

# LEARNING DESIGN NEWS

## USING BEHAVIORISM IN VARYING CONTEXTS

- Teaching dirga pranayama to help with stress relief (see below).
- Teaching yoga teachers how to teach pranayama to their yoga students so they effectively utilize it in their yoga classes.
- Teaching college students in first-year writing courses how to use critical thinking and reading comprehension skills to analyze a text.
- Teaching college students in first-year writing courses how to identify and correct common grammar and punctuation errors.

## DIRGA PRANAYAMA FOR STRESS RELIEF

Behaviorism: Dirga Pranayama for Stress Relief	
<p><b>Step 1:</b> Teacher explains, demonstrates, and instructs basic nostril breathing and pranayama in the context of yoga traditions.</p> <p>Learners begin their own practice of basic nostril breathing during the instruction.</p>	<p><b>Step 2:</b> Teacher explains, demonstrates, and instructs dirga pranayama.</p> <p>Learners begin their own practice of dirga pranayama during the instruction.</p> <p>Multiple rounds of dirga pranayama are instructed and last several minutes each, until Learners are practicing with ease on their own without instruction from the Teacher.</p>
<p><b>Step 3:</b> Learners perform a teach-back with explanation, demonstration, and instruction on how to practice dirga pranayama.</p> <p>Teacher assesses each Learner's teach-back and gives verbal feedback, positive reinforcement, and encouragement in areas for improvement.</p>	<p><b>Step 4:</b> Teacher explains, demonstrates, and instructs pratyahara (withdrawing senses) and dharana (one-pointed focus) in the context of yoga traditions.</p> <p>Learners are asked to provide real-world connection to these topics.</p> <p>Class discussion ensues.</p>
<p><b>Step 5:</b> Teacher explains, demonstrates and instructs the pairing of dirga pranayama with pratyahara and dharana.</p> <p>Learners begin their own practice of dirga pranayama paired with pratyahara and dharana.</p> <p>Multiple rounds of dirga pranayama + pratyahara/dharana are instructed and last several minutes each, until Learners are practicing with ease on their own without instruction from the Teacher.</p>	<p><b>Step 6:</b> Learners perform a teach-back with explanation, demonstration, and instruction on how to practice dirga pranayama with pratyahara and dharana.</p> <p>Teacher assesses each Learner's teach-back and gives verbal feedback, positive reinforcement, and encouragement in areas for improvement.</p>
<p><b>Step 7:</b> Teacher informs Learners about the real-world relevance of dirga pranayama + pratyahara/dharana for stress relief.</p> <p>Learners are asked to provide real-world connection to these topics through their personal experiences. Class discussion ensues.</p>	<p><b>Step 8:</b> Teacher informs Learners about the importance of practicing dirga pranayama + pratyahara/dharana for stress relief under both easy (in a quiet environment) and challenging conditions (in a chaotic environment).</p> <p>Learners are asked to share the environments and situations that are most challenging to them and that induce stress. Class discussion ensues.</p>
<p><b>Step 9:</b> Teacher takes Learners into a chaotic setting (a busy hallway or outside on a sidewalk or common area) and asks Learners to practice dirga pranayama + pratyahara/dharana on their own for 5 minutes.</p> <p>After, a round-robin discussion ensues of each Learner's experience in the chaotic setting.</p> <p>Teacher assesses each Learner's commentary and gives verbal feedback, positive reinforcement, and encouragement in areas for improvement.</p>	



Pictured: **Pavlov's dog** finally learning to shake like a good boy after 60 unsuccessful attempts. That's a lot of no jerky treats for you, doggo! Better late than never.

## HIGHLIGHTS OF THE THEORY

**Behaviorism** is a theoretical approach to learning that emphasizes experience and action as the primary conditions for learning. It frequently incorporates a stimulus and response followed by reinforcement, and it can be described as a practice of trial and error until the optimal or desired learning outcome is achieved (Schunk, 2020).

**Behaviorism** is what we use when we teach a command (stimulus) to a dog and then reward it (reinforcement) with a treat or affection when it performs the action (response). Alternately, we withhold the reward if the action is not completed as requested.

## IT ONLY HURTS WHEN THEY BLEAT



Pictured left to right: **Pavlov** and **Skinner** reminisce about dominating **Thorndike** and **Guthrie** in the Race for Behaviorism Theorist G.O.A.T.

