

Only an Expensive Horoscope

We repeat: the Hunter model cannot be expected to improve the state of science education.

Our analysis of the Hunter lesson design consisted, in part, of an examination of the Hunter materials that science teachers would be exposed to. This included, but was not limited to, the Hunter *Mastery Teaching* books and videotapes—all that might be deemed the flagship of the Hunter materials (including the tape *Putting It All Together: Science*). If, as Hunter seems to suggest, the aforementioned materials are not representative of the Hunter lesson design, then what is?

Hunter disclaims our definitions for her "elements of a lesson" and asserts that the examples and statements we used were taken out of context. But the element definitions came from Russell and Hunter's (1977) article and from a handout for teachers. As for her "out of context" charge, the Hunter rhetoric is most accurately delineated by the teaching that results. Statements by Hunter, and the teaching examples she provides, lead unambiguously to a conception of teaching best described as "teacher-centered, funnel model." For example, Hunter's belief in the automatic transfer of knowledge is seen in one of the objectives she provided in her rebuttal: "After today you'll be able to determine when conclusions are valid and when they're not." That this can be accomplished in one day or even one drawn-out lesson is ludicrous.

At this point, readers may think that we would be satisfied with more carefully articulated examples. However, reconstructing examples of exemplary science teaching so that those episodes fit the Hunter lesson design is a case of "Whig education" at its worst. We have no doubt that most of the innovative and successful practices found in the *Focus on Excellence* series of the National Science Teachers Association could be made to fit into

the Hunter lesson design. What we don't see are these innovative and successful practices *springing from* science teachers' uses of the Hunter lesson design. This is why we commented in our paper that Hunter lesson designs have much in common with horoscopes found in astrology: they seem to fit after the fact.

The critical question that science educators are asking is "Where is the evidence supporting the notion that children learn more (and faster) having been instructed via the Hunter lesson design?" Hunter's use of the Napa study is surprising because the Hunter project children did not achieve higher scores than the control children during the four years of the study (Stallings 1987). With regard to the South Carolina study by Mandeville and Rivers, Slavin (1988) writes:

Even with the problems that people cite, if there had been big effects, researchers would have found something, but in South Carolina, for example, where 15,000 teachers were trained in the Hunter method, researchers found nothing at all.

Regarding the West Orange, New Jersey, study (where both Hunter and Sousa claim the inservice training was well done), Sousa and Donovan (1990) admit the results "were not conclusive" and that no significant gains occurred in the secondary subjects tested.

We stand by Slavin's (1989) contention that "the results of the Napa, West Orange, and South Carolina evaluations of ITIP offer little hope that the Hunter approach will produce any improvement in student achievement."

Sousa's contribution to Hunter's defense is of little value, because testimonials can be obtained from both sides of this issue. Moreover, Sousa's testimonial is derived from observations of the West Orange, New Jersey, district

in which the empirical results were inconclusive.

Lindauer, like Hunter, finds inquiry science "inefficient," which reflects Hunter's cliché "teach more, faster." Science educators, however, are recommending investigating less content but in a more thorough manner.

Our position is judicious—the Hunter lesson design may be useful to science teachers for some instructional objectives, as we said before, but it cannot be expected to improve the state of science education. The lesson design may be useful for a small number of science objectives; but, to use Hunter's analogy, we saw enough flattened worms to make the road quite slick. Hence our warning to educators who might be looking to the Hunter lesson design to improve their students' science performance—take another road! □

References

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