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**THE CHANGING PERSPECTIVES OF TEACHER
EFFECTIVENESS RESEARCH: CONCEPTUALIZATIONS,
MODELS, MEASURES AND PREDICTORS**

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THE CHANGING PERSPECTIVES OF TEACHER EFFECTIVENESS RESEARCH: CONCEPTUALIZATIONS, MODELS, MEASURES AND PREDICTORS*

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Introduction

Over the years, the concept of teacher effectiveness as well as its measurement and prediction has been the subject of an enormous amount of research. So far studies made include all possibly known variables that are believed to affect or to influence the effective functioning of a teacher when in the act of teaching or when doing other work related to it. Some of these studies concern themselves with activities normally associated with the teacher as director or facilitator of learning; others pertain to the teacher's responsibilities, such as involvement in student guidance, extra-curricular activities, school-community relations; and still others dealt with the multi-farious roles of the teacher and other related professional responsibilities.

The foci of the researches differ in scope. Some aim to determine teacher effectiveness or predict it, or attempt both. Others seek to determine or predict such effectiveness in some particular aspects of teaching in controlled situation or with respect to all teacher responsibilities in a variety of situations and those that seek to determine effectiveness with reference to a particular criterion or multiple criteria. Some criteria used include efficiency ratings, time and frequency studies of behavior, and measures of student change, among others.

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With the recognition that teacher characteristics relate to teaching effectiveness, the concern of defining teacher effectiveness, the determination of what these characteristics are, the variables involved, and the possibility of measuring the predicting such characteristics come to the fore.

This paper will attempt to examine the changing perspectives of teacher effectiveness, then and now, with the end view of finding out whether there are reconstructions in its conceptualizations, a shift in the dimensions of its models, and the utility of its measures and predictors. Basic tenets, assumptions, implications and some future directions evolved from teacher effectiveness research cap this paper.

Key Terms

Three terms are interchangeably used and basic to the understanding of this paper: a) teacher effectiveness, b) teacher quality and c) teacher characteristics.

Operationally defined Teacher Effectiveness focuses on-

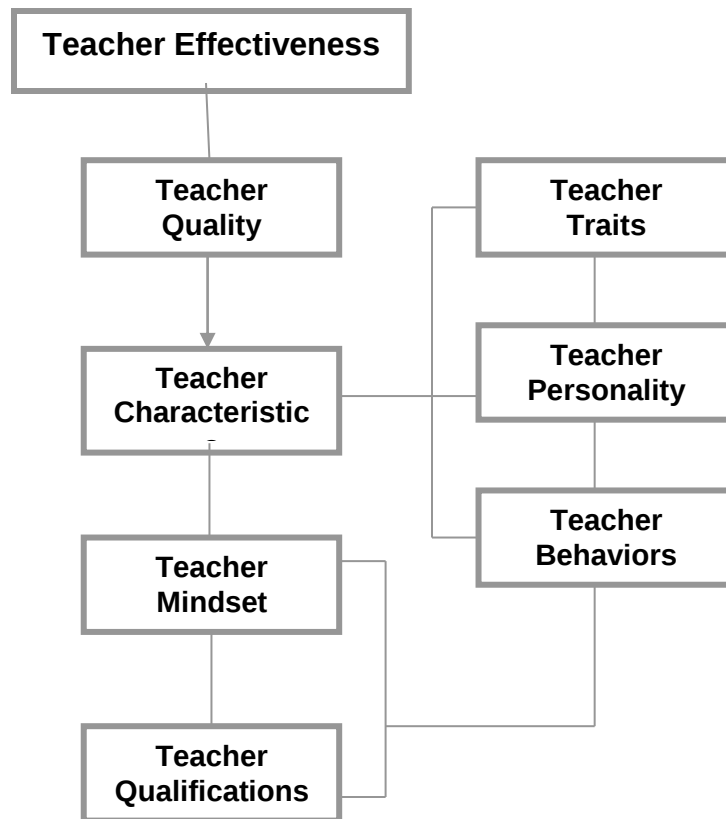
- An individual teachers' ability to produce agreed-upon results (*Biddle, 1964*)
- The concept depends on the criterion used in its assessment (*Klausmeier, 1971*)
- The teacher's effect on the realization of some values in terms of desired student behavior, abilities, habits and characteristics (*Gage, 1972*)
- The process of determining what variables make a good teacher (*Madike, 1982*)

Teacher Quality in a broader sense encompasses teacher characteristics and other variables. It is generally equated with large gains in student achievement (*Hanushek, 2006*). It can

include teachers' thought processes that motivate and support teachers' external behaviors; it even comprises teachers' beliefs, values and attitudes (Yero, 2002).