## PRIMARY BEHAVIORISM THEORISTS

<p><b>Ivan Pavlov</b> 1849-1946 <b>Classical Conditioning</b> Stimulus + Response</p>	<p><b>Edward Thorndike</b> 1874-1949 <b>Connectionism</b> Trial &amp; Error Learning, incrementally over time; Formation of associations &amp; connections through repetition</p>	<p><b>Edwin Guthrie</b> 1886-1959 <b>Contiguous Conditioning</b> Contiguity of Stimulus + Response; Associative strength of paired stimuli/responses</p>	<p><b>B.F. Skinner</b> 1904-1990 <b>Operant Conditioning</b> Stimulus + Response -&gt; Strengthening of behavior through reinforcement &amp; chaining</p>
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(Schunk, 2020)





# LEARNING DESIGN NEWS

## USING SOCIAL COGNITIVE THEORY IN VARYING CONTEXTS

- Teaching dirga pranayama to help with stress relief (see below).
- Teaching a yoga class using modeling poses + verbal cues for first half of class & verbal cues only for the second half of class.
- After demonstrating initially, using a Think-Pair-Share model to teach college students in a first-year writing course how to use critical thinking to analyze a text for meaning (i.e. song lyrics).
- Using the 20-80 Rule to teach college students in first-year writing courses how to identify and correct common grammar and punctuation errors in their essays. *The 20-80 rule in summary: The professor gives a lesson on the grammar/punctuation rule; then she shows you 20% of the instances where the error occurs, and you find the other 80% on your own!*

## DIRGA PRANAYAMA FOR STRESS RELIEF

Social Cognitive Theory: Dirga Pranayama for Stress Relief	
<b>Step 1:</b> Teacher Explains & Demonstrates, while Learners listen and take notes on a graphic organizer (worksheet) provided: <ol style="list-style-type: none"><li>1. Pranayama</li><li>2. Dirga pranayama</li><li>3. Pratyahara</li><li>4. Dharana</li><li>5. Integration of the practice</li><li>6. Purpose of the practice: stress relief</li></ol> Teacher gives positive motivation throughout, encouraging self-efficacy and self-determination.	<b>Step 2:</b> Teacher provides short-term goal: Practice dirga pranayama for 2 minutes on your own.  Teacher asks Learners to self-monitor & self-evaluate progress, and at the end of the 2 minutes of practice, to complete the relevant sections of the worksheet before sharing with the class. Teacher provides verbal feedback during sharing period.
<b>Step 3:</b> Teacher provides another short-term goal: Practice dirga pranayama for 5 minutes on your own.  Teacher asks Learners to self-monitor & self-evaluate progress, and at the end of the 5 minutes of practice, to complete the relevant sections of the worksheet before sharing with the class. Teacher provides verbal feedback during sharing period.	<b>Step 4:</b> Teacher ends the lesson with a round robin teach-back. Each Learner has to explain dirga pranayama, pratyahara, and dharana, and lead the class in 1-minute of the integrated practice. Teacher provides verbal feedback after each teach-back.  Learners complete the worksheet sections that are self-reflection questions, and Teacher provides a final opportunity to ask questions or get feedback.

## HE’S THE ONE ALL THE THEORISTS DREAM ABOUT

Albert Bandura

1925-2021

### Theory of Observational Learning

Behavior is learned via observing models.

The Person (Internal Cognitive Processes), Behavior (Personality/Actions), & Environment (Social Contexts) are intertwined to affect the learning process. Behavior is motivated and regulated by internal standards (self-efficacy), including self-regulation and self-evaluation. (Schunk, 2020)



President Barack Obama awards the National Medal of Science to Dr. Albert Bandura, Stanford University, Calif., during a ceremony to honor the recipients of the National Medal of Science and National Medal of Technology and Innovation, in the East Room of the White House, May 19, 2016. Official White House photo and caption by Pete Souza (National Medal of Science).

## HIGHLIGHTS OF THE THEORY

**Social Cognitive Theory** centers around modeling a behavior by a competent teacher while also considering the self-efficacy of the learner (Schunk, 2020).

**Social Cognitive Theory** supports the idea that people learn by observing but while also cognitively processing their experience based on a variety of factors that are both internal to the learner and socially cued (Schunk, 2020).

**Enactive Learning** is learning by doing. Behavioral consequences serve as sources of information & motivation (Schunk, 2020).

*Ex. Professor-X warns students that plagiarism will result in an F. Student-Z intentionally plagiarizes, and he receives an F on the assignment, which is something he does not desire due to his goal of attending medical school.*

**Vicarious Learning** is learning by observation (Schunk, 2020).

*Ex. Student-A heard about Professor-X’s plagiarism policy and her failing of Student-Z last semester for it. After she enrolls in Professor-X’s class, she is extra careful to learn how to avoid plagiarism by paying attention in class, and she successfully integrates all sources into her writing, earning an A.*



Pictured: Student-Z finding out the consequences of his plagiarism, and finally realizing what Professor-X meant in her syllabus by FAFO.



# LEARNING DESIGN NEWS

## USING COGNITIVE LEARNING PROCESSES IN VARYING CONTEXTS

- Teaching dirga pranayama to help with stress relief (see below).
- Leading a yoga nidra (guided meditation) with a discussion after about what participants experienced and how they re-directed their minds throughout.
- In a college writing class, teaching the 5 basic elements of critical thinking (conceptualizing, analyzing, synthesizing, thinking creatively & innovatively, and applying information) by scaffolding an assignment that uses one element at a time and by engaging metacognition for each step.

