



# Psychophilosophical Foundations of Teaching and Learning in the Health Sciences

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**TEACHING...**

**An ART or SCIENCE?**

# Teaching as a SCIENCE

Skinner (1968)

- Teaching as a result of conscious application of scientifically validated **theory** to classroom situations
- Correct **analysis** of student behavior
- Based on **application of theory** abstracted from the reality of the classroom & its environment

# Teaching as an ART

- A performance characterized as **aesthetic** (Eisner 1979)
- A teacher can perform with such **skill and grace** that the performance is an intrinsic form of **expression** – an aesthetic experience
- Teachers exercise qualitative judgments

# Teaching as an ART

- Teaching involves tension between **automaticity & inventiveness**
- Many of its ends are emergent in the course of interaction with students

# Teaching as a SCIENCE & ART

Scientific  
Basis



Correct application of  
Scientific Principles

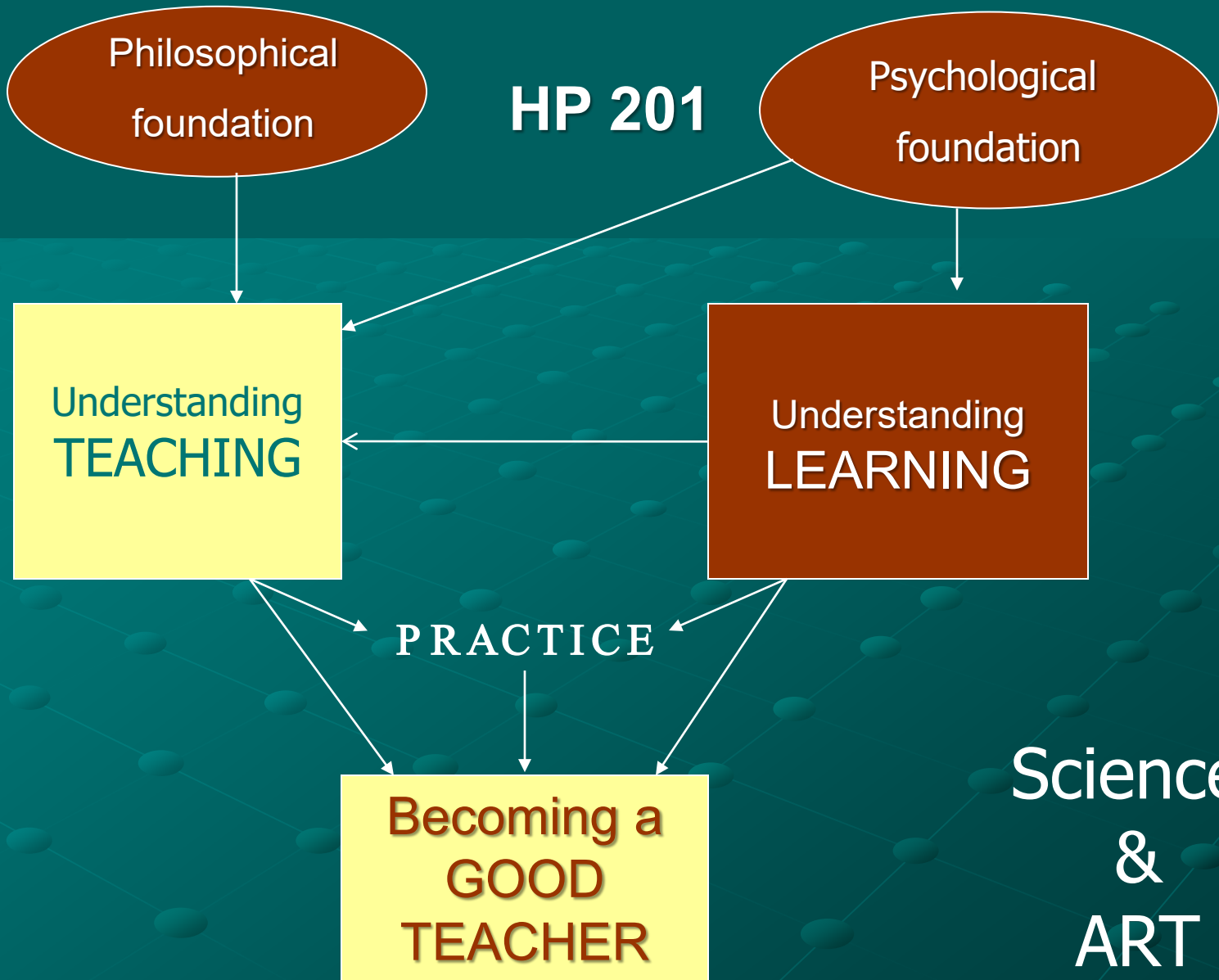
Mastery  
of theory

**EFFECTIVE  
LEARNING**

Aesthetic  
experience

**The critical, methodical appraisal of  
teaching principles & practice**

would seem to be a prerequisite for the construction  
of a comprehensive theory of teaching,  
whether it be considered a science or an art.



Why is it important for a  
TEACHER to understand  
Philosophy?

# What is Philosophy?

- "love of wisdom"

# What is Philosophy?

- Any coherent body of knowledge that represents a “master plan” for wise **decision making**
- World View

# What is Philosophy?

- Represents a deeply felt **commitment** & a powerful determinant in the decision-making processes of every individual & the society

# What is Philosophy?

- Unexamined and operates at an unconscious level
- Often found to contain irrational elements, incomplete ideas, and inconsistent beliefs



# Philosophizing (Reflecting, Asking Questions...) demand from us:

- Consistency
- Precision



# Consistency



# Precision

# 3 Philosophical Categories

1. Ontology / Metaphysics
2. Epistemology
3. Axiology
  - Ethics
  - Aesthetics

