

Rudner L., Boston C. (2003). Data Warehousing: Beyond Disaggregation. *Educational Leadership*, (62-65).

Education is a rapidly changing system that requires constant data and evaluation. Throughout the years there have been many systems put in place to better improve students' performance, teachers' performance, and a school's performance overall. One new system that has been in question is Data Warehousing. In an article written by Lawrence M. Rudner and Carol Boston, titled *Data Warehousing: Beyond Disaggregation*, it discusses the benefits and implementation of the systems and how it can improve education as a whole. Before the article can be picked apart, it is important to understand the term *disaggregation*. In essence it means to separate (something), into its component parts, a *method* used in education for the purpose of improving education as a whole.

It is important to note that under "the new laws of No Child Left Behind legislation requires breaking down results further to consider disabilities and English language status." In today's society there is a need to be aware of learning disabilities and students' English language abilities. With the increase in technology it is allowing for education to examine students and assist them in the most appropriate way. Data Warehousing not only focuses on complying with state regulations, it also focuses on "supplying information, providing accountability, and exploring relationships among different kinds of data." One of the most important aspects of data warehousing is the "tracking of school performance...and designing school improvement plans." The quality of the data, if done properly, can "improve and maximize learning (Kimball & Ross, 2020) for all students that are a part of the school system undergoing the new method.

“Data warehousing supports two types of data- cross-sectional and longitudinal- to create a more complex and nuanced picture of school performance than does the mere reporting of test score changes from year to year.” Cross-sectional data views present the evolving picture of the overall education system. Although the data can be miscalculated, if it is done correctly, the results can show a direct “relationship between the dependent variable and the combined effect of several independent variables.” Longitudinal data focuses on “students as they progress through grades.” “Longitudinal analyses are crucial for meaningful evaluation of program success.” It gears its methods on small classes for three or four years in the early grades” (Finn, Gerber, Achilles, & Boyd-Zaharias, 2001). “Furthermore longitudinal studies have linked the small-class experience with higher graduation rates and more honors diplomas.” The only negative aspect of the longitudinal data is that by creating smaller class sizes a school is in demand for more teachers and a bigger budget, which in today’s economy is very hard to come by.

Although the method seems very technical, in essence is means to assist the facilitation of education through a more personal learning experience. Unfortunately, there is a big gap in students’ achievements throughout the years. Data warehousing can help close the gap and answer some very stifling questions, such as: “

- Within what kinds of settings do initially high-achieving students maintain their high levels of achievement for several years?
- Do certain programs work better for students with different skills?
- What specific mathematics learning outcomes mastered in 3rd grade best predict overall mathematics achievements in grade 5 & 8?

- What is the relative impact of teacher experience, class size, and mentoring on student learning?
- What mathematics curriculum is most effective in closing the achievement gap and increasing the participation and performance of underrepresented groups in algebra and other higher mathematics courses?"

Data warehousing can be a very positive method if implemented correctly. The only issue with the method that seems a bit stressful is the fact that a great portion of it depends on teacher characteristics. It focuses on “which teacher characteristics are most highly associated with achievement gains for different groups of students?

What support systems for beginning teachers yield the highest gains for disadvantaged students?" In a way, the teacher has to be aware of the fact of whether her students “like” her/him or not. It is a sad thought only because, it is almost a guarantee that at some points in a teacher’s career someone is not going to like them. Whether it is their personality, their teaching methods, their educational approach, etc.

All in all, data warehousing is a positive method and I feel can benefit the school as long as it is implemented properly. Without proper training, test runs, and evaluations, the method will fail. All faculty members need to be fully aware of the data systems and how to properly collect data in order for the school to evaluate itself and move forward in their educational methods and teachings.