



New methods of teaching and its role on education performance and students achievement

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ABSTRACT

It can be said that a good way of teaching can be assured of learning shows. An experienced teacher can use various teaching methods to achieve the highest possible level of education. Teachers must be allow to the students that achievement higher levels of learning. Collaboration in teaching methods are such as team effectiveness design, team member teaching design, assessment of performance, brainstorming technique, anonymous brainstorming technique, subject classification, individual learning procedure with the help of a team, research group, development groups and discussion method. Cooperative learning is one of the most remarkable and fertile areas of theory, research, and practice in education. Cooperative learning exists when students work together to accomplish shared learning goals. Each teacher can use cooperative learning experience in every cross. In this method the most preparing educational materials for teachers before class is done. Teachers with used this method in the classroom are very comfortable. Several studies showed that a good efficiency cooperative learning in the classroom and the students enjoy this method of learning. Teacher collaboration and professional learning communities are frequently mentioned in articles and reports on school improvement. Schools and teachers benefit in a variety of ways when teachers work together.

Key Words: New methods teaching, Education, Performance , Students achievement

INTRODUCTION

Parents and educators quickly accept that students need to be taught from an effective curriculum in order to be successful in school. However, although most parents would say that they would want their children to have positive relationships with their teachers, they may view a close teacher-student relationship as less than necessary. Research suggests that this variable has a significant influence on student achievement. In order for students to learn what is offered from an effective curriculum, they must be able to access support from their teachers (Klem & Connell, 2004). In this age of high stakes testing and accountability for both students and teachers, it is important to examine the evidence to determine if these relationships are indeed a factor in raising student achievement. However, learning is a process that

involves cognitive and social psychological dimensions, and both processes should be considered if academic achievement is to be maximized (Hallinan, 2008). An extensive examination of the variables that impact learning should include studying the factors that impact students' attitudes regarding school and the relationships they form with their teachers. Two arguments can be made for the identification of these factors. First, if students like school they reap important social advantages such as building friendships, gaining respect for peers and adults, and learning social skills. Second, if students like school their academic performance is enhanced (Hallinan, 2008). Regardless of if a teacher-student relationship is close or fraught with conflict, that relationship seems to both contribute to, and be an indicator of, a child's adjustment to school (Pianta & Stuhlman, 2004). It is important to note that during the research process this author relied primarily upon juried sources. The importance of teacher quality is widely recognized as one of the most critical components of successful education and so policies that aim to improve teacher performance through the use of incentives are gaining momentum. Despite many findings that improvement in quality is associated with significant increases in student achievement (Aaronson et al., 2007), research has yet to pinpoint which teacher characteristics are most indicative of quality. For example, measurable teacher characteristics (such as race, gender, education history, or years of teaching experience) only account for 3% of a teacher's influence on student achievement (Goldhaber, 2002) and a teacher's experience is not significantly related to student achievement following the first few years in the classroom (Rivkin et al., 2005). These findings suggest that hard to measure teacher characteristics, such as personal motivation, job satisfaction, or patience and personality are the chief determinants of performance. Policies most likely to have a large impact on improving teacher quality may therefore be those that target positive change in these characteristics. Policymakers have attempted to address these issues through the evaluation and implementation of programs that provide incentives for teachers to improve. One such program is teacher tenure, which creates incentives for teachers by providing job security. Public school teachers in every state are awarded tenure after completing a probationary period, the length of which is determined by state law. Tenure policies consist of two primary components. The first part is an automatically renewing employment contract, which is granted after completion of the probationary period and may be terminated only for reasons specified by law. The second component is the right of due process for a tenured teacher in the event that his or her employment contract is terminated. This permits the teacher to appeal to a state board and argue his or her case against the school district attempting to fire the teacher, which may be difficult and very costly for the school district. Teacher tenure policies may provide teachers with incentives to either improve or diminish their teaching quality. If tenure gives a teacher confidence in job security and a sense that he or she is free of political pressures within a school system, it may improve teacher motivation, satisfaction, and overall productivity. This can also encourage teachers to try new methods or take risks in the classroom without the fear of losing one's job if the methods fail. In addition, the desire to obtain tenure may motivate new teachers to work harder in order to earn the approval of a school board or administrator. However, one could argue that tenure policies may have an opposite effect by removing incentives for a teacher to perform well. Once a teacher secures tenure, the link between teacher performance and career or financial incentives is severed. Teachers know that it would be difficult and costly for the school board to fire them. They therefore have little financial incentive to perform well.