# Ontology/ Metaphysics

What is real?

- Deals with the nature of reality
- 3 ontological positions:
  - Spiritual** - locus of reality in a supernatural realm
  - Material** - what is real is composed of matter, naturalistic tradition
  - Experience** - reality can reside only in human experience

**Educational Concern = the Curriculum**

# Epistemology

What is true? How do we know the truth? How do we know what we know?

determine what we can know & say about reality

EPISTOMOLOGY

ONTOLOGY

suggests the nature of knowledge & the procedures that are used to obtain it

Educational Concern = Methods of Instruction

# Epistemology

What is true? How do we know the truth? How do we know what we know?

- Deals with the nature of knowledge
  1. Knowledge by authority
  2. Discovery
  3. Common sense
  4. Logic
  5. Construction

# Epistemology: Ways of knowing

1. Knowledge by authority : (other-worldly ontology)
  - Man as receptor of knowledge which originates from another world
  - Through revelation or intuition
  - Yield absolute and immediate knowledge



# Epistemology: Ways of knowing

## 2. Discovery

- characteristic of earth-centered ontologies
- sense data as most reliable route to knowledge
- yield absolute or immediate knowledge
- suggests active role of the learner

## 3. Common sense/collective perception/ intersubjective verification



# Epistemology: Ways of knowing

## 4. Logic

- systematic treatment of ideas
- indispensable tool in dealing with sense data

## 5. Construction: (man-centered ontologies)

- knowledge is constructed out of human experience

# Axiology

What is moral and good? What is beautiful?

- Deals with the nature of value

2 main categories:

1. Ethics
2. Aesthetics

Educational Concern = Behavior

# Axiology

What is good? What should man prefer?  
What is really desirable?

Deals with the nature of value

**2 main categories:**

1. Ethics
2. Aesthetics

# Ethics

- What should I do?
- Concerned with concepts of right & wrong, good & bad, as they apply to human conduct
- Moral issues that involve the quality of relationships between human beings

# Aesthetics

What should I like? What is beautiful?