Teacher Characteristics embraces a set of traits; personal-social characteristics recognized as one of the known variables that affect teaching effectiveness. They are assumed to reflect teacher quality.

Figure 1 shows the interrelationships of these three concepts:



Early Conceptualizations, Models, Measures, and Predictors of Teacher Effectiveness (1960-1990)

As early as 1960, Gage noted that not only was the literature on teacher effectiveness literally overwhelming, but even bibliographies on the subject were becoming unmanageable. However, *Biddle* (1964) opines that few, if any “facts”, seem to have been established about teacher effectiveness, so that neither approved method of measuring it has been accepted nor manner of promoting teacher effectiveness have been widely adopted.

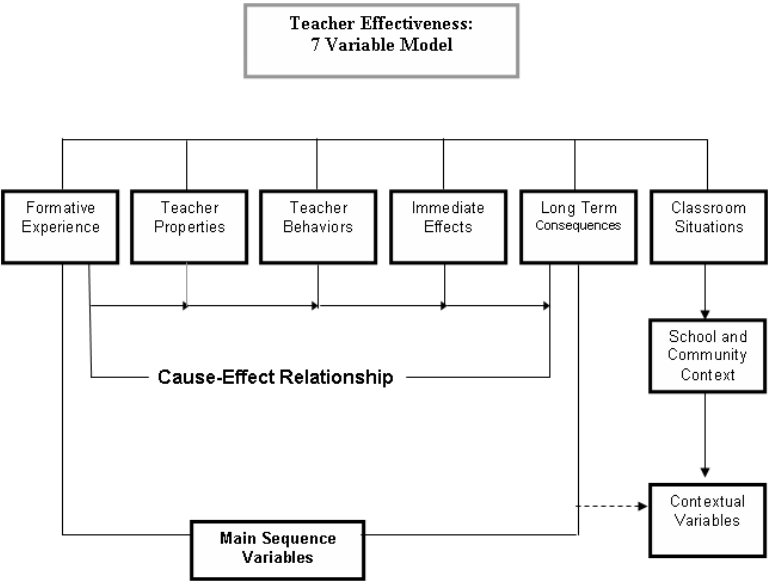
Conceptions of essential characteristics/traits of good teachers ranged from love, patience, trust (*Bollnow*, 1960) to enthusiastic, alert, have a sense of humor, fair, patient understanding (*Ryans*, 1960 and *Bibens*, 1970). Equally, categorizations of effective teachers cover a) personal-social b) emotional c) physical qualities d) moral and spiritual qualities (*Wynn*, 1960), while others categorize them as a) personal traits b) executive traits c) teaching power and d) professional responsibility (*Richey*, 1979). The 1970s also saw the conceptualizations as both combining content knowledge and traits, such as organization and clarity of subject, instructor and group/individual interaction, dynamism (*Eble*, 1971), and behavioral patterns (*Ebro*, 1977); *Sheffield*, 1974; *Smith*, 1980) such as interaction with students, motivation of students, being flexible and warm. Teaching skills and procedures that relate to teacher effectiveness were also studied. According to *Gage* (1972) effective teachers have high level of cognitive organization, were indirect, deliver lessons, from memory, while *Bell* (1962) notes direct relevant use of time, encouraging class discussion, and shows implications of learning to life situations. *Heil* and *Washburne* (1962) say that effective teachers are high in leadership work orientation – self-assured, methodical and able to set standards for themselves and their students. For *Lasley* (1981) good teachers implement workable set of rules, monitors

students' work and have acquired the skills necessary for multi-task instructional activities.

Even local studies conducted by *Pangalangan* (1973), *Sadsad* (1982), *Villasin* (1979), *Nava* (1986), showed that effective teachers show competencies as instructional, professional, personal-social and leadership. Also included were teachings by precept and example, being a nationalist, a lover of academic freedom, firmness, and adaptability. The early concepts of effective teachers from research literature then, comprise of listings of individual traits, categories of traits, behavioral patterns, teaching skills and procedures and other competencies.

In terms of early teacher effectiveness model, *Biddle* (1964) offers a 7-variable model involved in teacher effectiveness research, as shown in figure 2.