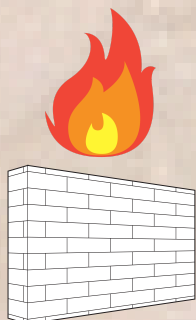
## DIRGA PRANAYAMA FOR STRESS RELIEF

Cognitive Learning Processes: Dirga Pranayama for Stress Relief	
<p><b>Step 1:</b></p> <p>a. Teacher provides a graphic organizer (worksheet) for Learners to complete.</p> <p>The worksheet contains the learning outcomes and prompts for Learners to provide information about what they know about the concepts covered in the module so they have a basis/associated reference for knowledge of each concept.</p> <p>b. Teacher asks Learners to share what they wrote down for the first initial questions (what they know about the concepts to be covered) in a class discussion.</p>	<p><b>Step 2:</b></p> <p>a. Teacher explains body-mind connection by introducing metacognition and self-monitoring concepts that will take place during the practice of dirga pranayama. Directs Learners to the worksheet to answer more questions, and to then share with the class.</p> <p>b. Teacher introduces the concepts of pranayama (breathing technique), dirga pranayama (three-part breath), pratyahara (withdrawing senses) and dharana (one-pointed focus). Directs learners to the worksheet to answer more questions, and to then share with the class.</p> <p><b>Sample questions from the worksheet:</b></p> <p>-Can you predict how well you will practice pratyahara and dharana?</p> <p>-How will you know if you have practiced dirga pranayama correctly or effectively?</p> <p>-If your mind becomes distracted, how do you plan to re-center yourself?</p>
<p><b>Step 3:</b></p> <p>a. Teacher demonstrates and instructs basic nostril breathing in the context of yoga traditions.</p> <p>Learners practice basic nostril breathing during the instruction.</p> <p>b. Teacher demonstrates and instructs dirga pranayama.</p> <p>Learners practice dirga pranayama during the instruction.</p> <p>c. Teacher scaffolds in pratyahara and dharana into the practice.</p> <p>Learners practice dirga pranayama while integrating pratyahara and dharana with the Teacher's instruction.</p>	<p><b>Step 4:</b></p> <p>a. Teacher gives learners a short timeframe to practice in silence on their own, integrating the lessons they've learned: 3 minutes.</p> <p>b. At the end of the 3 minutes, Teacher asks questions like these in a round-robin style to all learners:</p> <p><b>Sample questions from the worksheet:</b></p> <p>-How did it feel to practice self-directed for 3 minutes straight?</p> <p>-Where did your mind wander off to during the practice?</p> <p>-How did you draw your mind and awareness back to your breath after it wandered off?</p> <p>-What did you think about practicing dirga pranayama as you were doing it for those 3 minutes? Was it easy, hard, etc.?</p>
<p><b>Step 5:</b></p> <p>a. Teacher asks Learners to perform a teach-back, where each Learner instructs dirga pranayama for 1 minute.</p> <p>b. Teacher provides verbal feedback.</p> <p>c. Teacher asks Learners to complete the rest of the worksheet, in a section where they have to reflect on their experience.</p>	

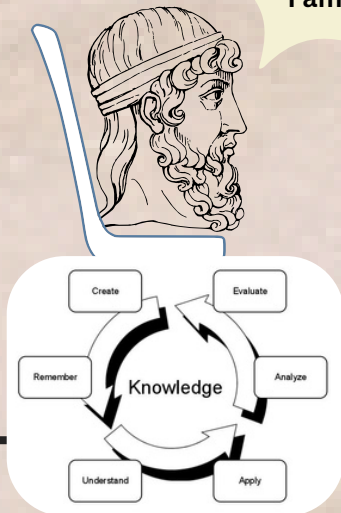
## OUT OF THE CAVE AND INTO BLOOM’S TAXONOMY: THE THEORISTS WE’VE COME TO...ADMIRE...AND...NOT PANIC AT THE THOUGHT OF...ANYMORE!

Plato (427-328 B.C.E.)  
Descartes (1596-1650)  
Piaget (1896-1980)  
Bloom (1913-1999)

(Schunk, 2020; Cognitivist Learning Theory, n.d.)



(Skidmore, 2017)



(Wees, 2011)

I cognitively process; therefore, I am...in...



## HIGHLIGHTS OF THE THEORY

**Cognitive Learning Processes** involves multiple cognitive-based approaches for the facilitation of a learning experience.

**Metacognition** is important to this approach because it requires the learner’s personal, self-reflection on the process of learning via doing the activity; it involves monitoring, controlling, and evaluating one’s own mental response to the learning experience.

**Cognitive Learning Processes** uses Concept Learning and Concept Teaching as central ideas to the theory. Concept Teaching comes into play through defining and then arranging the smaller steps necessary to achieve the full behavior, i.e. scaffolding the lesson, or chunking.

(Schunk, 2020)

Ex. In a “vinyasa” yoga class, the instructor will first demonstrate the poses for the Sun Salutation-A sequence as she simultaneously instructs students verbally through the first round. She announces to students that, “We will do two more together and then you will do two on your own.” She verbally instructs students through the Sun-A sequence as they all repeat two more rounds together by following her instructions. She provides affirmative feedback as she instructs, saying things like “Nice breath, everybody,” and she announces that, “Now, you will flow on your own for two more rounds of Sun-A.” As students are flowing on their own, she will walk around the room and provide feedback to students to ensure they are practicing the sequence safely and for as it was intended. During this period, she will say things to students things like, “Notice how you feel flowing on your own” as a way to encourage active metacognitive reflection.

