

שאלתה: ידע מורים

דרישות ידע של מורים, ידע מורה אפקטיבי, הישגי תלמידים, סוגי ידע, רוחמה אבן, ידע
תוכן, ידע פדגוגי, מהו ידע התוכן הרצוי והאפקטיבי בהכשרת מורים לסטודנטים, Teacher
qualification

1.

מספר פריט: 10774

מיון: P98

סוג: מאמר

כותר: הנה זה בא: המודל החדש להערכת מורים בישראל

מחבר: בלר, מיכל / הרטף, חגית / רטנר-אברהמי, עפרה

מו"ל: הסתדרות המורים בישראל

שנה: 2011

בתוך: הד החינוך

כרך: (2)86

עמודים: 76-80

מילות מפתח: הערכת מורים; הערכה; מורים; ישראל; מערכת החינוך;

2.

The Effects of Teachers' Qualifications, Practices, and Perceptions on Student Achievement in TIMSS Mathematics: A Comparison of Two Countries.

Authors:

Dodeen, Hamzeh1, hdodeen@uaeu.ac.ae

Abdelfattah, Faisal2

Shumrani, Saleh2

Hilal, Maher Abu2

Source:

International Journal of Testing; Jan-Mar2012, Vol. 12 Issue 1, p61-77,
17p, 8 Charts

Document Type:

Article

Subjects:

Mathematics teachers

Job qualifications

Academic achievement

Saudi Arabia

Taiwan

Author Supplied Keywords:

achievement

international testing

mathematics

teachers' practices

teachers' qualifications

TIMSS

Abstract:

This study focused on comparing mathematics teachers' qualifications, practices, and perceptions between Saudi and Taiwanese schools. Data analyzed in this study were the responses of mathematics teachers to the Teacher Background Questionnaire—8th Grade from the Trends in International Mathematics and Science Study (TIMSS) in 2007. The Saudi sample consisted of 171 teachers while the Taiwanese sample consisted of 152 teachers. The comparison between the two countries revealed that there were significant differences in teachers' preparation for teaching specific mathematics topics, professional development programs, and in teachers' perceptions about the effects of school environment on students' TIMSS scores. In addition, the two countries' results differed in the mathematics topics that had not been taught to students, in assessment tools commonly used in mathematics, and in the type of questions used in tests. Some teachers' qualifications and practices were found to be related to students' scores. Results are discussed and recommendations for educators and policymakers are proffered.

3.

Teacher qualifications and student achievement in urban elementary schools.

Authors:

Buddin, Richard, buddin@rand.org

Zamarro, Gema1, gzamarro@rand.org

Source:

Journal of Urban Economics; Sep2009, Vol. 66 Issue 2, p103-115, 13p

Document Type:

Article

Subjects:

Academic qualifications

Elementary school teachers

Academic achievement

School children

Cities & towns

Urban schools

School districts

Los Angeles (Calif(.

California

Author Supplied Keywords:

Education production function

J44

J45

Student achievement
Teacher licensure
Teacher quality
Two-level fixed effects
Abstract:

Abstract: Teacher quality is a key element of student academic success, but few specific teacher characteristics influence classroom outcomes. This research examines whether teacher licensure test scores and other teacher attributes affect elementary student achievement. The results are based on longitudinal student-level data from Los Angeles. California requires three types of teacher licensure tests as part of the teacher certification process; a general knowledge test, a subject area test (single subject for secondary teachers and multiple subject for elementary teachers), and a reading pedagogy test for elementary school teachers. The student achievement analysis uses a value-added approach that adjusts for both student and teacher fixed effects. The results show large differences in teacher quality across the school district, but measured teacher characteristics explain little of the difference. Teacher licensure test scores are unrelated to teacher success in the classroom. Similarly, student achievement is unaffected by whether classroom teachers have advanced degrees. Student achievement increases with teacher experience, but the linkage is weak and largely reflects poor outcomes for teachers during their first year or two in the classroom.