Figure 2



The first five variables are postulated to form a cause-effect relationship and are considered the main sequence variables, while the last two taken as contexts or portions of the main sequence; hence, considered contextual variables. One variable class in the model is teacher properties that include a legion of psychological traits, characteristics, abilities, attitudes all said to relate to teacher effectiveness. They are presumed to characterize the individual teacher in a consistent fashion over time and serve to explain teacher behaviors in response to a variety of situations. Presumably, they are laid “within” the teacher, thus unamenable to direct observation. One can readily observe the putative effects of such qualities in teacher behavior so as to ask teachers and others to report or rate such behavior, if not provide objective tests that attempt to measure such qualities.

Measures of effectiveness were already used during the last 3 decades. For instance, *Klausmeier* (1971) posits that teacher effectiveness has been assessed using three types of criteria: process, product and pressage.

- 1) product or what is learned – those who use this criterion hold the view that the test of teacher effectiveness rests on how well student achieve. Achievement tests, other measures in cognitive, psychomotor and affective domains are used to measure teacher effectiveness
- 2) process – those who prefer this criterion believe that the best test of teacher effectiveness lies on what the teacher does, what the students do, and the interaction that occurs between teacher and students or all 3. Observations of both teacher behavior and student behavior are used to measure effectiveness

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- 3) presage – those who use this criterion prefer not to, or are unable to observe teachers' behaviors. Measures of intellectual ability, grades made in college, personal appearance, characteristics, ratings made outside the classroom are used to measure effectiveness.

Large correlational studies using statistical tests such as factor analysis of effective performance were also done to measure effectiveness. *Hildebrand* (1973) for one used factor analysis in his study to interpret items describing effective performance resulting in five components: 1) analytic/synthetic approach, 2) organization and clarity, 3) instructor-group interaction, 4) instructor-individual interaction, and 5) dynamism/enthusiasm *Sherman* and *Blackburn* (1973) for their part determined the degree of relationship between personal characteristics and judged teaching effectiveness. Four factors emerged: Factor I – Personal potency; Factor II – Pragmatism; Factor III – Amicability and Factor IV – Intellectual competence.

Factor analysis with rotated varimax matrix was done by *Nava* (1990) to cluster the 20 traits/characteristics she found to be associated with teacher effectiveness. Only one factor emerged – the “caring” attitude of teachers to mean that all the 20 characteristics, such as sense of understanding, approachability, the ability to teach well, teacher's sense of humor, fairness, perseverance, critical mindedness, among others can be subsumed under one category, that is, the “caring” attitude of a teacher.

Other measures of teacher effectiveness include stakeholders as evaluators, students as evaluators, teachers themselves and administrators as evaluators, focus group discussions, standardized instruments and other criteria. Interestingly, *Larangan* (1972) found out that to the parents – a good teacher is one who can take their place in school; to an administrator – a good teacher is one who follows rules; and to

students, a good teacher is one who teaches them well. Across groups of students as evaluators, the elementary pupils put more emphasis on the teacher explaining the lesson well, with pleasing personality, sense of humor and understanding. To the high school students, teachers should have personal characteristics, good attitude, attention to duties, instructional skills, fairness and progressive attitude. The college students view effective teachers in terms of fairness, firmness, self-confidence, being well informed, systematic with appropriate, relevant jokes.

Standardized instruments such as rating scales, inventories, evaluation sheets, achievement tests, situational tests, semantic differential, were also used as measures to evaluate teacher effectiveness. *Turner* (in *Rosas*, 1983) summarizes the criteria for teachers' effectiveness: 1) student-attainment which covers cognitive, affective and psychomotor attainment. Teacher success is weighted against the improvement that students attain in these domains; 2) professional judgment - refers to assessment by teachers' peers, administrators, supervisors; and 3) student judgment – perception of students of the kind of teacher and the kind of teaching that they get in school.

Researches in the past also tried to predict effectiveness in some particular aspects of teaching, with respect to teacher responsibilities, and with reference to a particular criterion or multiple criteria.

According to *Rosenshine* (1971), high intellectual ability, academic grade point average, grades in student teaching, relate to or can predict subject matter preparation of teachers. *Elmore* and *Pohlman* (1978) in using teacher, student and class characteristics to predict effectiveness showed that teacher warmth, expected grade of students, and class size are predictors of effectiveness. *Larangan* (1972), on the other hand, found out that quality instruction in teacher training institutions may predict

teacher effectiveness, while *Montealegre* (1979) found out that cognitive tests which are used in most teacher admissions tests can predict student success in teacher education programs.