At the end of this process, she will have students begin the same process with Sun Salutation-B.



Pictured: Grace flows a little too much on her own during Sun-A and holds a forearm plank instead of moving through the Sun-A sequence twice, which prompts the yoga teacher to approach her and quietly ask, “Do you want me to walk you through the Sun-A again?” To which, Grace replies, “Yes. I forgot the sequence, so I just decided to hold a forearm plank.” Instead of reprimanding Grace, which would be inappropriate in a yoga class, the teacher just stays with her and verbally instructs her quietly in Sun-A while providing context for how the poses are sequenced and linked; this context will help with memory retention of the 9-movements of Sun-A in the future.

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### References

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# LEARNING DESIGN NEWS

## USING COGNITIVE INFORMATION PROCESSING IN VARYING CONTEXTS

- Teaching dirga pranayama (+ pratyahara & dharana) as a Gestalt to help with stress relief (see below).
- Teaching students how to write an effective intro paragraph using a scaffolded, Funnel Format approach.
- In a first-year writing course, using a graphic organizer to direct students’ attention to certain elements of a text in order to lead them to better understanding and engagement with critical thinking skills and objective looking. *See example to the right.*

## DIRGA PRANAYAMA FOR STRESS RELIEF

### Cognitive Information Processing: Dirga Pranayama for Stress Relief

1. Graphic Organizer/Worksheet distributed (and completed throughout the process):
  - a. State Learning Objectives
  - b. Background questions to assess prior knowledge
  - c. List of new concepts’ definitions to understand and relate to
  - d. Metacognition questions to identify how the Learner is processing information.
2. Instruction on Intellectual Concepts
  - a. Review & discussion of yoga concepts: pranayama, dirga pranayama, pratyahara, and dharana as a Gestalt that goes together.
3. Demonstration of Sensory and Motor Concepts
  - a. Scaffolded process
    - i. General breath awareness
      1. Layering in Pratyahara (withdrawing the senses)
    - ii. Body awareness in each of the 3 parts
      1. Layering in Dharana (focus/concentration)
    - iii. Merging the three parts of breath for dirga pranayama
      1. Full Gestalt of dirga pranayama + pratyahara + dharana
    - iv. Layering in methods for overcoming mental distractions
    - v. Time to practice.
4. Learners perform a Teach Back for LTM.]
5. Teacher assesses knowledge/Knowledge Check
6. Teacher provides real-world relevance to cement LTM goals.

### Sample Graphic Organizer: Dirga Pranayama for Stress Relief

Learning Outcomes	<ol style="list-style-type: none"><li>1. Practice dirga pranayama in a seated or supine position correctly.</li><li>2. Practice pratyahara during dirga pranayama correctly.</li><li>3. Practice dharana during pranayama correctly.</li><li>4. Practice all three simultaneously and correctly.</li></ol>
Background Questions / Entry Skills Assessment	<p>What do you already know about the following:</p> <ol style="list-style-type: none"><li>1. Breathing:</li><li>2. Yoga:</li><li>3. Focus &amp; Concentration:</li><li>4. Distractions:</li><li>5. Stress:</li><li>6. Stress Relief:</li></ol>
Relevant Definitions for today’s lesson	<ol style="list-style-type: none"><li>1. Pranayama: method of breathing that seeks stasis by returning essential prana to the body</li><li>2. Pratyahara: withdrawing the senses</li><li>3. Dharana: establishing a one-pointed focus on an object</li><li>4. Dirga Pranayama: three-part breath</li></ol>
Reflection Questions / Metacognition	<ol style="list-style-type: none"><li>1. How did nostril breathing feel to you in your body?</li><li>2. How easy or difficult was it to practice the three-part breath (dirga pranayama) on both the inhales and the exhales?</li><li>3. Were you able to lengthen the inhales and exhales from start to finish?</li><li>4. How easy or difficult was it to withdraw your senses as you focused your mind on your breath and body and then sustained your concentration there?</li><li>5. What were some of the things that surfaced in your mind as you were practicing dirga pranayama and pratyahara/dharana?</li><li>6. How successful were you at refocusing your mind on your breath and body when it wandered?</li><li>7. How can you envision yourself using dirga pranayama, pratyahara, and dharana for stress relief in your life? Are there certain scenarios that you feel it would work best for you?</li></ol>
Teach Back prep:	To prepare for the Teach Back of the dirga pranayama lesson, take a moment to write out a short script for yourself that covers each of the major steps in learning the practice of dirga pranayama. Practice it once with a partner before sharing with the full class.
Knowledge Check:	Complete the Knowledge Check below: <a href="https://docs.google.com/forms/d/e/1FAIpQLSFerBDY14iHEsngG5skN6wyzdOlxaC9iBeCHgQj1M2t9LAveA/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSFerBDY14iHEsngG5skN6wyzdOlxaC9iBeCHgQj1M2t9LAveA/viewform?usp=sf_link</a>

## HIGHLIGHTS OF THE THEORY

**Cognitive Information Processing (CIP)** centers around forming associations that aid in the learning process; it is focused around the internal mental processes that occur between stimulus and response.