A Brief Literature Review

In early work on teacher productivity, researchers estimated education production functions by regressing aggregate student achievement levels on measures of teacher training and various other controls using cross-sectional data (Hanushek, 1986). A subsequent generation of studies used student-level two-year test-score gains and richer sets of teacher training variables to evaluate the impact of teacher training on

student achievement. The state of the literature through the year 2000 has been extensively reviewed by Wayne et al. (2003) as well as by Rice (2003), Wilson and Floden (2003), and Wilson, et al. (2001). While some recent studies of the determinants of teacher productivity continue to employ the gain score approach (Aaronson, et al. (2007), Hill, et al. (2005), Kane, et al. (2006), the bulk of recent research has shifted away from this methodology. The gain-score studies rely on observed student characteristics or “covariates” to account for student heterogeneity. However, they cannot control for unobserved characteristics like innate ability and motivation. There is evidence that better trained and more experienced teachers tend to be assigned to students of greater ability and with fewer discipline problems (Clotfelter et al. 2006, Feng, 2005). Given this positive matching between student quality and teacher training, the gain-score studies’ inability to control for unobserved student characteristics would tend to upwardly bias estimates of teacher value-added associated with education and training. The recent availability of longitudinal administrative databases has brought forth a new generation of studies that seek to ameliorate selection bias by controlling for time-invariant unobserved student heterogeneity via student fixed effects. In the last six years, eight studies of teacher productivity in the U.S. have employed this approach. An alternative method of avoiding selection bias is to either randomly assign teachers to students (as in the Tennessee class size experiment) or to exploit situations where there is an exogenous change in student assignments to teachers or in teachers to training. Five other recent studies exploit either experiments with random assignment, situations where there is “apparent random assignment” or “natural” experiments where assignment is based on exogenous factors. At the middle school level the findings are essentially reversed. Studies that include middle school consistently find positive effects of teacher experience on math achievement whereas the findings for the effects of experience on middle school reading achievement are evenly split between positive and insignificant correlations. The three studies of high school teachers yield conflicting results. Aaronson, et al. (2007) and Betts, et al. (2003) find no significant correlation between teacher experience and student achievement while Clotfelter, et al. (2007) find strong positive effects. One difference in these studies is that Clotfelter et al. (2007) utilize course-specific end-of-course exams while the other studies rely on more general achievement exams. As discussed by Rockoff (2004) and Kane, et al. (2006), the estimated effects of experience may be biased if sample attrition is not taken into account. For example, less effective teachers might be more likely to leave the profession and this may give the appearance that experience raises teacher value-added when, in reality, less effective teachers are simply exiting the sample. Alternatively, selection could work in the opposite direction; more able teachers with higher opportunity costs may be more likely to leave the profession, leading to a spurious negative correlation between teacher experience and student achievement.

Teacher Characteristics Related to Effectiveness

The extensive literature on teacher effectiveness identifies many factors that are associated with student achievement. These correlations help explain the link between teacher quality and student performance. By taking them into account throughout my analysis, I can more effectively isolate and estimate the effect of tenure on teacher performance. Most researchers acknowledge that the effect of an additional year of teaching experience on student achievement levels off after the first few years of teaching (Rockoff, 2004; Rivkin et al., 2005) and some argue that this effect eventually recedes (Aaronson et al., 2007). Wayne et al. (2003) assert that a review of literature shows generally positive effects of experience on teacher quality. Nonetheless they note that these findings are “difficult to interpret” due to factors not accounted for in most models such as changes in motivation, personal life situation (children, divorce, etc.), and labor market changes over time, as well as the recognition that teachers who stay in the profession and have many years of experience may be very different from teachers that leave after only a

