

Nayda G. Santiago Assistant Professor Electrical and Computer Engineering Department

> Monday, March 16, 2009 ICOM 5047

Motivation

- Lack of understanding of own skills competence
- Unawareness of degree of scholarship in activities
 - Quality of work
- Unrealistic expectations
- Expect an A for non-quality work

Psychology

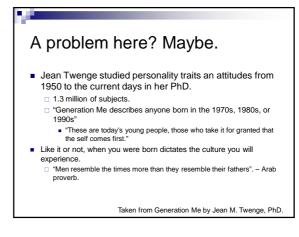
 Study of human mental functions and behavior
 Why do we behave in a certain way



Skills for success in higher education

- Independence
- Perseverance
- Responsibility
- Dedication
- Initiative
- Scholarship
- Freedom from emotional conflict

<section-header> A problem here? Maybe. 9 Jean Twenge 9 Seychology Researcher 9 Professor San Diego State 9 Books 9 Generation Me: Why Today's Young Americans Are More Confident, Assertive, Entitled - and More Miserabla Than Ever Before 9 The Narcissism Epidemic: Living in the Age of Entitlement



More on generation me.

What are her findings?

- Individual comes first
- Feeling good about yourself is a primary virtue

Taken from Generation Me by Jean M. Twenge, PhD.

More on generation me.

Adulthood shock

- Constant praise in childhood and self-esteem boosting, unrealistic expectations did not prepare us for increasingly competitive workplace.
- Depression
- Yeah, right attitude.
 - There is no point in trying.
 Self esteem will suffer if you fail.(not feeling good).

Contrast?

University

- Perseverance
- Focus on scholarship
- Acceptance of responsibility.
- Freedom from emotional conflict.

- Generation METhere is no point in trying
- Focus on feeling good.
- "Personal responsibility
- has faded." Blame others.Depression and
- loneliness.

Responsible independent study

A Second Study

- Student Expectations Seen as Causing Grade Disputes
 - MAX ROOSEVELT, February 17, 2009, New York Times
- Research at University of California, Irvine
 - Ellen Greenberger
 - Research Professor, Ph.D. Harvard University
 - Department of Psychology and Social Behavior
 - "Self-Entitled College Students: Contributions of Personality, Parenting, and Motivational Factors"
 - The Journal of Youth and Adolescence

Students expectations....

- "Many students come in with the conviction that they've worked hard and deserve a higher mark,"
- "He attributes those complaints to his students' sense of entitlement"
- "That is the default grade. They see the default grade as an A."
- "Students often confuse the level of effort with the quality of work. There is a mentality in students that 'if I work hard, I deserve a high grade."
- "Attributing the outcome of a failure to someone else is a common problem."

Example: Sense of entitlement?

• 03/13/2009

- When Miley Cirus learned that Radiohead was not interested in meeting her:
 "I'm gonna ruin them"
- "When Miley grows up, she'll learn not to have such a sense of entitlement,"

Radiohead (English rock band)



A Third Study

- Justin Kruger and David Dunning
 Cornell University
 Psychology Department
- Dunning-Kruger Effect
 Published in the Journal of Personality and Social Psychology
 Description
 - December 1999

Dunner-Kruger Effect

Cognitive bias

- "people reach erroneous conclusions and make unfortunate choices, but their incompetence robs them of the metacognitive ability to realize it"
 - Incompetence lack of competence
 Competence skill, knowledge, or ability
 - Competence skill, knowledge, or ability
- Study on logical reasoning skills, grammatical skills, and humor

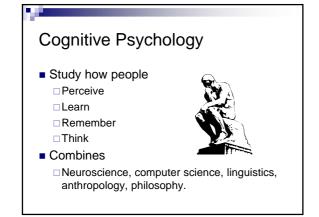
Dunner-Kruger Effect

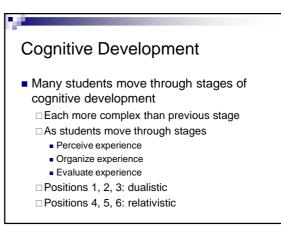
- With a typical skill which humans may possess in greater or lesser degree
 - Incompetent individuals tend to overestimate their own level of skill.
 - Incompetent individuals fail to recognize genuine skill in others.
 - Incompetent individuals fail to recognize the extremity of their inadequacy.
 - □ If they can be trained to substantially improve their own skill level, these individuals can recognize and acknowledge their own previous lack of skill.