- Qualities of beauty & enjoyment in human experience

# 4 Major World Philosophies

**Other-Worldly**

Idealism

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**Earth-centered**

Realism

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**Man-centered**

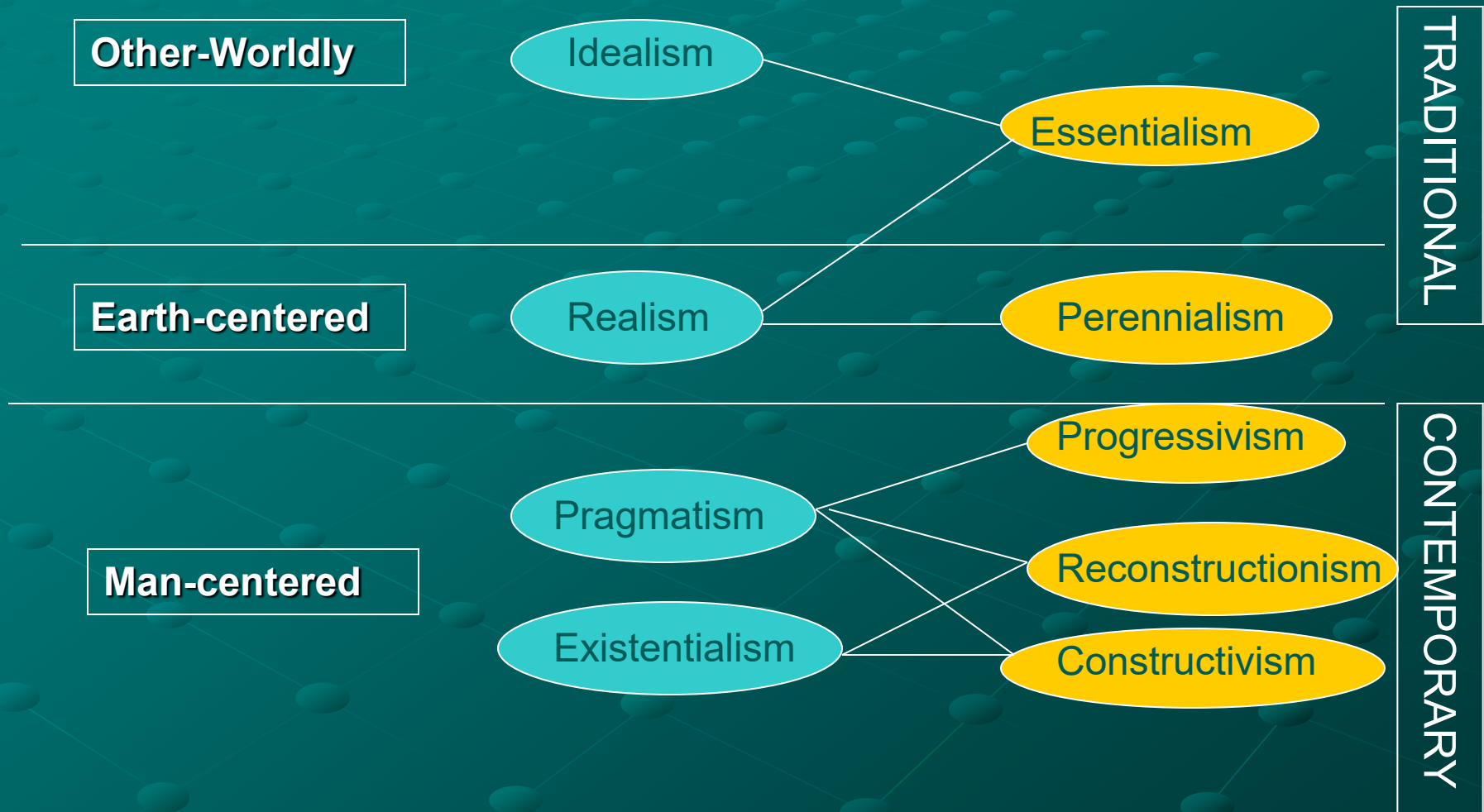
Pragmatism

Existentialism

# Organization of Philosophical Positions

<b>Problem Area/ Philosophical Position</b>	<b>Ontology</b>	<b>Epistemology</b>	<b>Axiology</b>	<b>Representative Philosophical Schools</b>
<b>Other Worldly</b>	Absolute Reality exists in another supernatural world	Absolute Knowledge is received	The absolute good is God or the ideal	Religion <b>Idealism</b> Transcendentalism
<b>Earth-centered</b>	Absolute Reality is inherent in this world	Absolute Knowledge is discovered	The absolute good is the law of nature	<b>Rational Realism</b> <b>Empirical Realism</b> Positivism Naturalism Logical Empiricism Dialectical Materialism
<b>Man-centered</b>	Relative Reality is human experience	Relative Knowledge is constructed	The relative good is the preferred consequence	<b>Pragmatism</b> Instrumentalism Experimentalism <b>Existentialism</b> Phenomenology

# Educational Philosophies



# IDEALISM

- A world of the mind
- Schools exist to sharpen the mind & intellectual process
- Absolute concepts of truth, beauty & honor
- Real world lies beyond & can only be reached by the intellect

# REALISM

- Form was the principle of actuality
- All things were composed of matter & form
- Form ~ pure rationality
- Matter ~ pure materiality

# Essentialism

- Other- worldly
- Rooted on idealism & realism (William Bagley)
- School curriculum should be geared toward essentials or fundamentals: 3R's & 5 essential academic subjects: English, Mathematics, History, Science & Foreign Language
- Subject-centered but not rooted in the past

# Perennialism

- Based on realism
- Earth-centered
- Oldest, most conservative educational philosophy
- Relies on the past
- View of the unchanging nature of the universe and of human nature
- Curriculum is subject-centered

# Perennialism

- Liberal education centered on language, literature, mathematics
- Robert Hutchkins & Mortimer Adler
- Ontology is 2-sided:
  - Natural world, open to reason
  - Supernatural realm open through revelation, faith & intuition

# PRAGMATISM / EXPERIMENTALISM

- Man-centered
- American philosophy
- Based on change, process & relativity
- Reality as constantly changing
- Whole affects the parts & both are relative
