



Multiple Intelligences: College Instructors and Their Students

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Objectives

- Introduction
- Define Multiple Intelligences
- Problem Statement
- Hypotheses
- Research Goals
- Methods and Procedures
- Results
- Implications

Introduction

- PhD Candidate at University of Illinois
- Teacher of high school , junior college and college level students
- Desire to teach students critical thinking and not just content
- Realize that each individual has various multiple intelligences
- Want students to gain genuine knowledge and not just regurgitate information

Multiple Intelligences

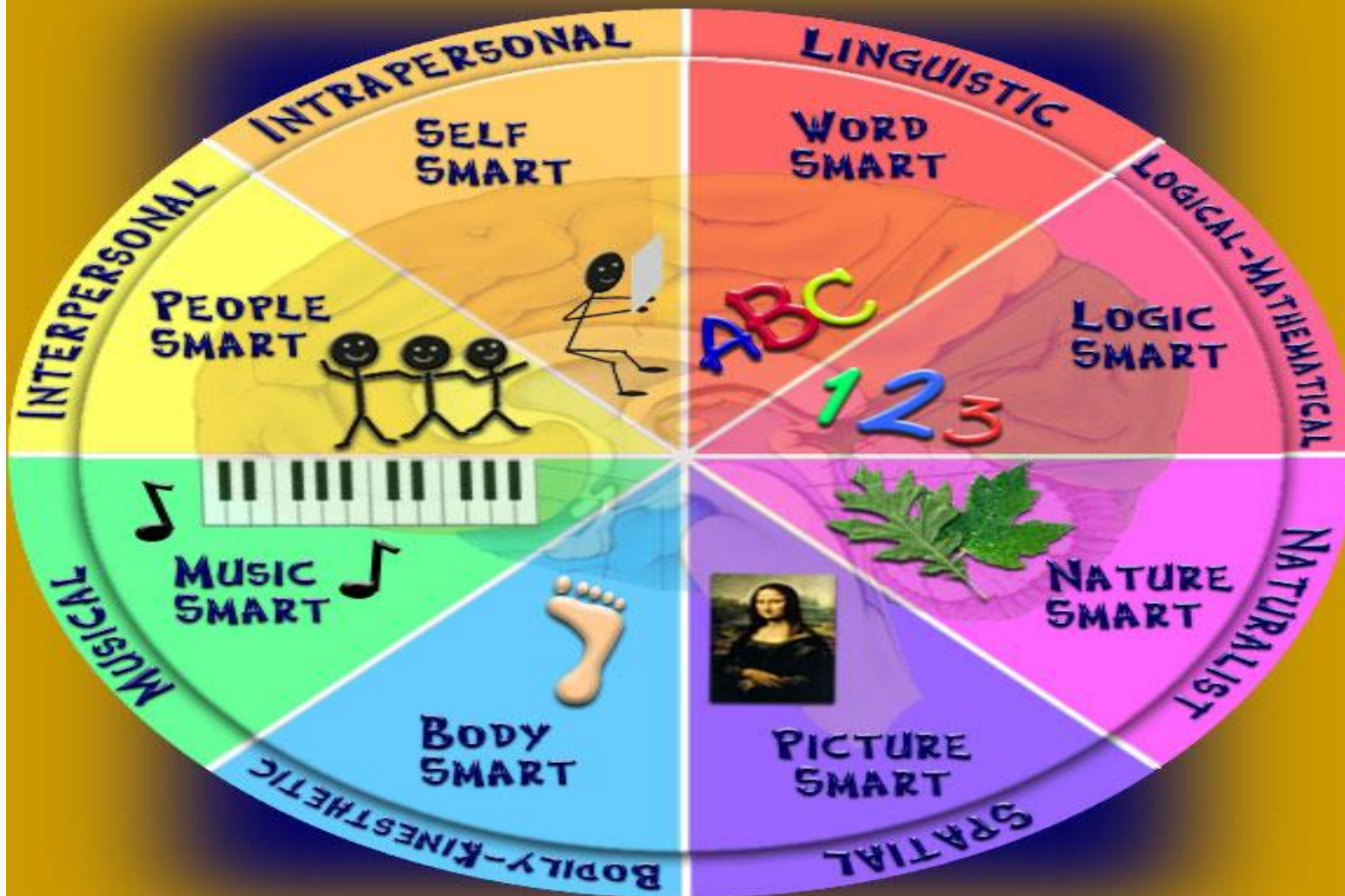
- Computational capacities to process information
- Ability to solve problems, create valuable products
- Each person has inherent capabilities and possesses varying levels of all multiple intelligences
- "It's not how smart you are but how you are smart," Gardner.
- Various ways of teaching to address MI
- Knowing which intelligences your students possess is crucial to appropriate instruction (Griggs et al,2009)

