

Amplified Learning

A practical guide to applying the "seven intelligences" theory, so that your presentations might be more engaging, effective, and fun

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The purpose of amplified learning is to engage others in multiple ways, grabbing their attention, so that one might truly educate.

Amplified learning seeks to very effectively use the "classroom core" intelligences (mathematical-logical and linguistic)—and then *amplify* the learning experience with the "classroom amplifier" intelligences (spatial, musical, bodily-kinesthetic, intrapersonal, and interpersonal).

The goal of amplified learning is to make learning more engaging, fun, and effective.

This report is primarily in outline form, with special emphasis on "how." This format is especially suitable for those whom are interested in grabbing the hearts of those whom they serve and educating them with greater depth than ever before.

Introduction

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Mathematical-logical

The Classroom Amplifiers

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Introduction

To educate

- "To educate" means "to draw out."
- It implies a drawing out, an active participation, an awakening of inner thought processes.

The "seven intelligences" theory

- This theory is a classification system-multiple ways of being intelligent and expressing intelligence.
 - Howard Gardner proposed it.
 - Thomas Armstrong expanded upon it in practical ways.
- What is intelligence, in the context of this theory?
 - Intelligence is the ability to produce something of value within a certain cultural context.
 - Intelligence is the ability to respond successfully to new situations and the capacity to learn from one's past experiences.
- Criteria for what could be considered an intelligence
 - Symbol system; developmental history; vulnerability to impairment through insult or injury to a specific area of the brain; and the existence of a culturally-valued world-class level

Why amplified learning

- Gain understanding of your learning styles and the learning styles of others.
- B-r-o-a-d-e-n one's perspective of what you (and others) can be, both inside and outside of the classroom.
 - Each person has all seven intelligences.
 - Each person has the ability to develop each one to a reasonable level of proficiency.
- Develop a multi-path educational approach for your workshops.

The Classroom Core

Linguistic



What

- Words! and language
- Technical ability with words
- Reading, writing, speaking
- Syntax, phonology, semantics, pragmatics
- Rhetoric, mnemonics, explanation, language about language, word puzzles
- Linguistic abilities: almost entirely in the left brain
- This is the most widely-shared human intelligence; it's also the most thoroughly-studied intelligence.

Components

Of language

- Syntax
 - The rules of the order of words
 - The impact of the order of words
- Semantics
 - Shades of meanings
 - Dual meanings
 - The meanings implied by words used within a context
 - The emotions or images that words stir up
 - How to use words to convey, convince, or entertain
- Phonology
 - Sound and inflection
 - Rhythm and meter

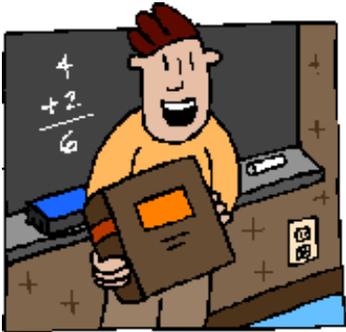
Within an individual

- Inner listening
 - The non-verbal process in which incubation and illumination occur
 - A gentle euphoria, a sense of calm and serenity, a feeling of being nurtured
 - With the intent of effecting a discovery or utilizing information in a creative process
- Inner speech
 - How we think and listen internally
 - Allows us to move with intention and conscious thought
 - Our companion on the journey of learning

How

- See words; hear words; say words.
- Listen to a lecture; listen to a tape; read something.
- Write; write; write.
- Speak about what you've learned so far, insights that have really "hit home" with you.
- Write into a log about what you've learned that day.
- Point/counterpoint "debates"
- Search the literature; scan and read at bookstores; spend time digging for key issues at the library.

Mathematical-logical



What

- Logic and numbers!
- Inductive and deductive reasoning
- Solve problems, do math, program.

- Fix, repair, troubleshoot.
- A love of abstract objects and actions on them
- A love for the exhilaration at the moment of breakthrough when working on a mathematical problem
- An object-based intelligence, one that finds and applies object abstractions

Components

- Concepts, abstract patterns, relationships
- Abstractions of objects, actions on objects

How

- Outline.
- Experiment.
- Solve problems.
- Conceptualize.
- Quantify.
- Reason (sequence, cause-and-effect, hypothesis, regularity)

The Classroom Amplifiers

Spatial



What

- Images, pictures, metaphors, color!
- An intuitive sense for visual representation
 - Shared by artists and viewers of the arts
 - Plus a sense of space
 - And that space allows certain structures, yet disallows others
- Examples
 - A sense of orientation or direction-finding one's way around
 - Recognizing objects and scenes-and what changes
 - Use of graphics which somehow correspond to the world around us
 - Finding suitable metaphors from analogies across different domains-perceiving similar patterns
- An object-based intelligence, one that works with concrete objects and their attributes (size, shape, color, position, etc.), how to transform them, and how they inter-relate in space.