4.

Teacher Qualification and the Achievement Gap in Early Primary Grades.

Alternate Title:

Cualificación docente y brechas en los resultados en los grados iniciales de la escuela primaria.

Authors:

Easton-Brooks, Donald¹, donald.easton-brooks@unt.edu

Davis, Alan²

Source:

Education Policy Analysis Archives; 2009, Vol. 17 Issue 14/15, p1-16, 16p, 4 Charts

Document Type:

Article

Subjects:

United States. No Child Left Behind Act of 2001

Achievement gap

Teacher qualifications

Effective teaching

Educational attainment

European Americans
United States
Author Supplied Keywords:
Early Childhood Longitudinal Study

reading

student achievement

teacher certification

teacher qualifications

value-added

certificación de docentes

educación infantil

estudio longitudinal

las formación docente

lectura

logros de los estudiantes

valor añadido

Language of Keywords: English; Spanish

Abstract (English:)

Title I of the No Child Left Behind Act (P.L. 107-110, 115 Stat. 1245, 2002) holds schools accountable for reducing the academic achievement gap between the different ethnic groups and requires elementary school teachers to have at least a bachelors degree and a state certification. The purpose of this study was to examine the relationship of the qualification requirement of NCLB to the goal of reducing the academic achievement gap. The study found that students with a certified teacher for most of their early school experience scored higher in reading than students who did not have a certified teacher. In addition, certification was associated with slightly narrowing the academic gap between African American and European American students across early elementary grades.

5.

Do Principal Preparation Programs Influence Student Achievement Through the Building of Teacher-Team Qualifications by the Principal? An Exploratory Analysis.

Authors:

Fuller, Ed1

Young, Michelle2

Baker, Bruce D.3

Source:

Educational Administration Quarterly. 02/01/2011, Vol. 47 Issue 1, p173-216. 44p.

Document Type:

Article

Subject Terms:

- *SCHOOL principals -- Training of
- *EDUCATION -- Study & teaching
- *TEACHER effectiveness
- *EDUCATIONAL quality
- *ACADEMIC achievement
- *ELEMENTARY school principals
- *TEAMS in the workplace
- *TEXAS Assessment of Knowledge & Skills
- *QUANTITATIVE research

Author-Supplied Keywords:

principal

principal preparation

student achievement

teacher quality

Company/Entity:

TEXAS Education Agency

NAICS/Industry Codes:

611710Educational Support Services

923110Administration of Education Programs

611699All Other Miscellaneous Schools and Instruction

Abstract:

Purpose: The primary purpose of this study is to explore how the characteristics of the principal preparation programs of newly hired elementary school principals might influence school achievement through the development of well-qualified teams of teachers by the school. Of primary interest is whether elementary school principals from preparation programs with certain types of characteristics are more or less likely to build teams of well-qualified teachers who, in turn, positively affect overall student achievement. A secondary purpose is to establish a relationship between the overall school-level qualifications of teams of teachers and school-level student achievement on the Texas Assessment of Knowledge and Skills (TAKS) to underscore the importance of the first relationship. **Research Design:** This quantitative study utilizes ordinary least squares regression to analyze seven extracts of data from the Texas Education Agency, merged together to create a data set that matched teachers, principals, school characteristics, and student achievement to individual schools. First, the authors establish the relationship between school-level teacher-team quality and school-level student outcomes on the TAKS. Second, they examine the relationship between principal preparation program characteristics and the measures of teacher-team quality after controlling for principal characteristics, school characteristics, and student achievement. Furthermore, because the authors hypothesize that principals cannot quickly alter the quality of

teams of teachers in schools, they examine school achievement and teacher-team quality over four years.

6.

Do Principal Preparation Programs Influence Student Achievement Through the Building of Teacher-Team Qualifications by the Principal? An Exploratory Analysis.