**CIP** is concerned with identifying and exploring a learner’s ability to discriminate (consciously or subconsciously) amongst sensory stimuli and how that learner cognitively processes it to make meaning and to inform action.

(Schunk, 2020)

*Ex. In a college writing class, the professor screens a documentary film in class called Not My Life. In the film are multiple profiles of human trafficking cases around world. Because the professor has screened this film before, she knows that students may have a particular reaction to the profile of the adolescent American girl that is less compassionate than the reaction they have to the children in Cambodia. She wants students to see all of the profiles factually as the same conditions that allow human trafficking to happen.*

*Thus, to direct students’ attention to the equally present elements of human trafficking at play in all of the profiles, the professor creates a graphic organizer (worksheet) that asks students to write details about how **force**, **fraud**, and **coercion** are used to manipulate and trap the victims into human trafficking scenarios. She lets them know that they will discuss their worksheet at the end of both days that the film is being screened, and that the worksheet will be collected at the end of the second day in order to evaluate completion of the worksheet for credit/no credit.*

*At the end of the first day of screening, the professor asks students, “**How were force, fraud, and coercion present in the American adolescent’s profile?**” instead of asking “What did you think about the American girl’s story?”*

*This directing of attention toward synthesizing the formal definition of human trafficking with the American adolescent’s profile helps keep attention on the facts versus the emotional responses they may have to that particular case because all of the profiles were equally insidious examples of human trafficking, regardless of how “close to home” they were.*

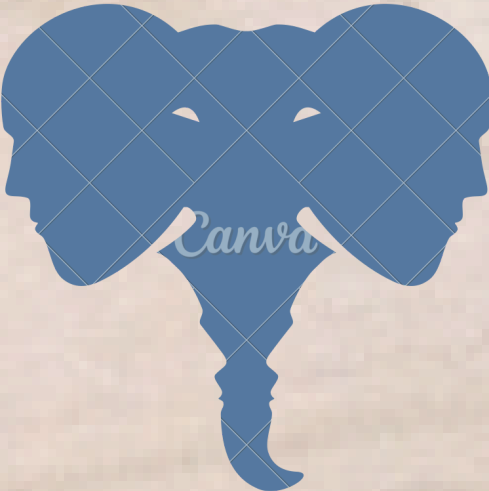


Pictured: Students in Purdue’s MEd in Learning Design & Technology program experiencing cognitive overload when reading about how many concepts are found in Cognitive Information Processing and trying to integrate them (or not!) into a gestalt handout.

## TO GESTALT OR NOT TO GESTALT?

THAT IS THE QUESTION WE WOULD ALL LIKE ANSWERED FROM THESE THEORISTS.

Gagne; Ebbinghouse; Estes; Atkinson & Shiffrin; Miller; Cherry; Broadbent; Treisman & Gelade; Rosch; Matlin, et al.  
*Gestalt Theorists:* Werthheimer, Koffka, Kohler, et al.



(Schunk, 2020)

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# LEARNING DESIGN NEWS

USING GAGNE’S THEORY OF INSTRUCTION IN VARYING CONTEXTS

- Teaching dirga pranayama to help with stress relief (see below).
- Teaching students how to write an effective intro paragraph using the scaffolded Funnel Format approach.
- Teaching students grammar and punctuation lessons, especially how to build on previously learned rules.
- In a first-year writing course, using a graphic organizer to direct students’ attention to certain elements of a text in order to lead them to better understanding and engagement with critical thinking skills and objective looking.