8 Multiple Intelligences

- Linguistic (Verbal)-Word Smart
- Logical/Mathematical-Logic Smart
- Naturalist-Nature Smart
- Spatial (Visual)-Picture Smart
- Kinesthetic (Bodily)-Body Smart
- Musical-Music Smart
- Interpersonal-People Smart
- Intrapersonal-Self Smart

(Gardner, 1983)

MULTIPLE INTELLIGENCES



THEORY BY HOWARD GARDNER
GRAPHIC BY MARK R. KASER
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$$|a| = a = \left| \begin{pmatrix} a_1 \\ a_2 \\ a_3 \end{pmatrix} \right| = \sqrt{a_1^2 + a_2^2 + a_3^2}$$

$$\left(\frac{f}{g} \right)' = \frac{f'g - fg'}{g^2}$$

$$V = \frac{4\pi}{3} r^3$$

$$x \rightarrow ax \rightarrow \exp x$$

$$x^2 = u \leftrightarrow \sqrt{u} = x$$

$$x_1 + x_2 = -\frac{b}{a}$$

$$(a+b)^2 = a^2 + 2ab + b^2$$

$$S = 4\pi r^2$$

$$n = \frac{\text{deposit of } 9\%}{R_0(1-R_0)}$$

$$A_2 = \frac{a_1 - a_2}{2}$$

$$m = \frac{1}{2}(a+b)$$

$$N_x = \sum_{k=1}^x D_k$$

$$\log(uv) = \log u + \log v$$

$$\left(\frac{1}{\sqrt{x}} \right)' = -\frac{1}{2\sqrt{x}}$$

Problem Statement

- Disconnect between established research and practice of teaching at university level
- Instructors not always teaching in manner to enhance students gaining genuine knowledge
- More inclusive methodology and pedagogy could be utilized
- Larger number of students could be engaged
- Genuine knowledge could be gained

Hypotheses

- 1.) Instructors possibly are not conscious of their own multiple intelligences (MI).
- 2.) Instructors perhaps are not cognizant of the varying range of MI of their students and consequently do not teach their courses with methods to address those.
- 3.) The instructors probably are not altering their teaching methods and pedagogy to accommodate the wide variety of the MI possessed by their students.

Research Goals

- Determine and compare the MI of instructors and students.
- Determine if instructors are conscious of their own MI and those of their students.
- Establish if instructors purposefully alter their courses (instruction, assignments, and assessments) to address the MI of their students.

Methods & Procedures

- Instructors completed online assessment (MIDAS)
- Students completed online assessment (MIDAS)
- Instructors participated in 2 personal interviews (pre and post assessment)

Methods & Procedures-(MIDAS)

- Multiple Intelligences Developmental Assessment Scales (MIDAS)
- Gardner's 8 MI assessed
- Tested for reliability and validity
- Results page with explanation