Authors:

Fuller, Ed¹

Young, Michelle²

Baker, Bruce D.³

Source:

Educational Administration Quarterly. 02/01/2011, Vol. 47 Issue 1, p173-216. 44p.

Document Type:

Article

Subject Terms:

*SCHOOL principals -- Training of

*EDUCATION -- Study & teaching

*TEACHER effectiveness

*EDUCATIONAL quality

*ACADEMIC achievement

*ELEMENTARY school principals

*TEAMS in the workplace

*TEXAS Assessment of Knowledge & Skills

*QUANTITATIVE research

Author-Supplied Keywords:

principal

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teacher quality

Company/Entity:

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more or less likely to build teams of well-qualified teachers who, in turn, positively affect overall student achievement. A secondary purpose is to establish a relationship between the overall school-level qualifications of teams of teachers and school-level student achievement on the Texas Assessment of Knowledge and Skills (TAKS) to underscore the importance of the first relationship. Research Design: This quantitative study utilizes ordinary least squares regression to analyze seven extracts of data from the Texas Education Agency, merged together to create a data set that matched teachers, principals, school characteristics, and student achievement to individual schools. First, the authors establish the relationship between school-level teacher-team quality and school-level student outcomes on the TAKS. Second, they examine the relationship between principal preparation program characteristics and the measures of teacher-team quality after controlling for principal characteristics, school characteristics, and student achievement. Furthermore, because the authors hypothesize that principals cannot quickly alter the quality of teams of teachers in schools, they examine school achievement and teacher-team quality over four years.

7.

Teacher qualifications and early learning: Effects of certification, degree, and experience on first-grade student achievement.

Authors:

Croninger, Robert G., croninge@umd.edu

Rice, Jennifer King¹

Rathbun, Amy¹

Nishio, Masako¹

Source:

Economics of Education Review; Jun2007, Vol. 26 Issue 3, p312-324, 13p

Document Type:

Article

Subjects:

Teachers

Mathematics -- Study & teaching

Reading (Higher education)

Academic achievement

Author Supplied Keywords:

Input output analysis

Productivity

Teacher quality

Abstract:

Abstract: A fundamental issue inherent to education policy is whether teacher qualifications such as certification status, degree level,

preparation, and experience predict student achievement. While existing research provides some direction regarding the potential importance of these qualifications for productivity in secondary schools, less is known about their importance for productivity in elementary schools. This study draws on data from the Early Childhood Longitudinal Study (ECLS) to analyze the relationship between elementary school teacher qualifications and first-grade achievement in reading and mathematics. While we find no effects for certification status, we report positive effects for teachers' degree type and experience on reading achievement. We also discover potential contextual effects of teachers' qualifications on student achievement, with first-graders demonstrating higher levels of reading and mathematics achievement in schools where teachers report higher levels of coursework emphasis in these subject areas. We discuss the implications of these findings for policy and future research.

8.

The Narrowing Gap in New York City Teacher Qualifications and Its Implications for Student Achievement in High-Poverty Schools.

Authors:

Boyd, Donald

Lankford, Hamilton

Loeb, Susanna

Rockoff, Jonah

Wyckoff, James

Source:

Journal of Policy Analysis & Management; Fall2008, Vol. 27 Issue 4, p793-818, 26p

Physical Description:

Bibliography; Graph; Table

Document Type:

Article

Subjects:

Academic achievement

Teachers

Teachers -- United States

Schools

Schools -- United States

Academic achievement -- United States

Teachers' backgrounds

Teacher certification

Education

Educational programs

United States

New York (N.Y).
New York (State(
Keywords:

Teachers -- Amount of education, experience, etc.

