



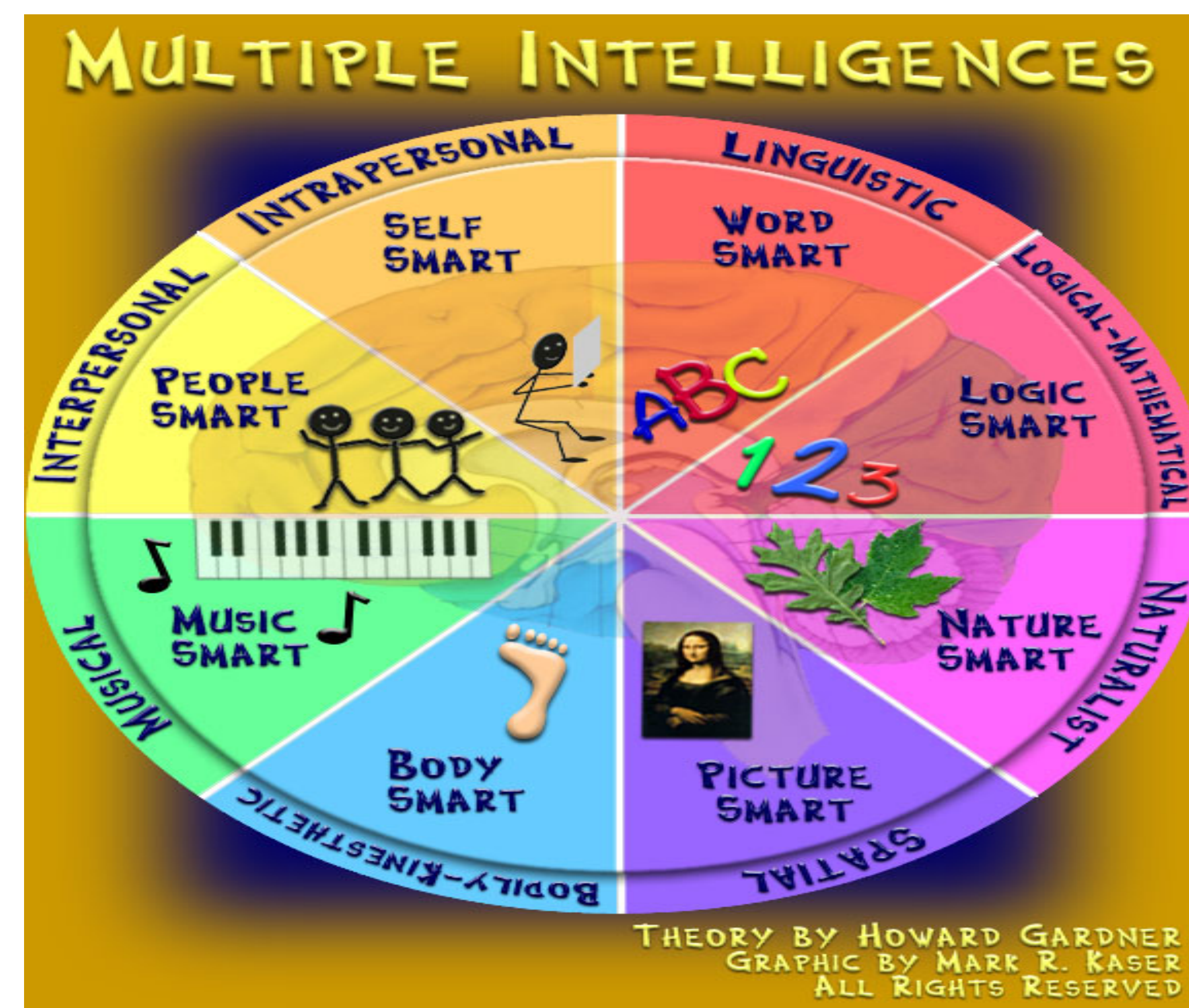
# Correlation of Naturalist (Science) Multiple Intelligence with Learning Styles of College Students in Animal Sciences