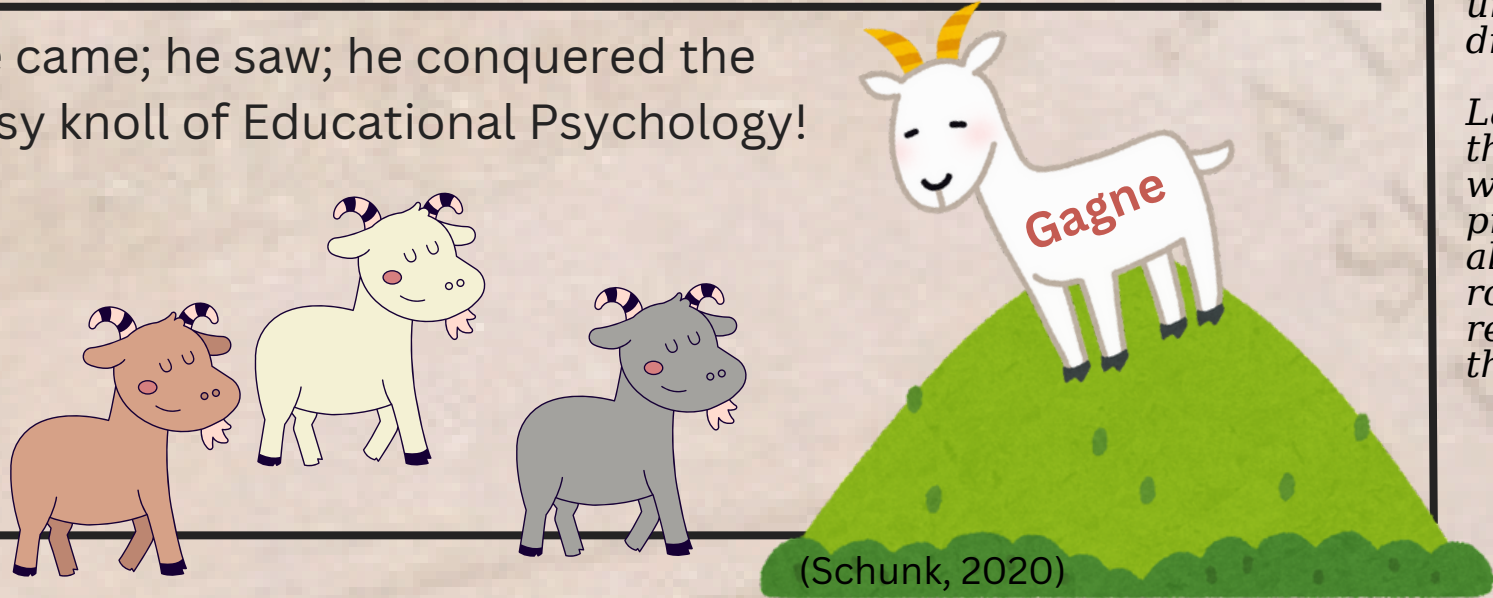
## DIRGA PRANAYAMA FOR STRESS RELIEF

Gagne’s Theory of Instruction		
Gagne’s Learning Phase (From Schunk, 2020)	Gagne’s Instructional Event (From Schunk, 2020)	Dirga Pranayama Lesson
Attending	Inform class it’s time to begin	“Have a seat in your chair or sit down on your yoga mat. It’s time to get started. ”
Expectancy	Inform class of learning objectives & performance expectations	“Today, we will learn how to practice dirga pranayama in order to achieve stress relief. By the end of this lesson, you will have practiced it several times, you will have taught it back to us, and you will walk away with the confidence and knowledge that you can practice dirga pranayama accurately whenever you need it.”
Retrieval	Ask class to recall subordinate concepts/rules	“Tell me what you already know about the following: 1. Breathing, 2. Meditation, and 3. Methods for stress relief.”
Selective Perception	Present examples of new concepts	“The first step is to breathe through your nose on the inhale and exhale. [then practice it] The second step is to breathe through your nose while expanding/contracting your lower belly as you inhale/exhale [then practice it]; then the middle belly when you inhale/exhale [then practice it]; then the chest when you inhale/exhale [then practice it]. The next step is to merge all 3 parts together seamlessly [then practice it]. The last step is to bring awareness to your mind and how it fluctuates, and bringing your attention back to the breath each time your mind strays. [then practice it]”
Semantic Encoding	Provide cues for how to remember	“Dirga pranayama, which is translated as the 3-part breath, is like a wave slowly filling your body from the bottom to the top. Imagine the wave starting from the bottom and filling from the bottom to the top; then it empties from the top to the bottom. Visualize this wave slowly expanding and contracting your diaphragm as you breathe.”
Retrieval & Responding	Ask students to apply concept or rule to new example	Practicing dirga pranayama without interruption or guidance by the teacher for 2-3 minutes.
Reinforcement	Confirm accuracy of student’s learning	Round-robin discussion of experience after each step is rolled out. Provide verbal feedback.
Cueing Retrieval	Give short quiz on new material	Teach back of dirga pranayama lesson. Provide verbal feedback.
Generalizability	Provide special reviews	Emphasis on practicing dirga pranayama in the real world in a variety of contexts in order to get used to practicing in calm and chaos. A few options: 1. Teacher can take students into a busy part of the building and practice it right then. 2. Teacher can challenge students to practice once daily over the next week in a 2-3 minute increment in a variety of places in order to emphasize how practice overcoming distractions is a necessary part of practicing dirga pranayama.

ROBERT GAGNE (1916-2002):  
THE MAN, THE MYTH, THE G.O.A.T. LEGEND



He came; he saw; he conquered the grassy knoll of Educational Psychology!



### HIGHLIGHTS OF THE THEORY

**Gagne’s Theory of Instruction** is a Cognitive Information Processing approach which centers around learning outcomes and the methodical progression of the events of learning.