few years. In addition, there is no research that explains why the effect of experience flattens out when it does. A ceiling effect whereby teachers will ultimately reach some maximum level of effectiveness after gaining experience and confidence in the classroom should be expected, but it is unclear why this tends to happen at the same time that most states grant tenure (two to four years). This leads to an important question of whether this connection is merely coincidence or if there is a more complex relationship at play in which tenure status prompts the estimated effects of experience to taper off prematurely. Goldhaber et al. (2000) used data to determine the effects of different teacher certification levels on student achievement. They find that the type (standard, emergency, probationary, or private) of certification that a teacher holds is related to student outcomes. Additionally, the students of teachers certified "out of field" do less well than the students of teachers certified in the subject matter being taught. The strongest finding is that students of teachers with standard certification in math do better than students with teachers that have either no certification or private school certification in math, but their findings are relatively weak. Although one might expect the effects of certification status to relate to those of tenure status, since it is often based on years of experience, this is not the case. Probationary certification lasts for the first few years in which a teacher holds his or her position, similar to the probationary status that a teacher has until obtaining tenure, but unlike obtaining standard certification, acquiring tenure provides teachers with benefits mainly increased job security that may affect a teacher's quality and alter incentives to perform at high levels. There are many factors related to a teacher's education history that have been shown to be related to teacher effectiveness. These include highest degree obtained, coursework and subject matter of degree(s), and rating of undergraduate institution. A review of research shows that most findings regarding degrees held and coursework taken are largely inconclusive except in relation to math. High school math teachers with an educational background in these fields produce significant gains in student achievement in math (Wayne et al., 2003). Research also indicates that the ranking of the undergraduate institution attended does have some relationship with student achievement gains (Wayne et al., 2003), although it is possible that this effect is overestimated because individuals that get into higher ranked schools are also likely to have other characteristics such as high levels of natural intelligence, more motivation, and better organization skills, all of which may also correlate with positive teacher effects on student achievement.

Teacher Training, Teacher Quality And Student Achievement

Proposals to use teachers' or school performance incentives as the basis for school reforms have recently attracted considerable attention and support among researchers and policy makers. The main message in the relevant body of literature is that the most likely promising way to improve students' achievements is to institute monetary performance incentives, direct rewards for improvements in student outcomes. Relationship between teacher productivity and teacher training, including formal pre-service university education, in-service professional development, and informal training acquired through on-the-job experience. Previous research on teacher training has yielded highly inconsistent results and has fueled a wide range of policy prescriptions. Some studies find that formal education is important and these have been interpreted as support for strengthening existing teacher preparation programs in universities and increased expenditures on post-college training. Equally common, however, is the finding that formal education is irrelevant, leading others to argue for the elimination of colleges of education. One reason for the uncertainty regarding the effects of teacher training is that past studies have been unable to overcome three methodological challenges in estimating the effects of training on teacher quality. First, it is difficult to isolate productivity, especially in teaching where a student's own ability, the influences of a student's peers, and other characteristics of schools also affect measured outcomes. The problem is exacerbated by the fact that assignment of students and teachers to classrooms is usually not random, leading to possible

correlations between observed teacher attributes and unobserved student characteristics. Second, like in other occupations, there is an inherent selection problem in evaluating the effects of education and training on teacher productivity. Unobserved teacher characteristics, such as “innate” ability, may affect the amount and types of education and training they choose to obtain as well as subsequent performance of teachers in the classroom. Third, it is difficult to obtain data that provide much detail about the various types of training teachers receive and even more difficult to link the training of teachers to the achievement of the students they teach. Addressing all of these issues in a single study presents significant data and estimation challenges.