Later and Current Conceptualizations, Models, Measures and Predictors of Teacher Effectiveness (from 2000 to date)

Teacher effectiveness research continued to flourish and other dimensions were added to its conceptualization, highlighting teacher quality; an articulation of four prevailing models of teacher work; the development of standards; the emphasis on student achievement as a common measure; and the use of other predictors of effectiveness.

Norlander-Case, Reagan and Case (2000) articulate the importance of a nurturing teacher. Nurturing of students becomes a critical issue and enables students to learn and create. *Nodding* (2001) agrees that a caring teacher is someone who has demonstrated that he/she can establish regularly relations of care in a wide variety of situations. Comparably, *Thompson, Greer and Greer* (2005) articulate 12 themes that revolve around the encompassing theme of caring, all surprisingly thought of by university students who indicated that these characteristics lead to increased students achievement such as: fairness, positive attitude, preparedness, personal touch, sense of humor, creativity, willingness to admit mistakes, forgiving, respect, high expectations, compassion and sense of belonging.

Sandy (2000) notes several dimensions in varying levels of degree that embody the effective/quality teacher. To him, an effective teacher is: a learner, leader, provocateur, innovator, coach, humanist, sentinel, idealist, collaborator, enthusiastic, with a sense of humor and revolutionary. *Frey* (2002) list s essential characteristics of effective teachers that seem to improve student achievement. These include trust, respect, humility, confidence to

teach experience and attitude. *Gordon* (2004) believes that teachers account for more of students' achievement gains year to year. Common factors of exceptional teachers are: motivation to teach, relationship they create, and the way they structure learning. He considers licenses and subject matter competence as minimum requirements. *Education Week Magazine* (Sept. 2004) – describes effective teachers as those that inspire greater learning on their students, possessing deep content-area knowledge; their courses focused on how best to teach a particular subject and proficiency in subject matter by having majored the subject in college.

Yero (2002), however, contends that teacher effectiveness lies in the mindset of the teacher, in the largely unconscious thought processes that motivate and support the teacher's external behaviors. These include the teacher's beliefs, values, assumptions, and other thinking processes. *Yero* holds that teachers armed with Ph.D.'s and Master's degrees in subject area, educational theory and pedagogy are not guarantees of quality. Quality teachers share certain characteristics such as a belief that all students can learn but not all in the same way; a belief that teachers are learners and students are teachers; a high level of respect for all students, but not the same for all; and a humanistic rather than custodial approach to classroom control.

The National Board of Professional Teaching Standards (NBPTS) in 2002 outlined competency area or criteria that are considered most important in the field of teacher quality. Some of them are: commitment to student learning, knowledge of subject matter, management and monitoring of learning, reflective practice and being members of learning communities. In 2002 *Danielson*, of the Educational Testing Center, outlines 4 dimensions related to quality teaching as: Domain 1 – planning and preparation, Domain 2 – the classroom environment, Domain 3 – Instruction and Domain 4 – Professional responsibilities. Other standards were given by professionals known in teacher effectiveness

research as *Darling-Hammond* (2002). She considers verbal ability, content knowledge, educational coursework, teaching behaviors, enthusiasm for learning and flexibility, adaptability and creativity as hallmarks of quality teachers. Certification is important for hiring, yet *Hanushek* (2002) says that someone teaching a subject for which her or she has not demonstrated subject matter competency, regardless of being fully certified is not a equality teacher.

Of late review of teacher effectiveness by *Harris* and *Rutledge* (2007) reveals four prevailing models of teachers' work and teacher effectiveness: teaching as labor, teaching as craft, teaching as profession and teaching as art.

Figure 3: Some Dimensions of the Teacher Effectiveness Models

Dimensions/Assumptions	Teaching as:			
	Labor	Profession	Craft	Art
Primary Unit of Analysis	Teacher, Organization	Teacher, Organization	Classroom	Student, Classroom
Effectiveness Measure	Unclear	Unclear	Unclear	Unclear
Nature of Work	Task oriented mediated by formal school structures	Supported by relationships with colleagues	Unclear	Relationship oriented with students
Assumed significance of work environment	Central	Central	Secondary	Secondary
Types of worker skills hypothesized to be important	Technical skills	Professional knowledge; Interpersonal skills	Unclear	Interpersonal and related skills

In teaching as labor conceptualization, teachers' work is understood to occur within the school system hierarchy and is subject to oversight by the administrators. At the classroom level, teachers adhere to external demands as well as school-level routine and procedures that can be measured and evaluated.