Components

- Perception
- Manipulation (rotation, transformation)
- Production

How

- Draw; sketch; color; visualize; transform.
- Use white boards, easels, posters, "art" galleries.
- Use videos, slides, diagrams, maps, and charts.

- Use extended gestures and lively facial expressions.
- Move left to right and back again (different eye positions trigger different areas of the brain).
- Use visual verbs: see, take a look at, observe.
- Use a room which is comfortable and well-lit; add posters, plants, and art, to make it visually exciting.
- Visualize with variety.
 - Size
 - Brightness
 - Color
 - Saturation (vividness)
 - Hue (color balance)
 - Contrast
 - Black and white
 - Movement (slide or movie)
 - Speed
 - Direction
 - Sparkle
 - Horizontal or vertical hold
 - Strobe
 - Perspective
 - Associated (you are there) / disassociated (you are an observer)
 - Foreground/background
 - Frame/panorama (lens angle)
 - Focus (or lack of it)
 - Orientation (tilt, spin)
 - Distance
 - Location
 - Duration
 - Direction of lighting
 - Transparency/opaqueness
 - Symmetry (or lack of it)
 - Shape
 - One or multiple views
 - Dimensions (flat or 3-D)
 - Aspect ratio (height to width)
 - Texture (granularity)
- Guided imagery
 - Use verbal images, loaded with multi-sensory stimuli, and metaphors to anchor the images and enhance memory retention.
 - Basic pattern
 - Imagine you are...

- You've become....
- Your journey...
- Now you may come back to the classroom.
- Starting words
 - Explore...
 - Go back in time...
 - Become a...
- Guide them with your words, to see, hear, touch, taste, and smell.

Musical



What

- Music! and rhythm
- A feeling for music, which may be followed with technical ability
- Almost entirely in the right brain (complimentary or independent of linguistic intelligence)
- Music gives your right brain food for thought (and keeps it out of trouble) while you're left brain is hard at work.

Components

- Melody and rhythm
 - Melody: an agreeable arrangement of sounds
 - Rhythm: an ordered pattern of strong and weak sounds in music and speech
- Intensity, pitch, timbre
 - Intensity: the relative volume of a sound
 - Pitch: the characteristic of a sound determined by its frequency
 - Timbre: the quality given to a sound by its overtones (its harmonics)

How

Use melody.

- Sing, hum, whistle, chant, and make sounds.
- Play a wide variety of music.
- Use music in the background during work sessions.
- Lock in a key point with music that illustrates it.
- Play a musical instrument.

Use rhythm.

- Say the key points to a beat.
- Snap your fingers; tap the table; clap your hands.

Use intensity, pitch, timbre.

- Vary your own voice-intensity and pitch.
- Play a variety of orchestral music.
- Play a kazoo or a special kind of whistle.

Use your voice.

- Think of your body as a sounding board.
 - - Let your body fully participate in your speaking.
 - - Try deep breathing and humming warm-ups before you speak.
 - - Look up and stretch your neck, to loosen (and relax) your neck muscles before you speak.
- Use musical verbs: sound, tune in, ring a bell.

Get participants to use their voices, too.

- Say it to yourself, with your inner voice.
- Repeat after me.
- Say it with me.
- Share it with another person in this room.

Playing music in the classroom.

- Multi-intelligence engagement
 - Primary use: background sound for learning
- Atmosphere
 - Music creates an audio environment.

- Positive, safe, supportive, relaxed, exploratory, joyous
- Identify other sound sources. They affect the learning process, too.
- Energy-boosting and attention-span boosting
- Group cohesion, rapport
- Tension release, especially when combined with movement
- Theme accents