Cooperative Techniques and Learning Process

Collaboration in teaching methods are such as team effectiveness design, team member teaching design, assessment of performance, brainstorming technique, anonymous brainstorming technique, subject classification, individual learning procedure with the help of a team, research group, development groups and discussion method. Cooperative learning is one of the most remarkable and fertile areas of theory, research, and practice in education. Cooperative learning exists when students work together to accomplish shared learning goals. Each student can then achieve his or her learning goal if and only if the other group members achieve theirs. In the past three decades, modern cooperative learning has become a widely used instructional procedure in preschool through graduate school levels, in all subject areas, in all aspects of instruction and learning, in nontraditional as well as traditional learning situations, and even in after-school and non-school educational programs. There is broad dissemination of cooperative learning through teacher preparation programs, in-service professional development, and practitioner publications (Goddard et al., 2007). The use of cooperative learning so pervades education that it is difficult to find textbooks on instructional methods, teachers' journals, or instructional materials that do not mention and utilize it. While a variety of different ways of operationalizing cooperative learning have been implemented in schools and colleges, there has been no comprehensive review of the research evidence validating the cooperative learning methods. The purpose of this review, therefore, is to examine the empirical support validating the effectiveness of the different methods of cooperative learning. In order to do so, it is first helpful to discuss why cooperative learning is so widely used. The wide spread use of cooperative learning is due to multiple factors. Three of the most important are that cooperative learning is clearly based on theory, validated by research, and operationalized into clear procedures educators can use. In psychology, where cooperation has received the most intense study, cooperative learning has its roots in social interdependence, cognitive-developmental, and behavioral learning theories (Guarino et al., 2006). It is rare that an instructional procedure is central to such a wide range of social science theories. Cooperative learning is more elaborate than group work activity. Cooperative learning can be incorporated into your classroom management system. If you train your students to work effectively in groups, the results can be a very productive and fun learning environment. The research on cooperative efforts, furthermore, has unusual breath, that is, it has focused on a wide variety of diverse outcomes. Over the past 100 years researchers have focused on such diverse outcomes as achievement, higher-level reasoning, retention, time on task, transfer of learning, achievement motivation, intrinsic motivation, continuing motivation, social and cognitive development, moral reasoning, perspective-taking, interpersonal attraction, social support, friendships, reduction of stereotypes and prejudice, valuing differences, psychological health, self-esteem, social competencies, internalization of values, the quality of the learning environment, and many other outcomes (Herman et al., 2008). There may be no other instructional strategy that simultaneously achieves such diverse outcomes. The diverse and positive outcomes that simultaneously result from cooperative efforts have sparked numerous research studies on cooperative learning focused on preventing and treating a wide

variety of social problems such as diversity (racism, sexism, inclusion of handicapped), antisocial behavior (delinquency, drug abuse, bullying, violence, incivility), lack of prosocial values and egocentrism, alienation and loneliness, psychological pathology, low self-esteem, and many more. For preventing and alleviating many of the social problems related to children, adolescents, and young adults, cooperative learning is the instructional method of choice (Kardos and Johnson, 2007). Figure 1 shows learning as a process. Three ingredients are needed for this process to be effective: (1) focus to plot a course for the learning effort; (2) an environment which facilitates learning; (3) techniques which enable learning to be efficient. The interlocking circles on the model imply that the ingredients are not discrete, but overlap, and are interdependent if the whole learning process is to be optimized. In simple terms these are the hows, whys, and whats of learning, and these will be examined in more detail. Readers are invited to relate the hows and whys to their own lifetime learning experiences, to establish a “ring of truth”, before going on to examine what has to be learned to achieve continuous improvement and innovation in business processes.