Because schools have bureaucratic aspects, they enjoy division of labor with staff assigned to specific instructional and managerial tasks. Studies demonstrated that some teachers are more likely than others allocate resources, and implement curriculum that affect or raise student achievement. Effective teachers are the ones that make better decisions, however studies could not identify specific characteristics of individual teachers that make better decisions.

In teaching as a profession, teachers' work is understood to include a technical knowledge as well as an exercise of judgment on how to apply this knowledge with students. Teachers draw on their formal knowledge base as well as their knowledge of learners. Teachers' knowledge base is gained through education, experience, and meaningful professional development. The work occurs within a community supported by administrators and peers who provide tools and support for effective work. An effective teacher in this model draws upon a strong knowledge base as well as collegial relations with peers to deal with classroom environment; teachers make policy implementation decisions through interactions with colleagues. The department serves as primary locus of organizations for teacher defining their professional community and values.

In teaching as a craft, teachers maintain discretion over their classroom decisions, applying their knowledge base of curricular and instructional techniques as appropriate, while focusing on interaction between the teacher and his/her students. In this conceptualization, an effective teacher employs pedagogical procedural information useful in enhancing learner-

focused teaching in daily classroom action. Teachers are expected to draw on both pedagogical content knowledge as well as knowledge of each student, the same with teaching as a profession. However, the greater focus is on the classroom and teacher-student relationships rather than focus on peers and administrators. Teaching is seen as an endeavor of teachers to hone their skills and individual ability.

Teaching as an art focuses on the individualized nature of the teaching task and the unpredictable nature of the classroom environment. While teachers draw on their professional repertoire and knowledge, their teaching reflects their unique personality as well as distinctive interactions with students. An effective teacher under this category has a special gift and talent with students. It is relationship oriented and learner centered. The outcome of interest is defined by the student, not the organization.

Multiple interactions suggest that no single conception of teaching is likely to capture all the elements of teaching. The evidences described in the models are not direct tests of any particular model. It is not possible to say whether studies of particular models use particular definitions or measures of effectiveness, hence the dimension on measures are listed as unclear.

Measures of effectiveness in current literature (*Harris and Rutledge, 2007*) were mostly based on: 1) student test score gains and 2) evaluation of teachers by school principals, college faculty, peers, students, parents and research observers.

The focus on student test scores in research came about due to several factors: 1) achievement is widely considered to be an important educational outcome, 2) increased availability of the scores and 3) tests are administered frequently.

Another readily available effectiveness measure is principal evaluation. Principals are known to have direct knowledge about each teacher's practices and behaviors, leaving no need to rely on sophisticated statistical methods. In addition, principal evaluation can incorporate many different measures of effectiveness. However, there are upward biases in the evaluation scores and there is lack of consistency across studies regarding the evaluation rubric. This being the case, consideration of both objective and subjective measures can still be useful when trying to understand and predict teacher effectiveness.

Predictive studies abound in the later and current teacher effectiveness research. *Rivkin, Hanushek and Kain* (1998-2000) found out that teacher quality is the most important school-related factor influencing student achievement. This finding was corroborated by *Rice* (2003) when she declared that teacher quality is a powerful predictor of student performance. *Gordon* in 2004 found out that quality teachers account for more students' achievement year to year than any other factor, a finding reinforced in *Hanushek's* (2006) study that quality teachers are the ones who get large gains in student achievement.

Even as teacher quality matters in predicting student performance, other studies used other criterion variables.

Ferguson's (2000) research showed that high scoring teachers in their own examination were likely to elicit significant gains in students. The "No Child Left Behind" (2001) federal legislation assumed that years of teaching experience, teacher certification, engagement in certain types of coursework and performance on standardized assessments are indicators of high quality teachers. To this effect, *Abell Foundation* (2001) agreed that teachers' verbal ability is consistently found to be most related to student achievement, and teachers who graduated from selective colleges and universities had greater impact on student

achievement. *Darling-Hammond* (2000) averred that measures of teacher preparation and certification are by far the strongest correlates of student achievement.