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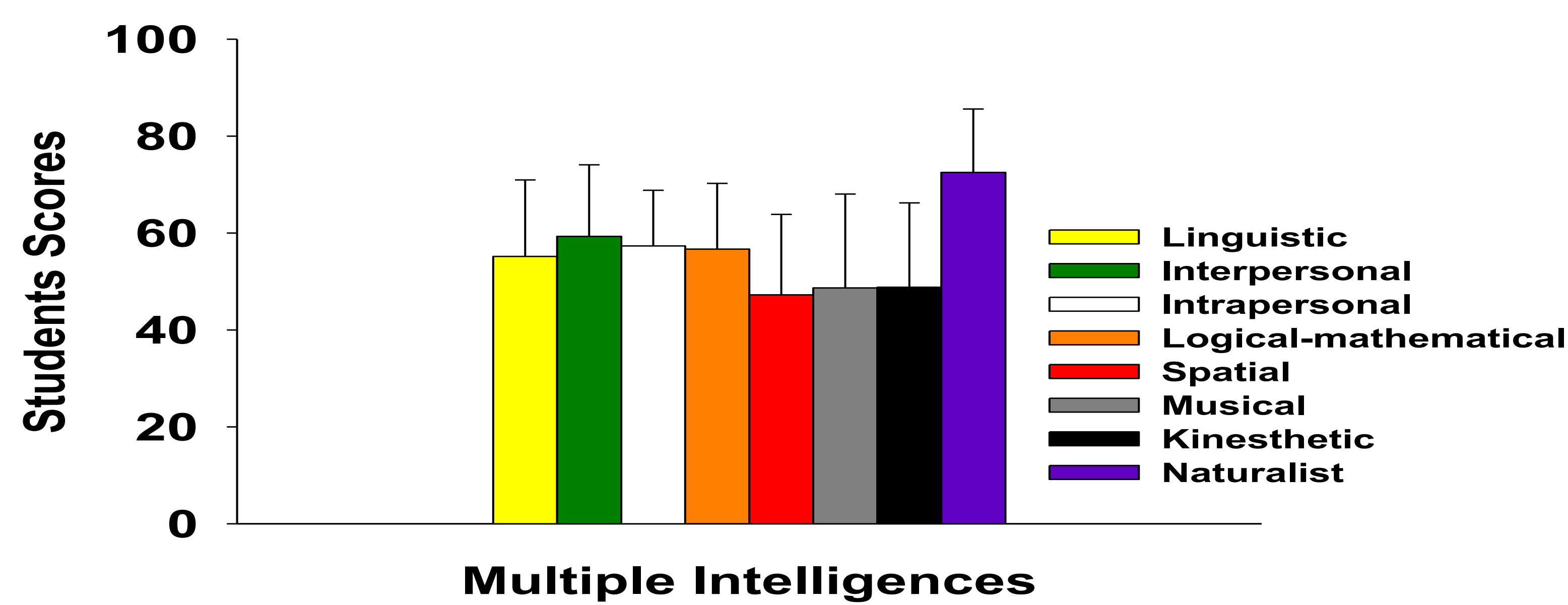
**INTRODUCTION:** It is essential for college instructors to understand and be aware of their students' Multiple Intelligences and Learning Styles so that they may address them with their teaching methods. All participants (n=453) were students enrolled in animal science courses at the University of Illinois. Our assumption was that students would score highly ( $\geq 60$ ) in the Naturalist MI due to their degree choices (more than 98% were animal science majors). The Naturalist MI is divided into subcategories: Science, animals, and plant care. Our concern was that they did not score highly in the Science subcategory and we were interested to find if their Learning Styles differed.

**OBJECTIVE:** Our intent was to find a correlation between the students scoring highly in the science subcategory of the Naturalist Multiple Intelligence and their Learning Styles which they possessed.

