

# Does Multiple Intelligences Based Instruction Have an Effect on Students' Attitudes & Achievement?

## Chapter IV Discussion

### *Summary of Findings*

The purpose of this study was to determine if MI based instruction had an effect on students' attitudes toward learning and on students' academic achievement in English. The results of this study reject the alternate hypothesis that the four instructional activities that incorporate the multiple intelligences will have no effect on students' academic achievement and on students' attitudes toward learning and support the hypothesis that the four instructional activities that incorporate the multiple intelligences will improve students' academic achievement in English and their attitudes toward learning.

The results of the analytical writing sample indicated improvements in analytical thinking skills and in written communication skills following instruction based on the multiple intelligences. At the beginning of the study, students' overall analytical skills were relatively undeveloped. Many of them still thought of literature in literal rather than inferential terms, and only a very small number of students could fully explain their analyses using evidence from the text. These results were consistent with the results of the informal MI self profile given to the students during the MI lesson at the beginning of the study. Students' responses to this profile indicated that 62% of the students were weak in the logical-mathematical intelligence and 56% of the students were weak in the verbal-linguistic intelligence. Since the logical-mathematical and verbal-linguistic intelligences heavily influence the ability to analyze literature and the verbal-linguistic ability influences the ability to effectively communicate through the written word, it is not surprising that the majority of students wrote compositions which were rated in the middle and low categories. Six weeks later, students were demonstrating significant improvements in analytical thought and significant improvements in their ability to communicate in writing. Their post analytical writing samples indicated that they were better able to interpret the poet's implied meaning and that they were better able to explain their analysis in writing. As one might expect with such low analytical and written communication abilities, the most significant improvements were seen in the decreased number of compositions in the low category, which contained either no analysis or only literal analysis with no explanations or textual support. Students in the fourth period class demonstrated the lowest levels of analytical and written communication abilities, so their dramatic 19% decrease in compositions rated in the low category demonstrated a definite improvement in analytical and written communication skills. The students in the first period class exhibited higher levels of analytical and written communication ability at the beginning of the study; therefore, the most important improvement for this class was the 15% increase in compositions rated in the high category.

The improvement in analytical and written communication abilities demonstrated on the post-tests indicated that MI based instruction had an impact on students' learning. This improvement over a six week time period implies that students' analytical and written communication abilities would likely continue to improve with continued exposure to instruction based on the multiple intelligences.

On both the introductory and closing surveys, the vast majority of students agreed that they liked activities that allowed them to be creative and that they liked activities that allowed them to think in nontraditional ways. Students' interest in nontraditional instruction was consistent with the results of the

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### **Discussion**

informal self-profile. Eighty-four percent of the students had strengths in both the musical and the interpersonal intelligences. These results were in stark contrast to the 38% of the students who had strengths in the logical-mathematical intelligence and the 44% of the students who had strengths in the verbal-linguistic intelligence. Forty-six percent more of these students had strengths in two of the nontraditional intelligences than they did in one of the two traditional intelligences. Of the three other nontraditional intelligences, 56% of the students had strengths in the bodily-kinesthetic intelligence, 49% had strengths in the intrapersonal intelligence, and 47% had strengths in the spatial intelligence.

The students sampled in this study were not strong in the traditional intelligences and, as the results of statement number 21 indicated, were aware of their areas of strengths and weaknesses and had a desire to improve their deficiencies. The logical-mathematical and verbal-linguistic intelligences were selected most often as areas in which students wanted to improve, coinciding with the results from the informal MI self profile on which 62% of the students reported weaknesses in the logical-mathematical intelligence and 56% reported weaknesses in the verbal-linguistic intelligence. The intelligences in which the most students reported strengths on the MI self profile were chosen least often as areas in which students wanted to improve. This helps to explain why the vast majority of students responded so positively to the statements on the attitude survey which measured students' responses to the concepts involved in the multiple intelligences. It also helps to explain why students overwhelmingly agreed that the multiple intelligences activities, projects, and assignments used in their classroom helped them to better understand the material that they learned in English class.

At the beginning of the study, students did not have positive attitudes toward school or toward English class, and only about half of them responded that they did the assigned reading in English class. There was no overall change in attitude toward school or toward English class in the combined results of the first and fourth period classes; however, a significant number of students said that by the end of the study they completed the assigned reading in English class. A more significant change can be seen in the attitudes of the higher achieving students in the first period class. Their attitudes toward school did not change significantly, but their attitudes toward English class improved by 14%. The number of students in the first period class who read the assigned work increased to 91%. This improvement in the first period class is important for both groups of students in that the higher achieving students already had better attitudes toward learning. The fact that their attitudes improved in a six week period indicates that their attitudes might have continued to improve with continued exposure to instruction based on the multiple intelligences. These results imply that with more time, the fourth period class would also have improved their attitudes toward learning.

Students' grades did not indicate the same positive results as the comparison of pre and post analytical writing samples. Only students with the highest grades actually improved their quarter grades; however, this is consistent with the slow transition toward improvement in analytical and written communication skills already described in the analytical writing sample discussion. At the beginning of the study the students with higher grades already demonstrated better attitudes toward school and toward English; therefore, their improvement in academic achievement improved more quickly in a shorter period of time. The fact that these first period students recognized their improvement in academic achievement was demonstrated by a thank you card given to the researcher by the first period students at the end of the study. One of the students said: "Thank you so much! You were such a big help for me in

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### **Discussion**

this class!" Another student said: "Thanks for helping me learn." Another said: "Thank you for a great quarter. I learned so much. You made everything we did all worth while!" With more time, it is likely that an improvement in overall grades would also have been seen.