- Kinds of music
 - Gregorian (600-1400)
 - Chants; mellow, calming sounds
 - Baroque (1600-1750)
 - Poetic musical forms
 - Slow movements: for creative study, listening , and intense learning sessions (inner speech, inner thoughts); good for passive learning (pour in the info)
 - Bach, Handel, Pachelbel, Telemann, Vivaldi
 - Classical (1750-1820)
 - Forms (symphony, sonata, concerto)
 - More variation of emotional expression
 - Some believe that this music rhythmically and harmonically stimulate the brain most effectively; good for active learning sessions (integrate and apply)
 - Beethoven, Haydn, Mozart
 - Romantic (1820-1910)
 - Much greater emphasis on expression and feeling (so to use it in a learning environment, you'll need to be a bit more selective).
 - Brahms, Chopin, Liszt, Paganini, Puccini, Schubert, Schumann, Tchaikovsky, Verdi
 - Impression (turn of the 20th century)
 - Sounds and musical rhythms, in an impressionistic mix
 - Debussy, Ravel
 - Contemporary (1915-now)
 - Copland, Gershwin, Shostakovich, Stravinsky
 - Pop, rock, rap, country, jazz
- Working with tempo
 - Variety
 - Very slow, to give the body and mind permission to rest
 - Upbeat, to get people ready to go
 - Energetic and rhythmic, to allow people to get ready, synch up with others in the room.
 - Pacing in a session
 - Gradual changes in the speed of voice, music, or information

content delivery

- Begin slowly, clearly; gradually deliver faster and faster; then gradually slow down; and close.
- A gradual change of pace will help you keep the listener's attention.

Playing music while you teach.

- Again and again
 - Pour it in.
 - Use background music as you teach, to relax for passive learning (so you can pour in new material), or to excite (so you can get them to integrate what you've just poured in, via examples you do and they do).
 - Apply it.
 - Use background music to nurture concentration during individual or small group "lab sessions."
- How often
 - Try using 20 (or so) minutes per 45 minute session.
 - Perhaps 7 minutes at the start, middle, and end of a 45 minute session.
 - Use a low volume; use good equipment.
 - Play baroque (when pouring in content) and classical music (when assimilating and applying that content).
 - Use a 3-5 minute sound breaks, using exciting and energetic music, at several times each day.

Rhythms: the inner music of life

- Rhythm
 - From *rhythmos* (Latin), "a particular way of flowing." Plato defined rhythm as "the order in the movement."
- Rhythm and speech
 - Emotional texture can soothe, irritate, excite, bore, or encourage attention.
 - Tone changes, to perk attention
 - Volume
 - Pace
 - Cadence (rhythmic flow of sound)
 - Location
 - Place speakers so music is closer to the left ear; keep your speech going in the right ear.
(This feeds the music to the right brain and the speech to the

left brain.)

- Rhythms of the day
 - A rhythmic flow of high and low energy levels throughout each day.
 - Morning-active individuals
 - Afternoon-active or evening-active individuals
 - Common peak: about 10-noon, the best time for complex, cognitive work
 - Common low: 1-2 pm
 - Music helps!
 - You can use music to develop effective and productive rhythms for more effective living, bridging between your personal rhythms and the demands of your day.
- Rhythms of presentation
 - Use 45 minute cycles, with shorter cycles within (pour info in; then assimilate and apply)
 - Best remembered info: first and last, in each time chunk
 - Regular breaks!
 - Free time, movement, change of teaching pace, new music, new positions
 - Use fun music; use cross-lateral exercise (frisbees!).
 - Time to assimilate, digest, internalize, consolidate
 - Rhythmic delivery of instruction is a subtle yet critical tool for more effective teaching.
 - Harmony among participant, subject matter, and teacher
 - Switching gears
 - Draw, with soft music in the background.
 - Walk and hum along the way.
 - Work and listen to and tap out rhythmic music while you do so.

Bodily-kinesthetic



What

- Broad motor ability, fine motor ability, or both
- Highly differentiated and skilled motion, to express something or achieve a goal
- One who works skillfully with real-world objects, using fine motor skills or broad motor skills.
- An object-based intelligence, one that works with invoking actions on real-world objects
- Most learners need physical engagement-opportunities for movement while learning.

Components

- Skillful body motion and object manipulation
- Strength, endurance, flexibility, balance, dexterity, expressiveness, coordination, reflexes

How

Use skillful body motion.

- Team work sessions-at a table, along the walls.
- Play act (role play; improvise).
- Use creative movement (e.g., a "wind up and let it go" motion).
- Take a stretch break; take a massage break.
- Play games together; use game balls and other toys (encourage a playful attitude toward learning).

Use skillful body manipulation.

- Touch, manipulate, and move.
- Hands-on, hands-on, hands-on

Use kinesthetic verbs.

- Get a better handle on, feel, fits

Kinesthetic variety

- Amount of movement
- Duration of movement
- Intensity of movement

- (pressure, temperature)
- Size of movement
- Rhythm of movement

Intrapersonal



What

- Understanding self!
 - Vision, planning
 - Self-assessment, reflection
 - Introspection
 - Self-directed (intense self-discipline)
- An individual's examination and recognition of the feelings and motivations of himself
- An inner awareness, used to produce something of value within a cultural context

Components

- Awareness of one's inner life-a wide range of feelings (and care for oneself in each); strong self-esteem
- Self-independence and intense self-discipline
- Ability to derive pleasure from being by oneself
- Rapport, feeling safe, heard, and part of a learning experience.