Dunner-Kruger Effect

 People with true knowledge tended to underestimate their competence!!!!!







Cognitive Development

- Dualistic: how to account for uncertainty Position 1: All information is either right or wrong. Uncertainty is not perceived.
 - Position 2: All information is either right or wrong, and where uncertainty seems to exist, it is really an error committed by a wrong authority.
 - Desition 3: All information is either right or wrong, but uncertainty is acceptable in areas where experts do not know the answers yet. Someday the right answer will be discovered or found.

Cognitive Development

- Behavior in dualistic stage
 - Classroom where multiple points of view are presented
 - Act confused
 - Hostile □ Want facts



- Do not give me conflicting opinions
- Teacher must be strong, authoritative, clear
- □ Passive recipients of body of knowledge
- Resent being asked to play an active role in class

Cognitive Development Behavior in dualistic stage Positions 1 and 2 Students learn by memorizing Learn basic facts Definitions Identify parts Position 3 Students can compare and contrast · See multiple perspectives, parts, opinions, evaluations

Basic analytic tasks but need how to use supportive evidence

Cognitive development

- Relativistic: Knowledge seems uncertain or valid within a context
 - Position 4: The student begins to feel that most questions cannot be answered with absolute certainty and when uncertainty prevails, feels that all answers are of equal value
 - Position 5: The sense of relativism enlarges and the student begins to form non absolute criteria for making judgments
 - Position 6: The ability to make judgments increases and a personal stance or commitment develops

Cognitive development

- Relativistic: Knowledge seems uncertain or valid within a context
 - Position 4: The student begins to feel that most questions cannot be answered with absolute certainty and when uncertainty prevails, feels that all answers are of equal value
 - Position 5: The sense of relativism enlarges and the student begins to form non absolute criteria for making judgments
 - Position 6: The ability to make judgments increases and a personal stance or commitment develops

Cognitive development

- Students in position 4
 Compare and contrast
 - Abstract analysis
 - Synthesis
 - Positive and negative critiques, support arguments
- Students in position 5 &6 Can relate learning in one context with another
- Look for relationships in learning Evaluate
- Conclude
- Support analysis

- Soupor analysis Synthesize different points of view Modify and expand concepts Generate new ways of looking at questions and formulate new questions

Blooms taxonomy

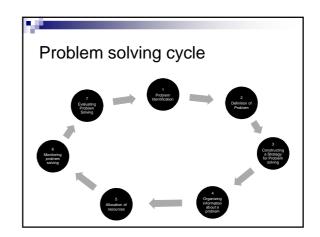
- Level of abstraction and complexity of thinking process
 - □ Knowledge
 - Comprehension
 - Application
 - □ Analysis
 - Synthesis
 - Evaluation

Definition

- Knowledge: Remembering the previously learned material
- Comprehension: Ability to grasp meaning of the material Application: Ability to use learned material in new and
- concrete situations Analysis: Ability to break down material into its component parts so that its organization and structure may be understood.
- Synthesis: Ability to put parts together to form a new whole.
- Evaluation: Ability to judge the value of material for a given purpose.

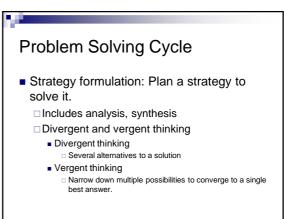
Problem Solving

• "We engage in problem solving when we need to overcome obstacles to answer a question or to achieve a goal."



