EDUCATIONAL TECHNOLOGY : DEFINITIONS

Susan Detrie

INTRODUCTION: ET | IT | ID | HPT

The average person rarely thinks about the fact that color is one of the few things we see daily that simultaneously is systematic, scientific, messy, descriptive and evocative of everything from the austerity of pure physics to the emotional states of people to the human mind at work.

In looking at the field of educational technology and it's many dimensions: instructional design, instructional technology and human performance technology, it can be said that color systems make a good framework and an interesting metaphor for describing the vibrant, scientific, chaotic and changing nature of the field.

Educational technology, in many respects, contains every emotive aspect of color and through the related fields of cognitive science, law, computer science, linguistics, visual art, statistics and assessment, ethics and teaching can comprise a large palette to draw from in developing educational materials for schools and work, as well as examining organizations and their systems. Color can also reflect diversity of people, global understandings, cognitive processing and the wide range of tools available to professionals in the field.

This paper will focus on the principles of additive color to describe the field of educational technology. Color has two fundamental systems, one for mixing pigment and the other for mixing light. The system for mixing pigment has the familiar red, blue and yellow as its primary colors. These colors mix to make black, and are referred to as substractive color. The system for mixing light has red, green and blue as its primary colors. These three colors mix to make white light and are referred to as additive colors.

Everyday we encounter additive color on computer screens, televisions, web pages and technology devices, since every pixel on a screen is comprised of a red component, a blue component and a green component. As the poetic DNA of computers, additive color makes a strong metaphor for the field of educational technology and it's definitions. Additionally, the combination of red, blue and green light and the resulting white light is a fitting way to help describe and define a field in education, where researchers and practitioners always hope to enlighten others through learning.

DEFINITIONS: ET | IT | ID | HPT

Educational Technology	Educational technology utilizes research, adheres to ethical standards, and creates and applies appropriate technologies to facilitate learning in diverse environments and improve performance. (Januszewski & Molenda, 2008; Spector, 2008)
Instructional Systems Design	Instructional systems design is a more descriptive name for instructional design. As major compnent of the field of educational technology, it focuses on the systematic procedures and the creative problem solving used in developing learning and training in an organized and methodical way. (Branch & Merrill, 2012)
Instructional Design	Instructional design is a major component of the field of instructional systems design and focuses on the procedures for developing curriculum and training in an organized and methodical way to meet specific learning and training objectives. (Branch & Merrill, 2012)
Instructional Systems Technology	Instructional systems technology is a more descriptive name for the field of instructional technology, acknowledging that technology is only an element of a greater whole and a larger system that seeks to address specific learning goals in order to increase human performance in diverse contexts.
Instructional Technology	Instructional technology is a major component of the field of instructional system technology and focuses on a specific learning goal, using appropriate technologies and planned instruction with the goal of increasing performance. (Reiser, 2007)
Human Performance Technology	Human performance technology is a systemic approach to the study of and solutions for perfomance and competence issues in organizations. Cost-effectively addresses human performance issues by analyzing, evaluating and designing interventions. (Pershing, 2006)
Human Performance Improvement	Derives from the parent field of human performance technology. Achieves through people, performance valued by an organiztion. Emphasizes cost of behavior and performance versus results produced. (Stolovitch, 2007)

WHY COLOR AND ET | IT | ID | HPT?

COLOR REFLECTS COGNITIVE PROCESSING

COLOR REFLECTS DIVERSE PEOPLE

COLOR REFLECTS MULTIPLE VIEWPOINTS

COLOR REFLECTS A NONLINEAR, MESSY WORLD

COLOR REFLECTS DIVERSE GLOBAL COMMUNITIES

COLOR REFLECTS SYSTEMS

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ET | IT | ID | HPT

Educational Technology: ET

Instructional Systems Design: ISD

Instructional Design: ID

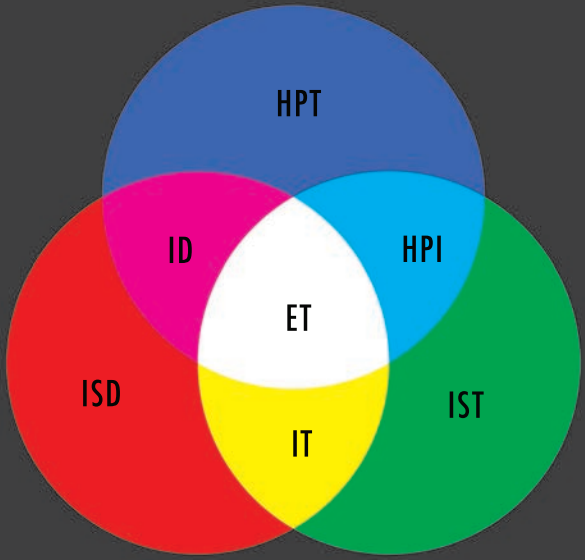
Instructional Systems Technology: IST

Instructional Technology: IT

Human Performance Technology: HPT

Human Performance Improvement: HPI

RED + BLUE + GREEN LIGHT CREATE WHITE LIGHT



ADDITIVE COLOR AS A METAPHOR FOR ET + ID + IT + HPT

Educational Technology : All the primary colors of light combine to form white light. The intersection of all the fields: IST, ISD and HPT create the core of educational technology.

Instructional Systems Design: Red is a primary color of light and here reflects action and power. As a a central and primary component of educational technology, ISD involves active strategies and problem solving in creating, developing, and executing learning and training within larger systems.

Instructional Design: Magenta is a secondary color of light. Instructional design, is more narrowly construed than ISD and focuses on designing learning activities and targeting a specific performance or learning goal. Magenta as color that indicates change, practicality and common sense aligns with the goals and practice of ID.

Instructional Systems Technology: Green is a primary color of light and here reflects growth, balance and harmony. The integration and appropriate use of technology within larger systems to promote learning and training goals is major function of IST, as it seeks to balance instructional goals with tools for learning and technology.

Instructional Technology: Yellow is a secondary color of light. Instructional technology focuses specifically on technologies used in learning and training goals. Here yellow reflects the brightness of attention and the optimism in the increased use of technology to advance the goals of education.

Human Performance Technology: Blue is a primary color of light and here reflects authority, trust and dignity. The most common color for corporate logos, blue is approriate for human performance technology, which is applied predominantly in the workplace. As a major compnent of educational technology its aim is to improve performance of organizations.

Human Performance Imrovement: Cyan is a secondary color of light. As a component of HPT, human performance improvement forcuses on people. Blue-green, as it is more commonly referred to, opens lines of communication, promotes clear thinking and decision-making in color lore.

CONCLUSION: ET | IT | ID | HPT

Color is not a flawless metaphor if viewed with an eye towards a literal relationship between the field of educational technology and the system of additive color.Still as a potentially poetic description of the field, it can always be repurposed and used to express the many dimensions and potentials of educational technology. Not every field of study contains such a wide range of activities as those found in the research and practices of edicational technology. With the caution, care and attention to detail of research, as well as the bold, experimentation of MOOC's and the methods to improve large organizations and the performance within them, the field covers a great deal of ground and draws from so many related areas that color as a metaphor makes sense. The field has innovators bold enough to create robots to educate middle school students and practitioners careful and methodical enough to look at life and death procedures in hospitals. Few things can really express this range of human activity. Still color can come close, as well as pairing the idea of light and learning, through the combination of the primary colors of light.

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