- Ideal teaching method is teaching critical thinking

# PRAGMATISM / EXPERIMENTALISM

- Charles Pierce & William James developed its principles:
  - Rejected preconceived truths & eternal values
  - Promoted method of testing & verifying ideas
- John Dewey : educational pragmatist viewed education as a process for improving human condition
  - Curriculum based on child's experiences
  - Interdisciplinary subject matter

# Progressivism

- As a protest to perennialism
- Contemporary reform movement
- Henry Barnard, John Dewey
- Skills & tools of learning is problem solving & scientific inquiry
- Skills & experience important for democratic living

# Progressivism

- Because reality is constantly changing, little focus on fixed body of knowledge
- How to think & not what to think
- Teacher served as guide in problem solving

# Reconstructionism

- Based on socialistic & utopian ideas
- Society-centered education
- Schools as agent of social change
- Brameld: reconstructionism as a crisis philosophy

# Reconstructionism

- Analysis of problems are insufficient, what is needed is commitment & action by students & teachers
- Society is always changing & curriculum has to change
- Curriculum based on social issues & social services

# EXISTENTIALISM

- Man-centered
- European philosophy
- Individual decisions lead to personal self-definition
- We are what we choose to be
- Learners are free to choose what to study & determine what is true
- Most important knowledge is about human condition

# Constructivism

- Knowledge is not discovered but constructed by the individual through his interactions with his environment
- Knower interprets and constructs a reality of meaningful representations based on his experiences and interactions with his environment

# Constructivism

- Knowledge and reality do not have an objective or absolute value
- Each of us generates our own "rules" and "mental models," which we use to make sense of our experiences
- Making sense of one's experiential world

# Constructivism

- Learning emphasizes the process and not the product
- Learning is simply the process of adjusting our mental models to accommodate new experiences
- Multiple truths, representations, perspectives and realities
- Students' errors are seen as a means of gaining insight into how they organize their experiential world

# Constructivism

- *On Curriculum* –
  - Elimination of a standardized curriculum
  - Promotes curricula customized to students' prior knowledge
  - Emphasizes hands-on problem solving.