Abstract:

A study was conducted to examine the narrowing gap in teacher qualifications in New York City. Data were obtained from the New York City Department of Education, the New York State Education Department, alternatively certified teacher programs, and the College Board. Findings revealed that the gap between the qualifications of New York City teachers in high-poverty schools and those in low-poverty schools has narrowed significantly since 2000; this is largely due to the virtual elimination of newly-hired uncertified teachers and an influx of teachers with strong academic backgrounds. Findings suggested that this change, particularly in the poorest schools, has led to improved student achievement; much larger gains could result if teachers with strong teacher qualifications could be recruited. Findings are discussed in detail.

9.

The Contributions of School Quality and Teacher Qualifications to Student Performance: Evidence from a Natural Experiment in Beijing Middle Schools.

Authors:

Lai, Fang

Sadoulet, Elisabeth

De Janvry, Alain

Source:

Journal of Human Resources; Winter2011, Vol. 46 Issue 1, p123-153, 31p

Physical Description:

Bibliography; Diagram; Graph; Table

Document Type:

Article

Subjects:

Middle school students

Schools

Academic achievement

School choice

School enrollment

School enrollment forecasting

Middle schools

Students -- Rating of

Beijing (China(

Keywords:

Teachers -- Amount of education, experience, etc.

Abstract:

We use administrative data from the lottery-based open enrollment system in Beijing middle schools to obtain unbiased estimates of school fixed effects on student performance. To do this, we classify children in selection channels, with each channel representing a unique succession of lotteries through which a child was assigned to a school. Results show that school fixed effects are strong determinants of student performance. These fixed effects are shown to be highly correlated with teacher qualifications measured in particular by their official ranks. Teacher qualifications have about the same predictive power for student test scores as do school fixed effects. Reprinted by permission of the publisher.

10.

Understanding Malaysian Pre-Service Teachers Mathematical Content Knowledge and Pedagogical Content Knowledge.

Authors:

Kwan Eu Leong¹, rkleong@um.edu.my

Chew Cheng Meng²

Abdul Rahim, Suzieleez Syrene¹

Source:

Eurasia Journal of Mathematics, Science & Technology Education; Apr2015, Vol. 11 Issue 2, p363-370, 8p

Document Type:

Article

Subjects:

Pedagogical content knowledge

Mathematics -- Study & teaching

Teachers -- In-service training

Student teachers -- Research

Education -- Malaysia

Author Supplied Keywords:

mathematical content knowledge

pedagogical content knowledge

Pre-service teachers

Abstract:

This article seeks to present findings from the analysis of the TEDS-M reports on the mathematical content knowledge (MCK) and pedagogical content knowledge (PCK) of the pre-service teachers in Malaysia. The main objective of this study was to investigate the level of teaching knowledge attained by the Malaysian pre-service primary and secondary teachers. Some 576 primary level pre-service teachers and 389 secondary level pre-service teachers participated in the TEDS-M study. The significance of this study is pertinent as the level of

teachers' knowledge influences students' achievement in schools. Results of analysis show that Malaysian pre-service teachers at the primary and secondary performed below the international average for both mathematics content knowledge (MCK) and mathematics pedagogical content knowledge (MPCK). The article suggested several steps on how teacher educators could improve the PCK and MCK of pre-service teachers in Malaysia.

11.

Middle School Mathematics Teachers' Professional Development and Student Achievement.

Authors:

Telese, James A.1 james.telese@utb.edu

Source:

Journal of Educational Research. 2012, Vol. 105 Issue 2, p102-111. 10p. 1 Diagram, 3 Charts.

Document Type:

Article

Subject Terms:

*MATHEMATICS -- Study & teaching (Middle school(

*RESEARCH

*TEACHER development

*MATHEMATICS teachers -- Training of

*ACADEMIC achievement

*TEACHERS -- In-service training

*MIDDLE school students

*TEACHER effectiveness

Geographic Terms:

UNITED States

Author-Supplied Keywords:

middle school mathematics teachers

National Association of Educational Progress (NAEP(

professional development

Abstract:

Middle school mathematics teacher quality is questionable because the number of certified mathematics teachers considered highly qualified is low (Birman et al., 2009). The author examined Grade 8 data from the 2005 National Association of Educational Progress mathematics assessment. The purposes of the study were to (a) determine the impact of middle school mathematics teachers' content knowledge and teachers' mathematics pedagogical knowledge on student achievement and (b) compare the effect of the degree to which teachers received reform-oriented professional development activities on student achievement. The results indicated that mathematics content knowledge has a larger role in predicting student achievement than

mathematics pedagogical knowledge. Also, teachers who reported participating in fewer professional development activities had students with higher scores than those students whose teachers reported either participating in more professional development. Results for various professional development activities are also presented.