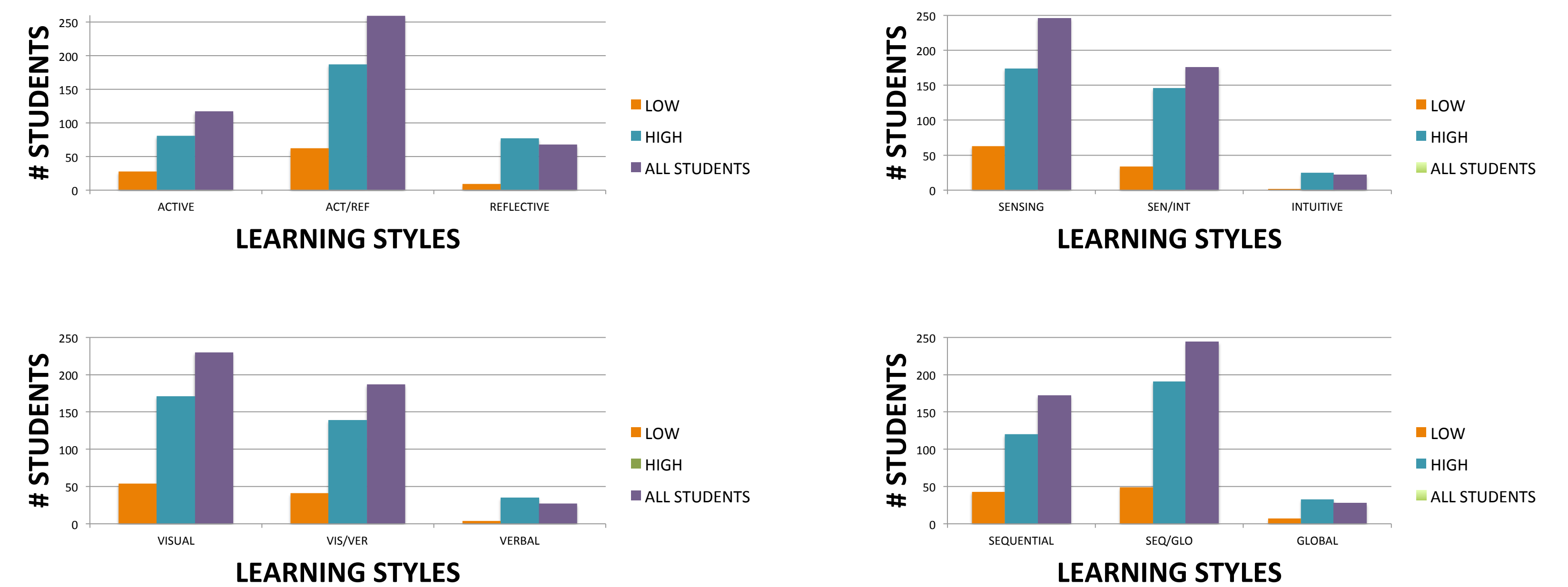
**METHODS:** Students were asked by their instructors to participate and voluntarily completed two online self assessments: Index of Learning Styles Questionnaire (ILS) and Multiple Intelligence Developmental Assessment Scales (MIDAS). Both assessments had been tested for reliability and validity (Felder and Spurlin, 2005, and Shearer, 1997, respectively). The protocol and methods used in this study were approved by the Institutional Review Board. Data was analyzed using Correlation Procedure in SAS 9.4 System with Pearson Correlation Coefficients and a p-value  $< 0.05$



## RESULTS:



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**Multiple Intelligences (MI)** - Gardner (1983) defines an intelligence as "an ability or set of abilities that allows a person to solve a problem or create a product that is valued within one or more cultural settings. Eight MI have been identified: Linguistic, interpersonal, intrapersonal, logical-mathematical, spatial, musical, kinesthetic, and naturalist. Each person possesses all 8 innate capabilities at varying levels (Gardner 1999).

**Learning Styles (LS)** - Learning styles are preferred ways in which individuals approach a task or learning situation (Cassidy 2004). Terminology differs between various theories and models used to measure learning styles, but the same concept is implied. The model we used included five category levels for each dimension pair: Active/Reflective, Sensing/Intuitive, Visual/Verbal, and Sequential/Global.

**CONCLUSION:** Our study found students in animal science courses consistently scored highly in Naturalist Multiple Intelligence but not always in the science subcategory. Those students with high-very high science scores (n=350) possessed more active, visual, sensing, and sequential learning styles. Students with low scores in science (n=103) exhibited the same trends. A significant positive correlation ( $p < 0.05$ ) was found between both the *Naturalistic MI* and the *science* sub category with the *Reflective Learning Style* as well as a negative correlation ( $p < 0.05$ ) found between both the *Naturalistic MI* and the *science* sub category with the *Sensing Learning Style*. It would be beneficial for college instructors to utilize teaching methods to address these LS, reaching students with both high and low scores in the science sub category.

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