# Constructivism

- *On Instruction* -- focus on making connections between facts and fostering new understanding
  - tailor teaching strategies to student responses
  - encourage students to analyze, interpret, and predict information
  - rely heavily on open-ended questions
  - promote extensive dialogue among students

# Review Questions

- What is a philosophy and why is it important for teachers?
- Define the three branches of philosophy.
- What is idealism and name a proponent of it?
- What is realism and someone who supports it?
- What is neo-Thomism and who is it named after?
- What are two contemporary philosophies?
- What are some key differences between the two contemporary philosophies?

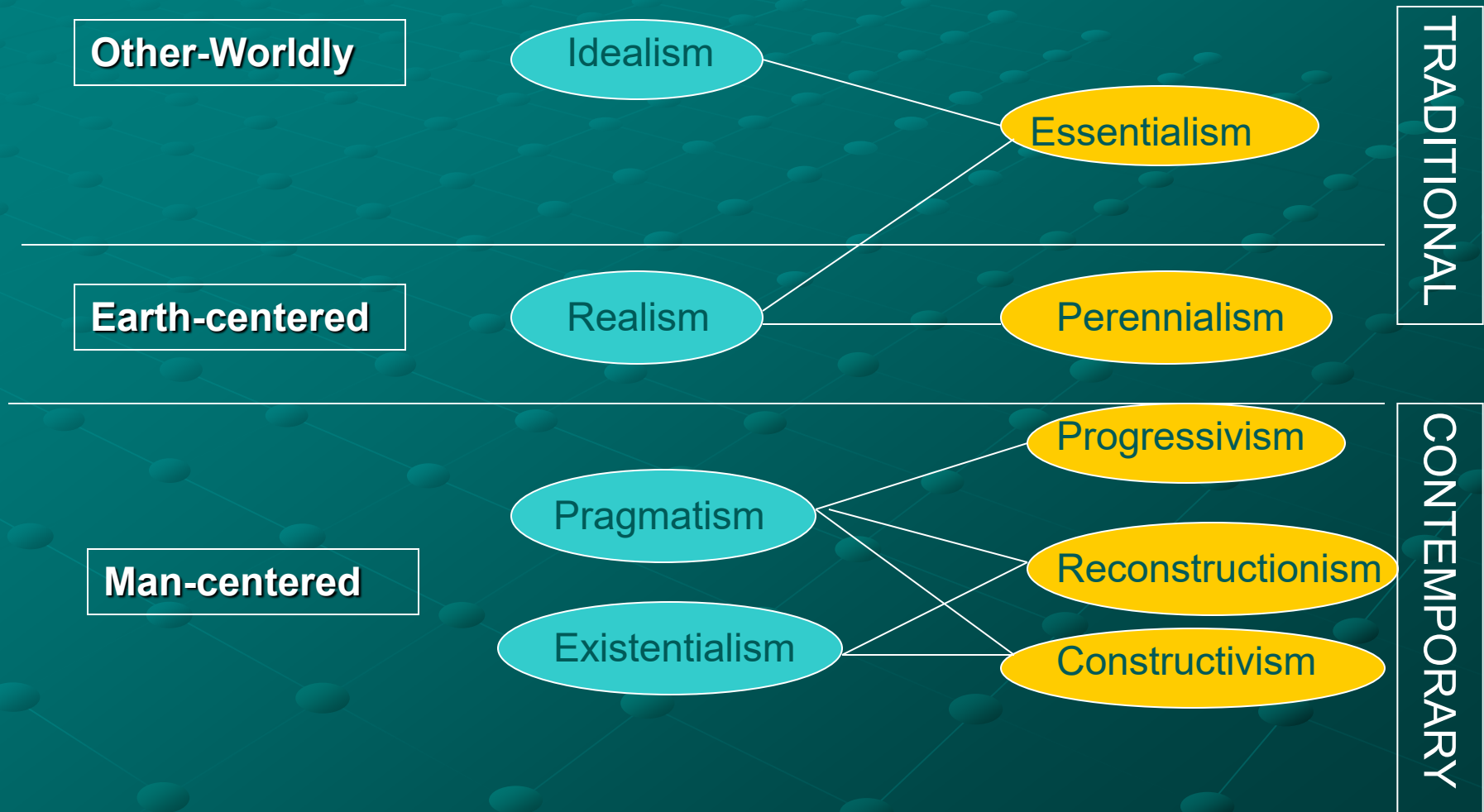
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# Educational Philosophies