12.

Relationship between teacher knowledge of concepts and connections, teaching practice, and student achievement in middle grades mathematics.

Authors:

Tchoshanov, Mourat A.1 mouratt@utep.edu

Source:

Educational Studies in Mathematics. Mar2011, Vol. 76 Issue 2, p141-164. 24p. 2 Illustrations, 2 Diagrams, 9 Charts, 2 Graphs.

Document Type:

Article

Subject Terms:

*MIXED methods research

*THEORY of knowledge

*ACADEMIC achievement

*CONCEPTS

*MATHEMATICS teachers

*METROPOLITAN areas -- United States

PSYCHOLOGICAL aspects

Geographic Terms:

UNITED States

Author-Supplied Keywords:

Cognitive type of teacher knowledge

Student achievement

Teacher content knowledge

Abstract:

The mixed method sequential nested study examines whether and how the cognitive type of teachers' content knowledge is associated with student achievement, and correlated with teaching practice. In the context of this study, the cognitive type refers to the kind of teacher content knowledge and thinking processes required to accomplish a task successfully, in terms of knowledge of facts and procedures (Type 1), knowledge of concepts and connections (Type 2), and/or knowledge of models and generalizations (Type 3). A sample of 102 middle school mathematics teachers (grades 6-8) was assigned to the study from a number of school districts in an urban area in the Southwestern US. Teachers were tested using the Teacher Content Knowledge Survey. Student level data of about 2,400 middle grades students' standardized test passing rates including percentage of students meeting the state

standards by objectives were collected. The type of teachers' content knowledge was assessed and tested for association with student achievement on the state-mandated standardized test using multivariate methods including tests for variance and independence. The nested research consisted of three phases. Substudy-1 focused on quantitative analysis of the association between cognitive type of teacher content knowledge and student achievement. Substudy-2 aimed at the correlation between cognitive type of teacher content knowledge and teaching practice. Finally, substudy-3 was a case study on examining middle grades mathematics teachers' knowledge and understanding of fraction division.

13.

Effectiveness of a curricular and professional development intervention at improving elementary teachers' science content knowledge and student achievement outcomes: Year 1 results.

Authors:

Diamond, Brandon S.1

Maerten-Rivera, Jaime2

Rohrer, Rose Elizabeth3

Lee, Okhee4

Source:

Journal of Research in Science Teaching; May2014, Vol. 51 Issue 5, p635-658, 24p

Document Type:

Article

Subjects:

Research

Career development

Workshops (Adult education(

Science teachers

Science

Author Supplied Keywords:

cross-sectional multilevel modeling

elementary science

professional development

science achievement

science content knowledge

teacher effect on student

teacher knowledge

Abstract:

Teacher knowledge of science content is an important but understudied construct. A curricular and professional development intervention consisting of a fifth grade science curriculum, teacher workshops, and school site support was studied to determine its effect

on teachers' science content knowledge as measured by a science knowledge test, a questionnaire, and classroom observations. These three measures, along with college science courses taken, were then used to examine the effect of teachers' science content knowledge on student achievement outcomes. The intervention had a significant effect on the treatment group teachers' science knowledge test scores and questionnaire responses compared to the control group, but not on the classroom observation ratings. Teachers' scores on the science knowledge test were found to be the largest significant teacher-level predictor of student achievement outcomes regardless of participation in the intervention. © 2014 Wiley Periodicals, Inc. J Res Sci Teach 51: 635-658, 2014.