Problem Solving Cycle

- Problem Identification □ Identifying the problematic situation and the goal.
- Problem definition and representation Define and represent the problem well enough to understand how to solve it. □ Most important step.

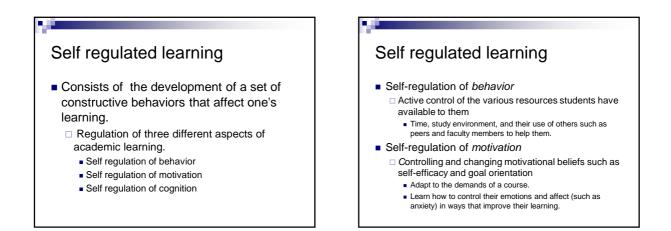


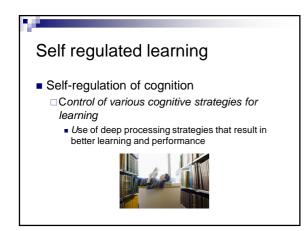
Problem Solving Cycle Organization of information Organize available information in a way that enables you to implement the strategy. Resource allocation Limited resources Time Money Equipment Energy Space Etc.

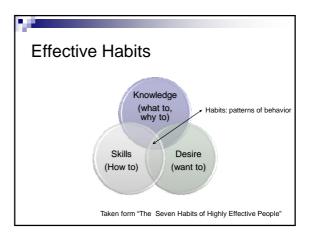
Problem solving cycle

Monitoring

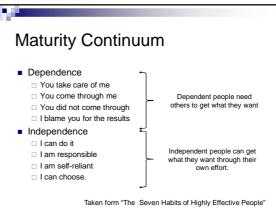
- Do not set a path to reach a solution and wait until the end to check where they are.
- □ Check all along the way to make sure you are getting closer to the goal.
- Reassess
- Evaluation
 - Evaluate solution after you have finished.
 - New insights. Lessons learned.

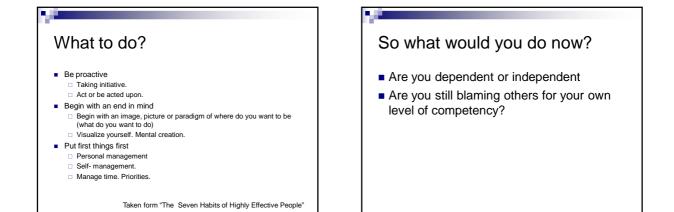


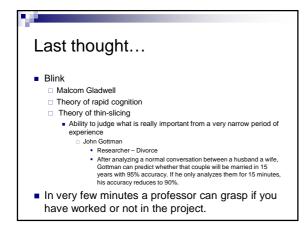




Maturity continuum From dependence to independence Infant Totally dependent on others Directed, nurtured and sustained by others Independent Physically, Mentally, Emotionally, Financially Take care of ourselves Self reliant Taken form "The Seven Habits of Highly Effective People"







References

- Forms of Intellectual and Ethical Development in College Years, William Perry, 1970 Cognitive Development http://ftad.osu.edu/read/teaching/how_students_learn/learn_differencesdevelopment.
- Liniti
 Construction

 Scales of Intellectual Development http://admin.vmi.edu/ir/sia/htm Jean M. Twenge, Generation Me: Why Today's Young Americans Are More Confident, Assertive, Entitled--and More Miserable Than Ever Before, Free Press, 2007.
- 2007. Bloom's Taxonomy <u>http://en.wikipedia.org/wiki/Bloom's Taxonomy</u> Malcom Gladwell, *Blink: The Power of Thinking Without Thinking*, Little, Brown and Company, 2005. Bink: The Power of Thinking Without Thinking, Little, Brown and Company, 2005.
- 2003. Self regulation <u>http://www.gifted.uconn.edu/siegle/SelfRegulation/</u> Stephen R. Covey, The 7 Habits of Highly Effective People, Free Press, 2004. MAX ROOSEVELT, Student Expectations Seen as Causing Grade Disputes, New York Times, February 17, 2009