MIDAS Results Page



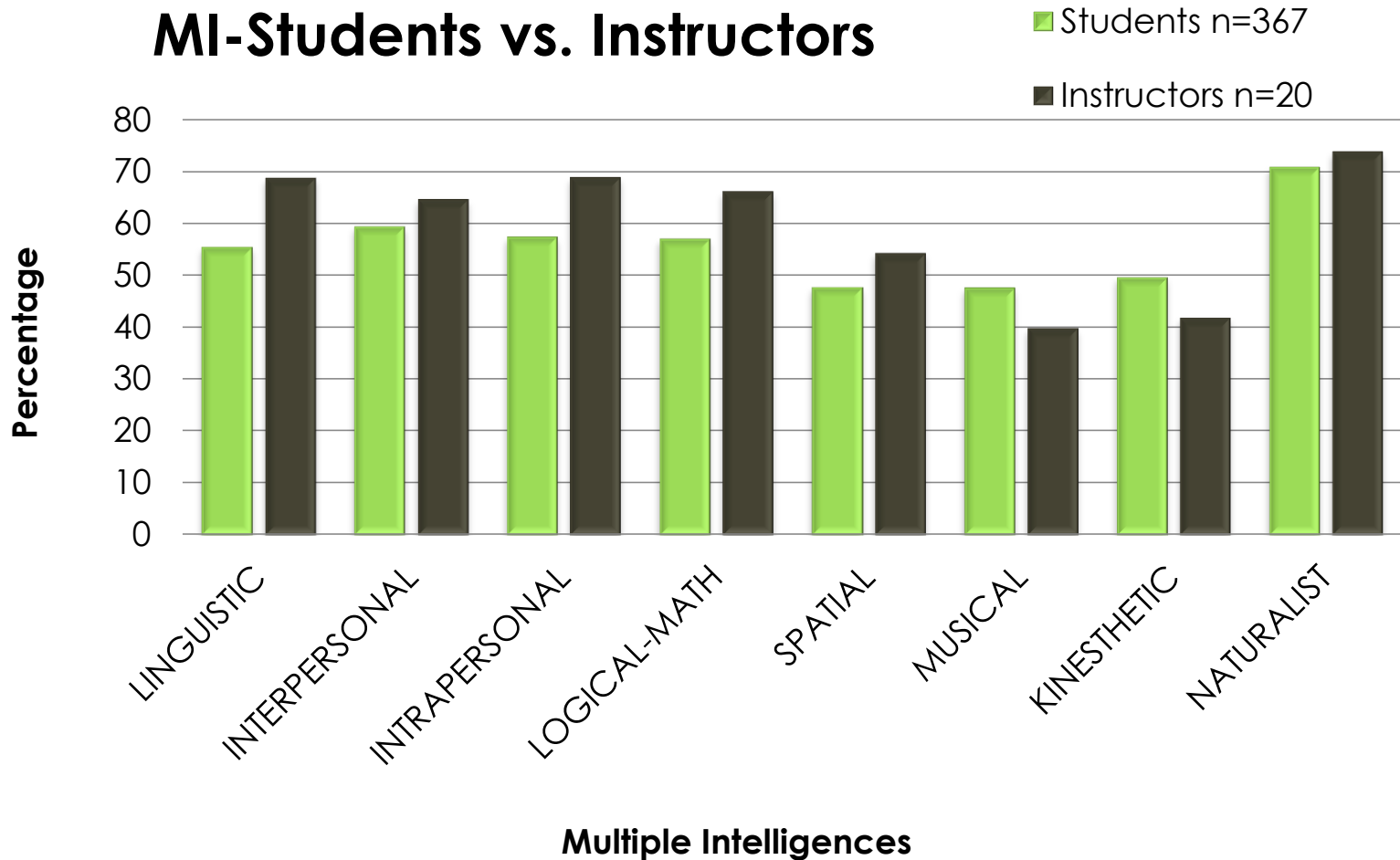
Name: C. Allen ID Number: 34739 Code:
Birth Date: 00 ?? Education: Master Sex: Female

These main scales represent your multiple intelligences profile as reported by you. You should review and verify this profile via reflection, discussion and in comparison with other information