14.

**TEACHER KNOWLEDGE AND CLASSROOM PRACTICE:
EXAMINING THE CONNECTION.**

Alternate Title:

Conocimiento del profesor y práctica en el aula: estudio de su conexión.

Authors:

Gilbert, Michael1 Mike.Gilbert@umb.edu

Gilbert, Barbara2 barbara_gilbert@gse.harvard.edu

Source:

PNA. ene2013, Vol. 7 Issue 2, p51-61. 11p.

Document Type:

Article

Subject Terms:

*PEDAGOGICAL content knowledge

*DECISION making

*TEACHER educators

*TEACHER-student relationships

*CLASSROOM environment

*EDUCATION -- Study & teaching

Author-Supplied Keywords:

Aprendizaje del profesor

Classroom practice

Conocimiento del contenido para la enseñanza

Content knowledge for teaching

Efectividad del profesor

Práctica en el aula

Teacher effectiveness

Teacher learning

Aprendizaje del profesor

Conocimiento del contenido para la enseñanza

Efectividad del profesor

Práctica en el aula

Language of Keywords: English; Spanish

NAICS/Industry Codes:

611699All Other Miscellaneous Schools and Instruction

923110Administration of Education Programs

611710Educational Support Services

Abstract (English):

This paper extends existing research regarding content knowledge for teaching (CKT) and the role it plays in advancing student learning. Two teachers, with high and low measured CKT respectively, are observed on the same day teaching similar content. Many studies have recently been published linking student achievement to teacher's CKT and many US schools have begun including CKT measures in teacher hiring and retention decisions. Teaching observed for this study illustrates that content can be taught effectively by teachers across the spectrum of CKT levels, but observable and significant differences in teaching leads to important questions for in-service and pre-service teacher educators.

15.

Exploring Kindergarten Teachers' Pedagogical Content Knowledge of Mathematics

Lee, JoohiView Profile. International Journal of Early Childhood42.1 (2010): 27-41.

Abstract

The purpose of this study was to assess 81 kindergarten teachers' pedagogical content knowledge of mathematics on six subcategory areas such as number sense, pattern, ordering, shapes, spatial sense, and comparison. The data showed participants possessed a higher level of pedagogical content knowledge of "number sense" (M = 89.12) compared to other mathematics pedagogical content areas. The second highest scores among six subcategories of pedagogical content knowledge of mathematics was for the pedagogical content area of "pattern" (M = 82.33). The lowest scores among those six subcategories of kindergarten teachers' pedagogical content knowledge were obtained from the subcategory of "spatial sense" (M = 44.23), which involved the means to introduce children to spatial relationships. The second lowest score was obtained for the subcategory of "comparison" (M = 50.40) which involved the means to introduce the concept of graphing and the use of a balance scale for measurement.

16.

Pedagogical Content Knowledge of Experienced Teachers in Physical Education: Functional Analysis of Adaptations

Ayvazo, ShiriView Profile; Ward, PhillipView Profile. Research Quarterly for Exercise and Sport82.4 (Dec 2011): 675-84.

Abstract

Pedagogical content knowledge (PCK) is the teacher's ability to pedagogically adapt content to students of diverse abilities. In this study, we investigated how teachers' adaptations of instruction for individual students differed when teaching stronger and weaker instructional units. We used functional analysis (Hanley, Iwata, & McCord, 2003) of the instructional interaction to examine PCK. We observed and measured student-teacher interactions and their appropriateness. Participants were 2 experienced elementary physical educators who taught stronger and weaker units. Primarily, the appropriateness data indicated PCK differences between the stronger and weaker units. Results show that functional analysis of instructional adaptations is an effective strategy for examining PCK and that teachers were better able to meet students' needs in the stronger unit.

17.