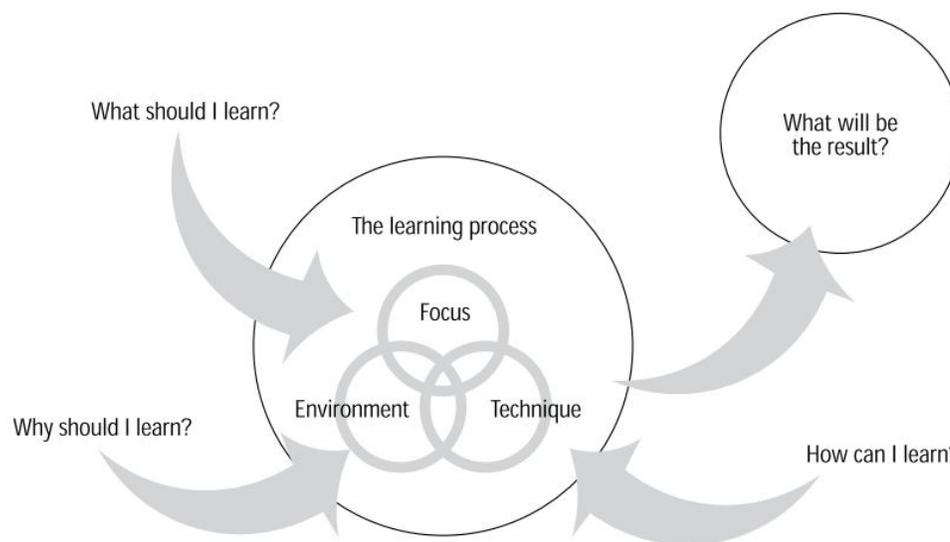


Figure 1. Learning as a process

The development of understanding will take place in stages, as the depth of knowledge increases. Shallow understanding will generally result from single-loop learning (Argyris, 1992), but double-loop learning will be needed if deep understanding is to be achieved. Commitment will start to develop provided the knowledge is perceived as meeting the needs of the individual and the organization (Maslow, 1942, Herzberg et al., 1957). On the other hand, as the depth of understanding increases, it may start to challenge deeply held beliefs and values, which either overtly or subconsciously may limit the move to commitment. Commitment will not be achieved without intrinsic interest and curiosity (9). If this is not present, the move to action may not take place. Many training courses do not have the desired effect because they are imposed, and are not attended because of an intrinsic desire to learn. This desire cannot be directed, but must come from within the individual. However, it can be nurtured and encouraged. To be most effective, learning at this level must be pulled by the individual, not pushed by the organization. Also, the barriers preventing the transition from commitment to enactment can be formidable. Usually, they will require the individual to change behaviour. Often this will bring into play a powerful, inbuilt, and unconscious defence mechanism. This is probably the most important part of the learning process which is often missing in taught organizations. This is where actions, outcomes and theories are evaluated, and deep learning takes place. The compliant nature of taught systems often means that

individuals are not encouraged to question or challenge theories, and inappropriate actions continue to be taken long after those theories have been discredited. In extreme cases of operant conditioning, where actions are a result of learning by rote, the difficulties in achieving a change in behaviour needed to enable deep learning to take place should not be underestimated. When effective, reflection increases understanding, which, in turn increases commitment and action, and a virtuous cycle of learning is unleashed. My experience has shown me that success in achieving the learning company vision depends greatly on the effectiveness of managers and team leaders in creating an environment where individual, team, and thereby, organizational learning is facilitated. In order to do this they will need a deep understanding of the learning process, to be able to identify an individual's position on the stages of learning model, to understand the driving and restraining forces applicable to the individual at that time, and have intervention strategies to facilitate movement through the stages. The models and processes outlined have been developed following many years' experience in managing change and process improvement in a large organization. They seek to provide an explanation why some initiatives were successful, while others were less so. They should not be considered as models to be rigidly followed, in a taught manner, but rather as a framework against which past experience can be assessed. The use of student teams can be an especially effective teaching strategy for several reasons. First, it allows the instructor to support students in learning a valuable skill that employers continually rank as critical to workplace success: how to work together and support each other in learning and discovery. Second, becoming effective and productive team members allows students to develop their independent learning skills by working individually on a portion of a group project that makes them accountable not only to the instructor but also to team members. And finally, integrating teamwork into a course can result in adding structure to out-of-class time and increasing student accountability for their learning. Obviously, team-based learning is not appropriate for all content, but it can usually be adopted in some form in any course. All managers have experiences of actions which produced successful outcomes, and actions which failed. So often, however, we omit the reflection stage of the learning process, and continue to take inappropriate actions, destined to fail. Worse still, we copy initiatives which have worked elsewhere, and do not understand why they do not work for us. Instead, it will be more useful to view the models using a discovery learning process, to help evaluate successful initiatives, and experiment with other ideas which are of interest, always adding a reflection stage to our thought process. Ideally managers will be stimulated to follow up some of the references, to increase their depth of understanding. In today's uncertain economic times, it is essential that our capacity to improve and innovate exceeds the rate of change imposed on our organizations (Harati, 2012). It is essential, therefore, that managers understand the learning process and know how to facilitate its application throughout their areas of responsibility. Such a partnership is a highly effective way to strengthen the education of university students preparing to teach elementary school. Obviously, prospective elementary school teachers need to learn how to teach. Perhaps less obviously, though, prospective teachers also need to learn a significant amount of math beyond what they learned in high school. And even more, they need to learn how to use that mathematical knowledge to serve their students in the classroom.

Conclusion

The idea of developing stronger performance incentives directly focused on students achievements has vast appeal, and is the subject of frequent discussion. Collaborative learning is an instructional method in which students team together on an assignment. In this method, students can produce the individual parts of a larger assignment individually and then "assemble" the final work together, as a team. Whether for a semester-long project with several outcomes or a single question during class, collaborative learning can

vary greatly in scope and objectives. Cooperative learning, sometimes confused with collaborative learning, describes a method where students work together in small groups on a structured activity.

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