**Gagne’s Learning Outcomes** are the following: intellectual skills, verbal information, cognitive strategies, motor skills, and attitudes. *Every learning experience should have one or more of these learning outcomes associated with it.*

**Gagne’s Events of Learning, a.k.a. Phases of Learning,** are attending, expectancy, retrieval, selective perception, semantic encoding, retrieval & responding, reinforcement, cueing retrieval, and generalizability. *Learners are to be led through these steps as a gestalt (or whole) for optimal attainment of learning outcomes and performance objectives.*

(Schunk, 2020)

*Ex. In a writing workshop for college freshmen, the Instructor plans to review identifying and correcting comma splices, run-on sentences, and sentence fragments.*

*To do this, she employs a graphic organizer (worksheet) where she lists the learning outcomes and performance objectives of the session and asks students to complete some entry skills questions to assess prior knowledge. After reviewing everyone’s answers to better understand the skill level in the room, she instructs students methodically through the lessons by first going backwards to review punctuation rules associated with periods, commas, and semi colons. She asks students to write what they’re learning into the graphic organizer as a note taking method.*

*After assessing their understanding of the first lesson through verbal feedback, she moves on to the next lesson on independent and dependent clauses and how they relate to the punctuation topics just discussed. She asks students to write notes down about what they’re learning on their graphic organizers and assesses their knowledge verbally by asking for volunteers to share.*

*Lastly, she moves to the last lesson on correcting comma splices, run-ons, and fragments, and she asks students to look back at their graphic organizers to review the punctuation and clause rules. She gives them a few examples to correct and present to the class on the board. As they are each presenting, she assesses their accuracy and makes corrections where necessary.*

*At the end of the workshop, the Instructor gives a short verbal quiz on the topics covered in order to formatively assess the students’ understanding and to clarify any final discrepancies or questions.*

*Lastly, before the students disburse, she asks them what assignments they’re currently working on that they will need to be able to proofread, edit, and revise for accurate use of all of the concepts covered, and a brief round-robin ensues wherein the Instructor is able to reiterate the relevance (and transferability) of this workshop topic to their academic lives.*

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# LEARNING DESIGN NEWS

USING CONSTRUCTIVISM IN VARYING CONTEXTS

- Teaching dirga pranayama to help with stress relief (see below).
- Teaching yourself how to make homemade vegan croissants using the lamination method by reading food blogs and recipe books.
- Teaching yourself how to use Adobe Captivate using online tutorials.
- In a first-year writing course, using the Think-Pair-Share approach to facilitate collaborative learning when discussing the meaning of song lyrics via analysis and synthesis.
- Utilizing a graphic organizer to facilitate reading comprehension with first-year writing students as they read a complex academic article.

## DIRGA PRANAYAMA FOR STRESS RELIEF

Constructivism: Dirga Pranayama for Stress Relief	
<p><b>Step 1:</b> (Day 1) Teacher sets up the room in a typical environment (living room, conference room, community center, etc.), and specifically not a yoga studio. There are chairs, tables, and also some pillows or mats available if people want to sit on the floor.</p>	<p><b>Step 2:</b> (Day 1) Teacher informs learners of learning objective &amp; timeline. -Lesson will take all week. -Learners should practice multiple times a day outside of class and on their own. -Learners are given a graphic organizer (worksheet) and are informed they will fill out various sections throughout the learning module. <b>Learning Objectives:</b> -Students will successfully practice dirga pranayama, pratyahara, and dharana as an integrated practice. -Students will successfully use this integrated practice for stress relief.</p>
<p><b>Step 3:</b> (Day 1) Teacher asks students to share prior knowledge both verbally and on the worksheet.</p> <p>Example question from the worksheet: <i>Tell me what you know about the following:</i> -yoga -breathing techniques -stress relief strategies -meditation</p>	<p><b>Step 4:</b> (Day 1) Teacher provides an initial lesson on conceptual basics of -pranayama -dirga pranayama -pratyahara -dharana -using the integrated practice as a tool for stress relief</p> <p>Teacher demonstrates the practice.</p>
<p><b>Step 5:</b> (Day 1) Learner Exploration: setting their own goals. using the worksheet to help them track their progress.</p> <p>Example questions on the worksheet: <i>What goals would you like to set for yourself in practicing dirga pranayama for stress relief:</i> -over the next hour? -over the next week? -in targeted situations?"</p>	<p><b>Step 6:</b> (Daily) Learner Exploration of the practice and self-monitoring progress.</p> <p>Worksheet is used to track progress and engage metacognition using questions like these:</p> <ul style="list-style-type: none"><li>• (while you are actively practicing) What is practicing dirga pranayama doing for me in this moment?</li><li>• (while you are practicing) Am I able to shift my focus back to my breath when my mind wanders?</li><li>• (before you open your eyes) How do I feel now that I have completed my practice of dirga pranayama?</li><li>• (any time after you open your eyes) When I am in a moment of stress, do I practice dirga pranayama?</li><li>• "What other questions could you ask yourself? Write a few more out, as you see fit."</li></ul>
<p><b>Step 7:</b> (Midweek) Learner exploration of the practice: evaluating progress on a formative assessment.</p> <p>Example questions: <i>How do you know if you've been successful practicing dirga pranayama? Is it because you fit your practice to exactly the parameters I laid out in my demonstration? Or do you have other ways of evaluating how effectively you've been practicing it as a method of stress relief? Please reflect on how it has been going for you and what your personal level of progress is with this practice.</i></p>	<p><b>Step 8:</b> (End of Week) Learners are partnered up to practice teaching dirga pranayama to each other with a brief 2-minute teach-back by each student throughout the remaining days of the week.</p> <p><b>Step 9:</b> (Final day) Learner exploration: going beyond the basics &amp; exploring interests. This leads to deeper class discussion and documentation on the worksheet.</p> <p>The worksheet asks the following type of question: <i>Now that you've learned dirga pranayama for stress relief over the last week, is there anything else you want to pursue with regard to exploring other types of pranayama, other methods of stress relief, or other concepts from yoga philosophy?</i></p> <p><b>Step 10:</b> (Final day) Full module summative self-assessment to confirm learning objectives were met.</p>