Moreover, *Rice* (2003) summarizes the findings on other teacher characteristic assumed to reflect teacher quality:

- 1) teacher experience – is found to have positive effect on effectiveness
- 2) teacher preparation, program and degrees – selectivity, prestige of institution a teacher attended has positive effect on student achievement
- 3) teacher certification – there is positive effect of certified teachers on specific subject area (e.g. math) when certification is on that area
- 4) teacher coursework – in both subject area taught and pedagogy contribute to positive outcomes. Field experiences component of teacher education program suggest positive effects in terms of opportunity to learn the profession
- 5) teachers' own test scores – tests that assess verbal abilities of teachers have been shown to be associated with student achievement. National examinations are less consistent predictors of teacher performance.

In the most recent review by *Harris and Rutledge* (2007), they focus on three predictors on which teacher characteristics are considered and how they are measured.

- 1) teacher personality – this makes use of the older 16 Personality Factors or 16 PF and the newer Meyers Briggs Type Indicator (MBTI) as predictor in teacher evaluation studies. Teacher effectiveness is positively related to

conscientiousness, outgoingness/ extrovertedness, self-control, warm heartedness, attentiveness, generosity in personal relations, emotional maturity and self-sufficiency

- 2) teacher education – this makes use of the relationship between teacher education and teacher evaluation as measure of effectiveness. Grade point average, English grade, subject matter test were predictors, but coursework in pedagogy and subject area were the best predictor found out in most studies
- 3) teacher cognitive ability – this is a consistent predictor of effectiveness, even if evidences have shown that this is not innate, and appears to be significantly influenced by environmental factors. Verbal ability together with teachers' test scores was known predictors of effectiveness.

Lessons Learned

Considering the disparate concepts, models, measures and predictors of teacher effectiveness and the interchangeability of teacher characteristics and teacher quality, the following assumptions/premises/postulates gained from the review could be of use, considering that the teacher is central to the educative process:

- 1) Teachers make a difference. There are patterns of behavior which distinguish the effective from less effective teaching in eliciting student learning
- 2) Personality characteristics are more enduring and difficult to change than are functional behaviors typically associated with teaching
- 3) Classroom behaviors associated with effective teaching are more affective than cognitive, although it is recognized

that to produce the desired effects the teacher should possess high intellectual ability and other cognitive variables. Recent studies however, seem to confirm cognitive ability as consistent predictor

- 4) There are no empirical ground to say whether there are one or more general abilities adding to effectiveness as there are no empirical support for generic and or specific teaching skills, abilities and characteristics.
- 5) Research yields no global criteria nor universal description of teacher effectiveness, just as there is no agreement as to what educational effect the teacher is to produce.
- 6) Neither is there a consensus on what constitutes “best” teaching, but rather multiple and conflicting strategies reflecting broad curricular and instructional debates as well as beliefs and values of individual teachers.
- 7) Teaching requires different skills and knowledge in different contexts. As it is contextual in nature, these multiple contexts underscore that effective teaching is neither simple nor fixed.
- 8) The lack of theories in teaching can neither explain nor integrate research findings. While teaching offers rich concepts, paradigms, research findings, and instrumentalities of various types, it is still deficient in theories. *Wallen* and *Travers* (1963) call it the “theory of ethics” or the philosophy of teaching.

Some Implications and Directions for Future Research

A. Implications to policy and practice

- 1) The use of multiple measures in the hiring and recruitment of new teachers with emphasis on teacher qualities and qualifications
- 2) Teacher quality as one of the bases for increase in teacher salaries, incentives and merit pays
- 3) Hiring of quality teachers with specific specializations/credentials to teach classes that match her/her specialization
- 4) Teacher preparation programs to emphasize content domains along with pedagogy
- 5) Development of competency-based standards for quality teaching, possibly like the ones developed by the National Board for Professional Teaching Standards (NBPTS)

B. Directions for future research

- 1) Further studies on the role of teacher personality as predictor since most recent studies point out to cognitive ability as a consistent predictor
- 2) Studies on the improvement of measures and predictor of teacher effectiveness beyond the students' test scores or achievement
- 3) Researches on gaps in teacher quality at different school levels and different population of students

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- 4) Studies on what counts as quality teachers in different contexts (e.g. disadvantaged students, special education, geographic location, different subject areas, etc.)
 - 5) Studies on teachers' reflective thinking or philosophy of teaching and its role in teacher quality

“Not everything that can be counted counts and not everything that counts can be counted.”

Albert Einstein

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