# Educational Philosophies...

- Encourage students apply their own intellectual ability
- Make us aware of the need for asking questions
- Most schools combine philosophies

# Quotable Quotes

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It is the mark of an educated mind to be able to entertain a thought without accepting it.  
(Aristotle)

# Quotable Quotes

*"All who have meditated on the art of governing mankind have been convinced that **the fate of empires depends on the education of youth.**"*

**(Aristotle)**

# Quotable Quotes

*Plants are shaped by cultivation and men by education. .. We are born weak, we need strength; we are born totally unprovided, we need aid; we are born stupid, we need judgment. Everything we do not have at our birth and which we need when we are grown is given us by education.*

*(Jean Jacques Rousseau, Emile, On Philosophy of Education)*

# Quotable Quotes

*My dear children: I rejoice to see you before me today, happy youth of a sunny and fortunate land. Bear in mind that the wonderful things that you learn in your schools are the work of many generations, produced by enthusiastic effort and infinite labour in every country of the world. **All this is put into your hands as your inheritance in order that you may receive it, honour it, and add to it, and one day faithfully hand it on to your children.** Thus do we mortals achieve immortality in the permanent things which we create in common. If you always keep that in mind you will find meaning in life and work and acquire the right attitude towards other nations and ages. (Albert Einstein talking to a group of school children. 1934)*

# Quotable Quotes

The fundamental principle of education is to understand the truth for oneself.

The fundamental principle of philosophy is to realise that all truth comes from reality.

**Thus educational philosophy must be founded on the truth of what exists.**

(Geoff Haselhurst, Philosopher of Science, Metaphysics, Theoretical Physics.)

# Quotable Quotes

*Numerous are the academic chairs, but rare are wise and noble teachers. Numerous and large are the lecture halls, but far from numerous the young people who genuinely thirst for truth and justice. Numerous are the wares that nature produces by the dozen, but her choice products are few.*

*We all know that, so why complain? Was it not always thus and will it not always thus remain? Certainly, and one must take what nature gives as one finds it. But there is also such a thing as a spirit of the times, an attitude of mind characteristic of a particular generation, which is passed on from individual to individual and gives its distinctive mark to a society. **Each of us has to do his little bit toward transforming this spirit of the times. (Einstein, 1954)***



# *Plato, Quotations on Education*

..for the object of education is to teach us to love beauty.  
**(Plato)**

'And once we have given our community a good start,' I pointed out, 'the process will be cumulative. **By maintaining a sound system of education you produce citizens of good character**, and citizens of sound character, with the advantage of a good education, produce in turn children better than themselves and better able to produce still better children in their turn, as can be seen with animals.'**(Plato)**

# *Plato, Quotations on Education*



'It is in education that bad discipline can most easily creep in unobserved,' he replied.

'Yes,' I agreed, 'because people don't treat it seriously there, and think no harm can come of it.'

'It only does harm,' he said, 'because it makes itself at home and gradually undermines morals and manners; from there it invades business dealings generally, and then spreads into the laws and constitution without any restraint, until it has made complete havoc of private and public life.'

'And when men who aren't fit to be educated get an education they don't deserve, are not the thoughts and opinions they produce fairly called sophistry, without a legitimate idea or any trace of true wisdom among them?'

'Certainly'.

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'Certainly'.



# *Plato, Quotations on Education*

'Because a free man ought not to learn anything under duress. Compulsory physical exercise does no harm to the body, but **compulsory learning never sticks to the mind.**'

'True'

'Then don't use compulsion,' I said to him, ' but let your children's lessons take the form of play. You will learn more about their natural abilities that way.'