

CONTROVERSY Over the “BIG FISH-LITTLE POND” Effect (BFLPE)

Other Factors Adversely Affecting Academic Efficacy
By Glenn Terrell, Ph. D.

There are four important goals of this issue of THE LETTER:

1. To inform TPI colleagues of the controversy created by the Marsh and Hau study, as reported in the current issue of *American Psychologist*, the official journal of the American Psychological Association.
2. The educational policy implications of the Big Fish Little Pond Effect (BFLPE) concept.
3. The general problem of official and public dissatisfaction with the academic performance of students.
4. The capability of The Pacific Institute to address the issue of student underperformance at all levels.

In a recent issue of THE LETTER, Volume 6, Issue 3 (Fall 2003), I reviewed an important study by H. W. Marsh and Kit Tai Hau, *The Big Fish Little Pond Effect (BFLPE) on Academic Self-Concept, A Cross Cultural (26 Countries) Test of the Negative effects of Academically Selective Schools. May 2003. American Psychologist, 58, 364-*

376. The notion BFLPE refers to students whose self-concept or self-efficacy may be high when they are in a relatively small, non-selective school, but often find that their confidence is lowered by their inability to successfully compete academically with the higher performing students in large, selective schools. Note that my definition of BFLPE assumes that self-confidence, self-concept and self-efficacy are interchangeable terms, since all have been shown to be favorably related to academic achievement. Therefore, hereafter, I shall take the liberty of using the term “self-efficacy,” a concept central to The Pacific Institute’s programs and to Bandura’s social cognitive theory. (*Bandura, A. Self-Efficacy: The Exercise of Control. Freeman. New York. 1997.*)

Marsh and Hau’s study must be taken seriously since they included 4,000 fifteen year olds, from each of 26 countries, totaling 103,558 subjects, all selected randomly. Rarely will studies of this type include so many randomly selected subjects from so many nations. This is an





A MESSAGE FROM LOU & DIANE TICE

This issue of THE LETTER is a follow-up of two previous issues, *Big Fish Little Pond Effect (BFLPE)* (Volume 6, Issue 3, Fall of 2003) and *Children's Self-Competence* (Volume 5, Issue 2, Spring of 2002).

The authors of *BFLPE* are Marsh, H.W. and Hau, T.H. The authors of *Children's Self-Competence* are Jacobs, J. E. et al.

Briefly, the Marsh and Hau study provided evidence that children who are transferred from a non-selective to a highly selective school experience a loss of performance. This study has been challenged by other researchers in a recent issue of *American Psychologist*, the official journal of the American Psychological Association. Among other things, the respondents seem to assume that Marsh and Hau imply that selective schools are undesirable from an educational policy standpoint. The Jacobs et al research reveals that children from grades one through twelve experience a significant decrease in self-confidence in math, language arts, and sports.

This issue of THE LETTER uses the implications of the Marsh and Hau study on policy regarding selective schools, plus the alarming loss in confidence of children as they progress through the educational experience, as revealed by Jacob et al, to once again point to the critical need for our work at The Pacific Institute in the development of student and teacher efficacy, and in probing more deeply the implications of selective classes.

Lou & Diane Tice

important factor to the degree that the results of the Marsh and Hau study may be generalized to populations other than those used in the study.

In order to determine the relationship between academic achievement and self-efficacy, two tests were used: one to determine achievement and another to measure self-efficacy. The results of this study provide a test of the BFLPE theory, as well as Festinger's Social Comparison theory, which holds that learners develop academic self-efficacy largely by comparing their performance with that of their

classmates. (Festinger, L. (1954) *A Theory of Social Comparison Processes. Human Relations*, 7, 117-140.)

Marsh and Hau report that in each of the 26 countries, the effect of individual achievement on academic efficacy was statistically significant. The correlations varied from .14 to .63 for all countries.