Main Scales



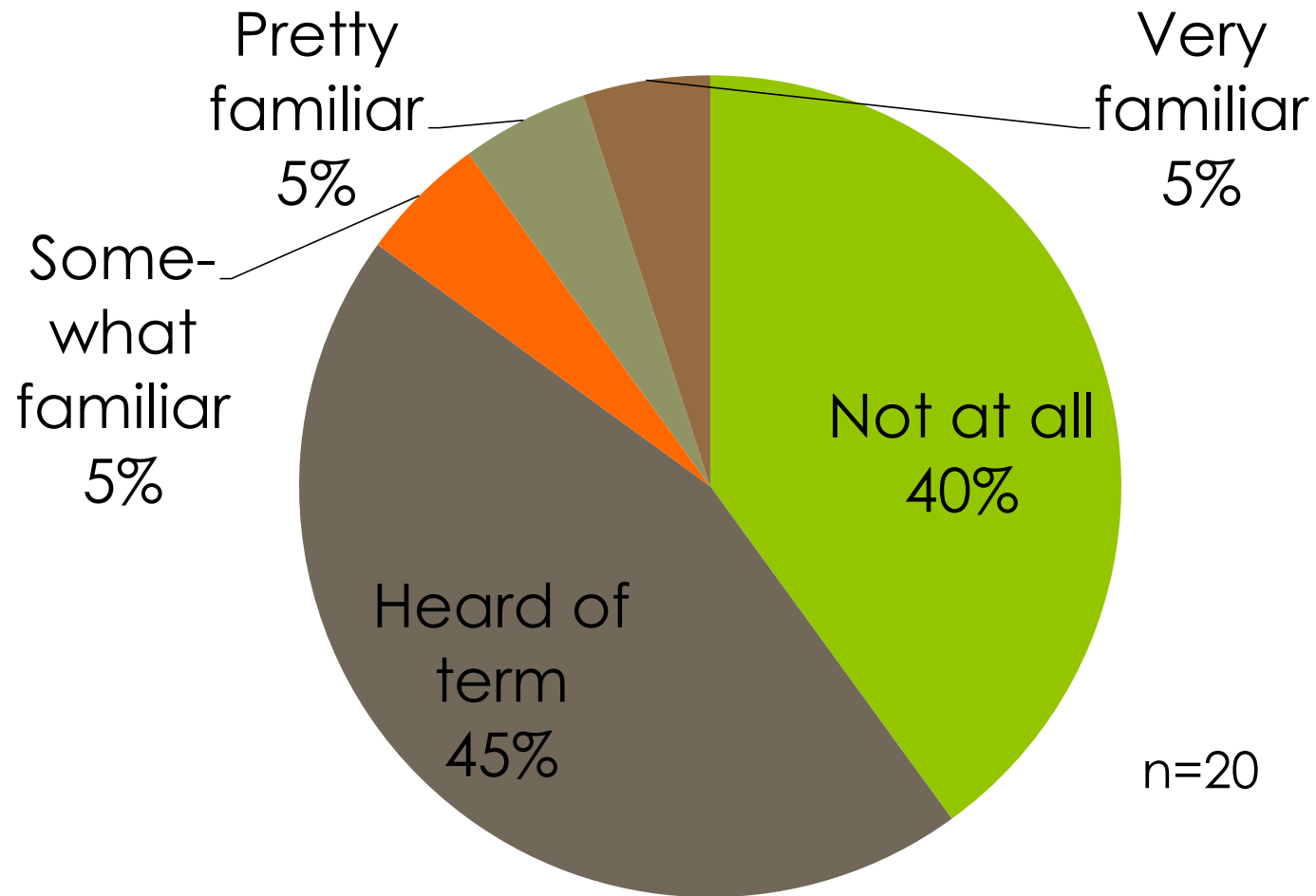
Results-MI-Students vs. Instructors



Results-Instructor Interviews

- 20 University Instructors total
- 11 Full Professors
- 2 Associate Professors
- 5 Assistant Professors
- 2 Academic Professionals

