculum might also be due to the fact that there is little professional recognition. The recognition that tends to exist gets very tied to criteria based on a standard content which understands jewelry as an object, not a dialectic between artist and relevant other. Jewelry design is an occupation becoming a profession, and it may feel safer for the teacher to remain in craft or art, rather than design, because the criteria for teacher evaluation is more well defined and agreed-upon.

And there is no student demand. Jewelry design is often viewed more as an avocation or occupation, rather than a professional pursuit. It's a way to exercise creative thoughts. A way to earn some extra money. A way to have fun. Jewelry design is not seen in professional terms with specialized knowledge and specific responsibilities.

Partly demand reflects low student expectations. There are assumptions that you cannot teach *creativity* – you have it or you don't. There are assumptions that anyone can make jewelry, and that once you learn some basic vocabulary and techniques, better design skills will naturally evolve over time. And these assumptions get affirmed because all students ever see and experience is good ole basic craft or art education.

Partly demand reflects some realities of the marketplace. Most people who buy jewelry have little understanding about quality issues, art and design

considerations, who the artists are and what their reputations are. They don't know better so they don't demand better. Jewelry purchases skew heavily toward the upper classes. However, this does not mean that we should assume that better designed jewelry has to equate to more expensive jewelry.

It is my firm belief, however, that if instructors integrate disciplinary literacy – thinking routines for how designers think design – into the standard curriculum, both student and client demand will follow, as well as teacher pay and recognition.

As teachers of jewelry design, we should be motivated to create that demand for deeper, disciplinary learning. We need to support the professionalization of the field. We should want to make jewelry design even more fulfilling for our students.

Towards this end, we should teach jewelry design knowledge and skills development which lead to greater fluency, comprehension, self-direction, flexibility, originality and automaticity in design. This means developing our students as architects, as well as artists. It means helping our students develop those critical thinking skills so they can adapt to different design situations, and more easily problem-solve when things go awry. It means enabling our students to evaluate situations and contexts in ways which make clear how the shared understandings of others impact the jewelry design process. It means giving our students a clear understanding of how creative thinking relates to the creative marketplace. It means teaching our students to be able to assert their worth – the worth of the pieces they create, their skills, their ideas, and their labor.

Only in these ways will we play an active part in enhancing the ability of our students to make a living from their artistry and design work. Only in these ways, moreover, will we elevate contemporary jewelry design so that it has a life outside the studio, and so that it doesn't get whipped by the whims of fashion or seen only as a design accessory.

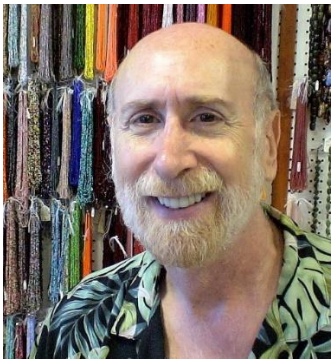
**How Should We Measure Successful Teaching?**

In the standard design curriculum, it is relatively easy to measure our success as teachers. We can gauge how many students take our classes. We can refer to the number of concepts learned. We can count the number of successfully completed steps students have completed. We can get a sense of how many students are able to sell or exhibit their pieces.

What is more difficult to measure, from a disciplinary literacy standpoint, is how well our students are able to think, analyze, reflect, create and engage in jewelry design, given variation and variability in audience, client, context, situation, society and culture.

It is difficult, as well, to gauge the degree we have been able to elevate the importance of jewelry design as a profession. Something beyond craft. Something beyond occupation. Something even beyond art.

***WARREN FELD, Jewelry Designer***
**warren@warrenfeldjewelry.com**
***615-292-0610***



For Warren Feld, Jewelry Designer, (www.warrenfeldjewelry.com), beading and jewelry making have been wonderful adventures. These adventures have taken Warren from the basics of bead stringing and bead weaving, to wire working, wire weaving and silversmithing, and onward to more complex jewelry designs which build on the strengths of a full range of technical skills and experiences.

Warren leads a group of instructors at Be Dazzled Beads (www.bedazzledbeads.com). He teaches many of the bead-weaving, bead-stringing, wire weaving, jewelry design and business-oriented courses. He works with people just getting started with beading and jewelry making, as well as those with more experience. Many of his classes and projects have been turned into kits, available for purchase from www.warrenfeldjewelry.com or www.landofodds.com. He conducts workshops at many sites around the US, and the world.