In the issue of THE LETTER cited above, I expressed the strength of the programs of The Pacific Institute to address the problems of BFLPE in our school systems, both public and private. And we know

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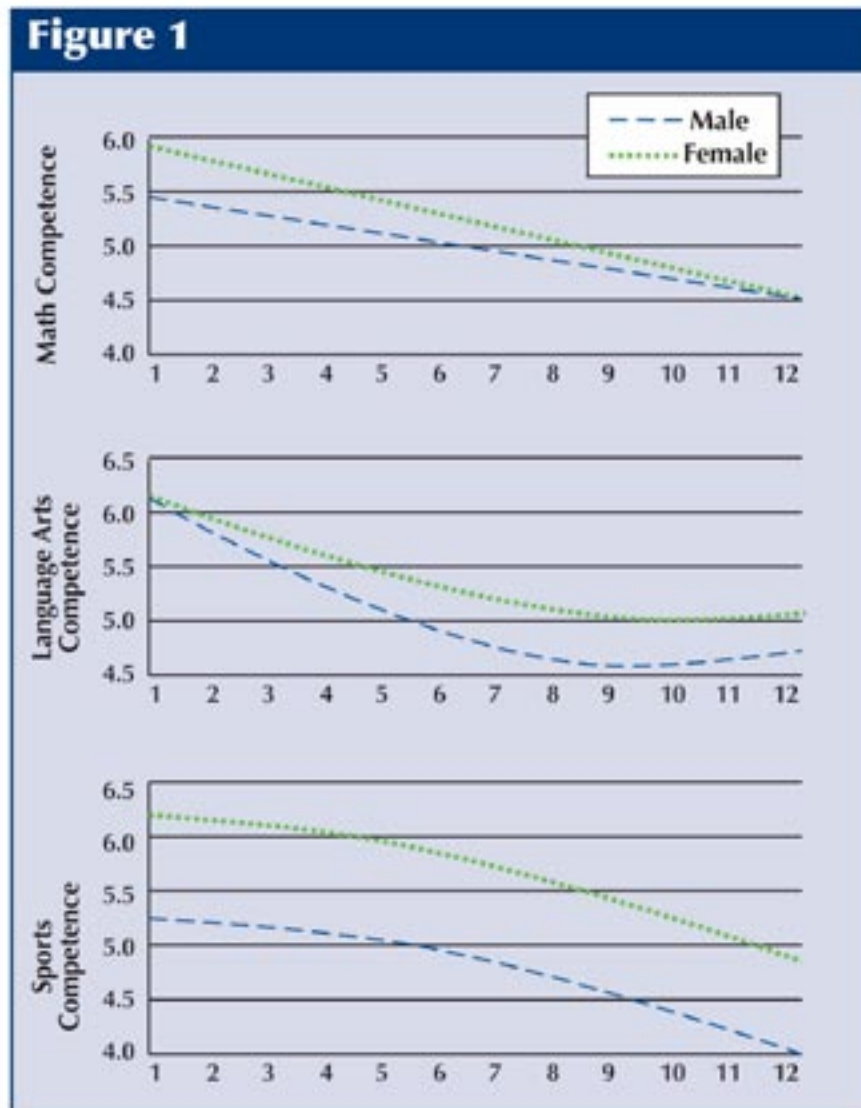
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that there is a distressing loss of academic efficacy in students as they progress through our public school systems that is NOT associated with the problems of transfer from a non-selective to a selective school. (Jacobs *et al Child Development*. 2002) Figure One below reveals the loss of efficacy from grades one through twelve, published in an earlier issue of THE LETTER (*Children's Self-Competence*, Volume 5, Issue 2 Spring 2002).

The *American Psychologist* journal reserves a "comment" section in some of their issues for an exchange of views from authors regarding developments and disagreements regarding important issues in the discipline. Since the publication of the Marsh and Hau study, the Big Fish-Little Pond Effect has become

a much-debated concept in the literature. For example, the most recent issue of *American Psychologist*, May and June 2004, contains an extended discussion of the BFLPE by several researchers. The salient points made by three of them are included below.

Professor David Yun Dai, University of Albany, State University of New York, asks the important question, "How universal is the Big Fish-Little-Pond-Effect?" Dr. Dai suggests that the adverse effect on academic efficacy may result in an erosion of efficacy to some and not to others who may identify with the more select group, and thus provide opportunities for academic development in the more select group.