Results-Instructor Familiarity of MI

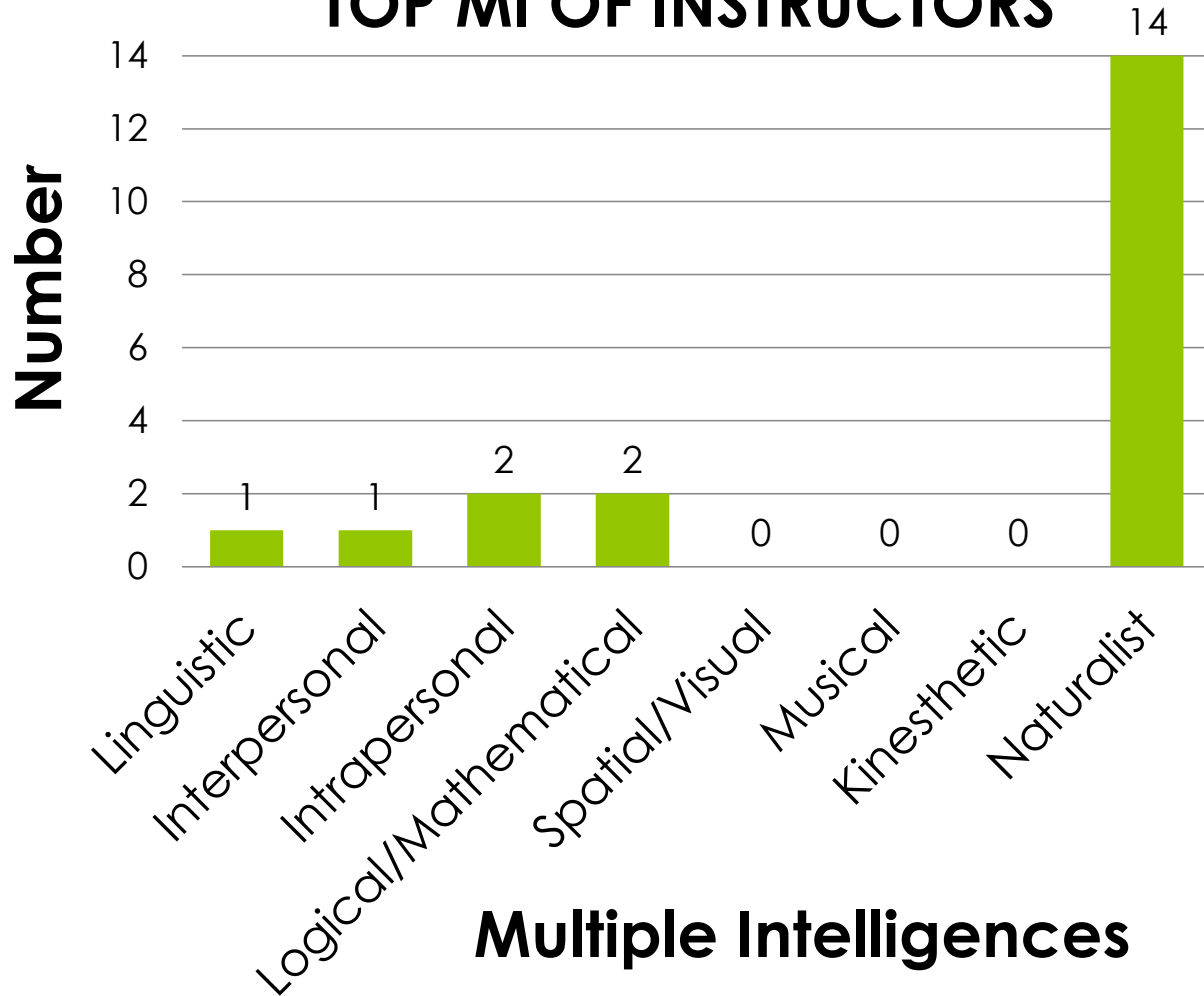


Results-Instructors' Highest 4 MI

- 19/20 (95%) Naturalist assessed as top 4
- 19/20 (95%) Intrapersonal assessed as top 4
- 13/20 (65%) Logical-Mathematical assessed as top 4
- 11/20 (55%) Linguistic assessed as top 4
- 11/20 (55%) Interpersonal assessed as top 4