Enhancing Pedagogical Content Knowledge in Preservice Science Teachers

Nuangchalerm, PrasartView Profile. Higher Education Studies2.2 (Jun 2012): 66-71.

Abstract

Preservice teachers are key element to shape students' attributes and key factor affecting to motivate students to have achievement in learning behaviors. This study aims to investigate pedagogical content knowledge of preservice teachers. Forty three preservice science teachers participated the study, inquiry-based instruction was implemented in the context of science teaching and learning for enhancing pedagogical content knowledge. A variety of qualitative methods were employed to examine the engagement of their pedagogical content knowledge. The findings can be indicated that inquiry-based instruction can enhance pedagogical content knowledge and its result can be used for teacher preparation program as well.

18.

Assessing Pre-service English as a Foreign Language Teachers' Technological Pedagogical Content Knowledge

Öz, HüseyinView Profile. International Education Studies8.5 (May 2015): 119-130.

Turn on hit highlighting for speaking browsers by selecting the Enter

Abstract

The present research aimed to assess pre-service English as a foreign language teachers' technological pedagogical content knowledge. A total of 76 undergraduate students enrolled in an English language

teaching (ELT) program at a major state university in Turkey were recruited in the study and were asked to anonymously complete the Technological Pedagogical Content Knowledge Scale and answered some open-ended questions. The findings revealed a highly developed knowledge of TPACK (Mean > 3.5; 81%). Gender differences were found to be significant with respect to Technological Knowledge (TK) and Pedagogical Knowledge (PK) dimensions with females proportionally having higher TPACK development. The findings of qualitative data analysis also revealed that compared with cooperating teachers, faculty members in the department used more TPACK in a classroom lesson. Thus, these findings contribute to understanding the nature and development of TPACK based instruction among pre-service English teachers, suggesting that the integration of content, pedagogy and technological knowledge into the existing teacher education paradigm and fostering technologically-rich environment for language learners will contribute to quality learning and teaching.

19.

Pedagogical content knowledge for teachers: Integrate everything you know to help students learn

Griffin, Linda; Dodds, PattView Profile; Rovegno, InezView Profile. Journal of Physical Education, Recreation & Dance67.9 (Nov/Dec 1996): 58-61.

Full text

Full text - PDF

Abstract/Details

Abstract

The importance of pedagogical content knowledge (PCK) in helping students learn is emphasized to physical education teachers. Developing PCK is a task for highly committed educators who are willing to examine their instructional techniques and make substantial changes over time.

Impact of Chemistry Teachers' Knowledge and Practices on Student Achievement.

Authors:

Scantlebury, Kathryn1

Source:

AIP Conference Proceedings. 10/20/2008, Vol. 1064 Issue 1, p46-49. 4p. 3 Charts.

Document Type:

Article

Subject Terms:

- *EDUCATION -- Research
- *INQUIRY-based learning
- *EDUCATIONAL tests & measurements
- *ACADEMIC achievement
- *COLLEGE student development programs

Author-Supplied Keywords:

chemistry education
gender differences
professional development

NAICS/Industry Codes:

- 611710Educational Support Services
- 923110Administration of Education Programs
- 611699All Other Miscellaneous Schools and Instruction

Abstract:

Professional development programs promoting inquiry-based teaching are challenged with providing teachers content knowledge and using pedagogical approaches that model standards based instruction. Inquiry practices are also important for undergraduate students. This paper focuses on the evaluation of an extensive professional development program for chemistry teachers that included chemistry content tests for students and the teachers and the impact of undergraduate research experiences on college students' attitudes towards chemistry. Baseline results for the students showed that there were no gender differences on the achievement test but white students scored significantly higher than non-white students. However, parent/adult involvement with chemistry homework and projects, was a significant negative predictor of 11th grade students' test chemistry achievement score. This paper will focus on students' achievement and attitude results for teachers who are mid-way through the program providing evidence that on-going, sustained professional development in content and pedagogy is critical for improving students' science achievement.