Join Warren for an enrichment-travel adventure on Your World Of Jewelry Making Cruises.

His pieces have appeared in beading and jewelry magazines and books. One piece is in the Swarovski museum in Innsbruck, Austria.

He is probably best known for creating the international The Ugly Necklace Contest, where good jewelry designers attempt to overcome our pre-wired brains' fear response for resisting anything Ugly.

He is currently writing a book – *Fluency In Design: Do You Speak Jewelry?*

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FOOTNOTES

[1] T. Shanahan, C. Shanahan. "Teaching disciplinary literacy to adolescents: Rethinking content-area literacy," *Harvard Educational Review*, 2008.

[2] Historians gathering evidence like letters, journals, newspaper articles, photographs, analyze them and compare then. They look for patterns and corroboration. From that they infer understanding and conclusions. The historian may take many paths and turns to discover information that may or may not be factual, but may be helpful.

Scientists set up controlled experiments, typically using information they consider facts, and interrelated these facts mathematically in order to establish understandings and conclusions. They go about things following the scientific method and approach, beginning with observations, formulating hypotheses, setting experiment and collecting data, and so forth.

Jewelry designers manage tensions between appeal and functionality. The successful managing of these tensions involves adequately anticipating the shared understandings of various client groups about whether a piece should be considered finished and successful. The designer is able to establish something in and about the piece which signals such anticipation and understanding.

[3]*Thinking Routines*. I teach jewelry design. I find it useful to engage students with various ways of thinking out loud. They need to hear me think out loud about what choices I am making and what things I am considering when making those choices. They need to hear themselves think out loud so that they can develop strategies for getting more organized and strategic in dealing with information and making decisions. My inspiration here was based on the work done by ***Visible Thinking by Project Zero at Harvard Graduate School of Education . http://www.visiblethinkingpz.org/VisibleThinking_html_files/VisibleThinking1.html***

[4] *Fluency*. I took two graduate education courses in Literacy. The primary text we used was ***Literacy: Helping Students Construct Meaning*** *by J. David Cooper, M. Robinson, J.A. Slansky and N. Kiger, 9th Edition, Cengage Learning, 2015*. Even though the text was not about jewelry designing per se, it provides an excellent framework for understanding what fluency is all about, and how fluency with language develops over a period of years. I have relied on many of the ideas in the text to develop my own ideas about a disciplinary literacy for jewelry design.

[5] *Shared Understandings*. In another graduate education class, the major text reviewed the differences between understanding and knowledge. The question was how to teach understanding. Worth the read to gain many insights about how to structure teaching to get sufficient understanding to enrich learning. ***Understanding by Design*** *by Grant Wiggins and Jay McTighe, 2nd Edition, Association for Supervision and Curriculum Development, 2005*.

[6] *Bloom's Taxonomy*.
Bloom, Benjamin S. 1956. *Taxonomy of educational objectives; the classification of educational goals*. New York: Longmans, Green.

Anderson, L. W., Krathwohl, D. R., & **Bloom**, B. S. (2001). A **taxonomy** for learning, teaching, and assessing: A **revision** of **Bloom's Taxonomy** of educational objectives (Complete ed.). New York: Longman.

Bloom's Taxonomy and the Arts. Incredible Art Department. *As referenced at* https://www.incredibleart.org/files/blooms2.htm

Bloom's Taxonomy. Vanderbilt University. Center for Teaching. *As reference at* https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/

[7] *Backwards Design*. I had taken two graduate education courses in Literacy and one in Planning that were very influential in my approach to disciplinary literacy. One of the big take-aways from ***Understanding by Design*** *by Grant Wiggins and Jay McTighe, 2nd Edition, Association for Supervision and Curriculum Development, 2005,* was the idea they introduced of "*backwards design*". Their point is that you can better teach understanding if you anticipate the evidence others will use in their assessments of what you are trying to do. When coupled with ideas about teaching literacy and fluency *(see* ***Literacy: Helping Students Construct Meaning*** *by J. David Cooper, M. Robinson, J.A. Slansky and N. Kiger, 9th Edition, Cengage Learning, 2015)*, you can begin to introduce ideas about managing the design process in a coherent and alignable way.