Results-Highest MI of Instructors

TOP MI OF INSTRUCTORS

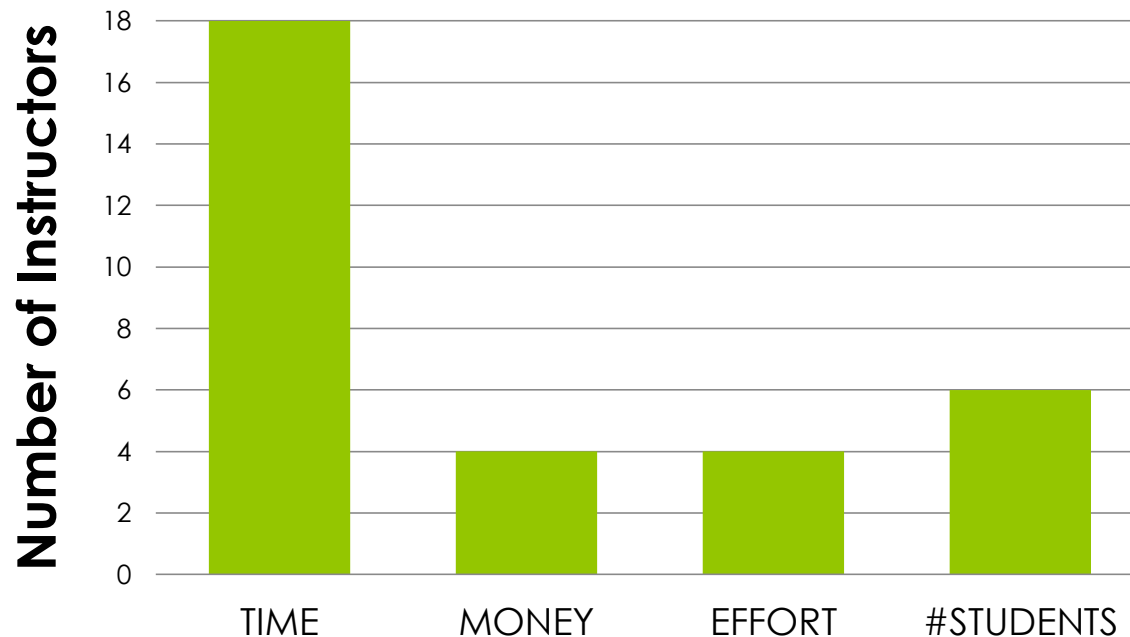


Will Instructors Make Changes?

- 17 (85%) Instructors intend to alter courses
- 1 (5%) Instructor didn't know
- 2 (10%) Instructors did not intend to alter courses

Obstacles To Change

OBSTACLES



Other obstacles noted: Incentive, TA support, space, ability, desire, and technology.

Implications

- Common trend between students/instructors
- Naturalist MI highest in both students/instructors
- Instructors lower in Kinesthetic, Musical MI
- Naturalist MI was highest for 70% of instructors
- 85% Instructors were not familiar with MI
- 85% Instructors intend to alter courses
- Instructors viewed time as the biggest obstacle to making changes in courses.

Now What?

When instructors learn about MI, most see the importance and desire to implement methods to address them. The issue is mainly the time to alter their courses and the knowledge of how to teach accordingly.

Future Plans:

- Make all instructors aware of MI of students
- Host workshops to educate about MI
- Provide resources to assist instructors
- Create material for use by instructors

Sincere Thanks Go To

- Dr. Walter L. Hurley, Animal Sciences, U of I
- Dr. David M. Rosch, Ag Education, U of I
- Dr. Darrel Kesler, Animal Sciences, U of I
- Participating Instructors
- Participating Students

“All genuine learning is active, not passive. It involves the use of the mind not just the memory. It is a process of discovery, in which the student is the main agent, not the teacher.”

Mortimer J. Adler (1982)