Professor Dai also contends that, "No rigorous experimental conditions were in place in the Marsh and Hau study that afford high confidence that the effects of the individual student achievement on self-concept were due exclusively to the use of peers in school as the frame of reference."

Plucker et al claim that, "It's Not How the Pond Makes You Feel, but Rather How High You Can Jump." They further question the "conclusion that highly selective high schools should be avoided because these settings may modify student self-concept. Plucker et al further contend that because research suggests that the self-concept is relatively constant, if there is adverse effect due to the pressure of competition, it will likely be temporary.

Plucker et al claim that Marsh and Hau use a measure of self-concept, where "the Program of Student Assessment taps only a very limited range of traits, leaving out such characteristics as social and emotional development in gifted children, perfectionism, non-conformity, social acceptance, personal identity, and motivation and others." Plucker et al conclude that Marsh and Hau "do not provide the level of detail necessary to make informed judgments about the effectiveness of academically accelerated schools."

Marsh, Hau and Craven respond with the expression of belief that The Big-Fish-Little-Pond-Effect stands up to scrutiny. Marsh et al contend that there is no disagreement that "equally able students have lower academic self-concepts when attending schools where the average ability levels of other students is high than when attending schools where the school-average ability is low." Marsh et al also claim that there is both internal and external validity in their methods.

Marsh asserts that it was not the purpose of their study to assess the implications of programs for the gifted that his critics addressed. He also presents evidence to support his contention that the BFLPE, including academic self-concept, contrary

to the claims of his critics, was in some circumstances long-lasting and negatively influenced subsequent important school and occupational decisions.

Educational Policy Implications

Selective schools are very popular with many school administrators and the general public. Parents generally want their children to be enrolled in them, thinking if they are good for some children, they probably are desirable for their children. A re-examination of the educational policy regarding the role of selected accelerated schools is suggested by the results of the Marsh and Hau study and the responses of their critics.

The Marsh and Hau study provides an alternative way of thinking about selective schools – that they are not necessary or even desirable for some children. The BFLPE simply means that in the development of optimal academic efficacy, some children will benefit more from being a big fish in a little pond than being a little fish in a big pond.

Public Dissatisfaction with Schools

Since the publication of a scathing attack on our educational system in the book *A Nation At Risk* in the early 1980's by the Secretary of Education in the Reagan administration, the nation's schools and government entities have focused on improving the effectiveness of our schools. Despite the fact that a few productive changes have been implemented at both the national and state levels, most of us with the responsibility for the quality of our public schools and universities must admit that we have fallen far short of instituting what may be called "break-through improvements" in the quality of our educational system.

Many schools have focussed on the measurement of student learning and have established minimum performance for graduation. An example is the Washington Assessment of Student Learning, or WASL. The usual criticisms of these tests

centers on their questionable validity and reliability, and the requirement that an arbitrary passing grade is necessary for graduation from high school. Similar testing efforts have been implemented by other states, goaded on by national slogan-like federal legislation, "No Child Left Behind."

There have been efforts by legislative and administrative officials to reduce the sizes of classes as a way to increase teacher effectiveness. Most of these attempts have been scratched, allegedly because of federal and state budget deficits. Sadly, that reveals to me that the education of our citizens does not have a high enough priority.

The most encouraging development to me is the trust fund for education recently suggested by former Washington State governors Dan Evans and Booth Gardner. This fund would be provided by a one-cent increase in the Washington state sales tax. It will be interesting to see what the legislature does about this idea.

The Role of The Pacific Institute in School Improvement

The controversy created by the studies reviewed in this issue of THE LETTER cry out for greater participation by The Pacific Institute in the education systems throughout the world, given the well-established success we have had in enhancing the performance of students, teachers and schools by helping them establish higher individual and collective efficacy. We have reported on our successes in the United States, the United Kingdom and South Africa. We shall continue to attach significance to our Education Initiative. I can think of no better response to the struggle in the United States and elsewhere for addressing the problems of our school systems. I am convinced that the earlier in the human development cycle we apply the skills we teach, the sooner our children will reach their full potential, the central component of our mission statement.



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