### HIGHLIGHTS OF THE THEORY

**Constructivism** is an approach to teaching and learning that promotes learner agency and self-guided exploration toward an answer, solution, or informative discovery of knowledge, and it promotes the teacher’s backseat guidance and flexibility (over didacticism) in order to be present, reflective, and responsive to students’ diverse learning needs while not overpowering learners’ active engagement in the learning experience.

**Constructivism** is best used with learning experiences that are authentic and relevant, and have real-world implications for learners.

**Constructivism** should only be used if the teacher is willing to forego an expectation that there is one right answer that students should arrive at or one right pathway to get there; constructivist approaches are inherently tied to more exploratory-based approaches to finding a multitude of potential answers, solutions, or attainment of other types of learning outcomes.

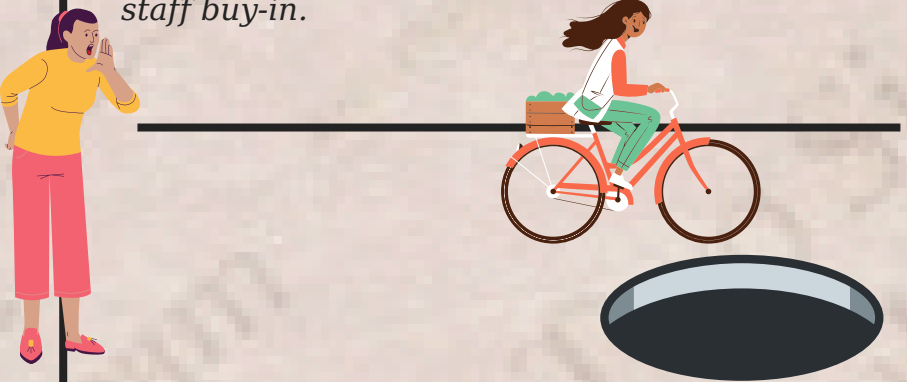
(Schunk, 2020)

*Ex. In a university writing center, the Director institutes a semester-long professional development that asks writing consultants to read chapters of a book by Dr. Claude Steele called **Whistling Vivaldi: How Stereotypes Affect Us and What We Can Do**, and discuss the chapters monthly for the purpose of making improvements to the center. The director provides reading guides in the form of graphic organizers and questionnaires for writing consultants to complete as they read, so they will have their own conversation topics ready for the monthly meetings. They are ultimately to work together as a group to discern two things:*

1. Ways to make changes to the center’s intake form so that student clients feel less intimidated and are more empowered during sessions.
2. Ways to ensure students do not experience stereotype threat while engaging with the center and its consultants.

*Through a collaborative process, the writing consultants come up with their own lists of positive affirmations to say to students to make sure they are receiving positive feedback, and they narrow their individual lists to a collective list everyone can draw upon when needed. They also come up with a list of new questions to add to the intake form that will help dispel any worry over stereotype threat by asking student clients to name positive aspects of their assignment or writing background.*

*In the final monthly meeting on this semester-long professional development topic, the writing consultants make the final decisions, with the director as facilitator, and all changes that are made have been collectively achieved and have full staff buy-in.*



Pictured: Sarika learns to ride her bike because her friend, Gretchen, is willing to give her some pointers. Sarika realizes how different riding a bike is to longboarding, which is her favorite pastime. But she uses the same approach to learning to balance on the bike that she did when she first got a longboard for her birthday. She falls off the bike a few times but adapts quickly to balancing. In this scene, Sarika has a new obstacle--trouble with steering--so Gretchen yells at her to “Watch out for the potholes!” and Sarika narrowly escapes the crash of the century into an urban cenote thanks to her friend’s guidance at a pivotal moment and her prior experience leaning on the longboard to steer.

### TEACHER AS FACILITATOR: WHEN IN DOUBT, FIGURE IT OUT (ON YOUR OWN)!

Piaget (1896-1980)

Vygotsky (1896-1934)

Dewey (1859-1952)

Bruner (1915-2016)

(Schunk, 2020)

Seriously....  
Where my  
ladies at?!



Wouldst thou  
like to live  
deliciously,  
Gagne?!