How

- Self-study
- Individual projects and games
- "Learning centers:" multiple learning options, running in parallel, encouraging the individual to take responsibility for his learning.

- Time to relate the subject matter to one's personal experiences
- Self-guided learning materials
- Self-developed learning materials
- Discovery log
 - At the end of each unit, ask participants to review what they learned and the discoveries that they made. Give them a minute or two to write down their most important discoveries in their logs.

Interpersonal



What

- Understanding others!
 - Reading other people
 - Social skills, rapport-building, building relationships
- An individual's examination and recognition of the feelings and motivations of others.
 - With individuals (moods, temperaments, intentions, and desires)
 - With groups (move others to enthusiastic action)

Components

- The direct perception of other individuals
- The ability to notice and make distinctions among other individuals, especially their moods, temperament, motivations, and intentions
- Listening, assertion, conflict resolution, and collaboration skills

How

- Teams!
 - Team exercises and projects
 - Team consensus on something, after they've worked individually for a

while

- "Blab school"
- Work-in-progress exhibitions
- Group discussions and problem-solving sessions
- Social events
- Teach each other what you've learned.
 - The best way to learn is to teach: your observational powers become keener, motivation is higher, and purpose is focused. Concepts are solidified in one's mind as one explains them.
 - We remember far better when we put something in our own words and hear ourselves say those words. Hearing someone else express something just doesn't have the same impact.
 - Tell others about what you've learned and observed.

Other Notes

Opening, during, closing

- Opening
 - Attention (verbal and non-verbal)
 - Purpose and agenda in the first 30 seconds
 - Rapport and bonding
- During the session
 - Creative learning environment, engaging multiple intelligences throughout
- Closing
 - Movement (progress we made)
 - Validation (important)
 - Completion (closure; we got it done)

Left-right and VAK

- Left-right
 - Left: logical, sequential, linear, rational
 - Right: random, unordered, intuitive, holistic
- Visual-auditory-kinesthetic (VAK)
 - Visual: learning through seeing (visual intelligence)
 - Auditory: learning through hearing (linguistic intelligence, musical intelligence)
 - Kinesthetic: learning through moving, doing, and touching (spatial intelligence, bodily-kinesthetic intelligence)

"New ideas" process

(a rhythmic pattern that brings fresh ideas and new insights into every area of life)

- Preparation: gathering information and exploring
- Incubation: processing time for the mind and body
 - Slow down! Allow space and time for incubation and consolidation of thoughts.
 - Too much activity builds stress and does not allow one to incubate and discover insights.
- Aha: an exciting point of insight
- Verification: checking out the insight
- Implementation: putting the insights into practice

Teaching by example

- "The example teaches." (A proverb in Latin)
- "One wonders if anything else ever does." (An added observation from Dale Carnegie)
- Direct the participant's attention to an overall example. Participants discover the overall meaning first, then they discover a second plane (with more detail), and then deeper planes. Stimulate the whole; let them discover the parts; and quickly integrate those parts back to the meaningful whole (keeping the overall focus on the whole).

Comfort zone

- Connectivity: knowledge, experience, connections from one activity to another, inspiration
- Comfort zone. Find it. Then stretching outside of it just a bit. Enter the learning zone!

Suggestion

- Suggestion has a profound influence on a learning situation.
- Be aware of and use both verbal and non-verbal suggestions.
 - Every single detail in a learning environment makes a positive or negative suggestion.
 - How you set up and work with your learning environment greatly influences how (and how much) people learn.
- Focus on sending positive, supportive messages about learning.
 - - "Learning comes easily and naturally to me."
 - - "Learning is an exciting adventure for me."
- Ideas: posters, self-developed positive statements about learning; relaxation, multi-sensory success visualization, rhythmic recitation

Success and celebrations

- Use a success in one activity as an "anchor" for additional learning.
- Celebrate! your completions (accomplishments, achievements), both in the classroom and in all of life.

References

These are the references the author used when researching and teaching this subject, from 1992 to 1996. Some of these books may no longer be in print. And other books on this topic have surely been written since that time.

Each of these books are significant in the field of multi-intelligence education (more often referred to as "accelerated learning").

For a gentle introduction, read one of Armstrong's books. Recommended: *In Their Own Way*.

For the definitive text, albeit a psychology text yet fascinating, is Garner's book. *Frames of Mind: The Theory of Multiple Intelligences*.

Then read Gardner's book (the classic and oh so informative).

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