International Journal of Learning and Teaching

Volume 10, Issue 3, (2018) 245-251

www.ij-lt.eu

Teaching strategies by gender, grade level and teacher's self-concept in Mexico

Pedro Sanchez-Escobedo*, Universidad Autonoma de Yucatan, Km 1 Carretera a Motul, Merida, Yucatan 97000, Mexico.
Jodi L. Linley, University of Iowa, N491 Lindquist Center, Iowa City, IA 52242 USA.
Alicia Rivera Morales, Universidad Pedagogica Nacional, Subida al Ajusco, CDMX, Mexico.

Suggested Citation:
Sanchez-Escobedo, P., Linley, J. L. & Morales, A. R. (2018). Teaching strategies by gender, grade level and teacher's self-concept in Mexico. *International Journal of Learning and Teaching. 10*(3), 245–251.

Received date December 15, 2017; revised date February 26, 2018; accepted date July 30, 2018.
Selection and peer review under responsibility of Prof. Dr. Hafize Keser, Ankara University, Ankara, Turkey.

Abstract

This study examines teaching strategies of Mexican teachers by gender, grade level and self-concept as an instructor. A conventional sample of 573 teachers from diverse school settings in the state of Yucatan in Mexico responded to a paper and pencil questionnaire. Results indicated, in general, that teachers prioritise classroom management and independent learning over strategies emphasised by policies and training programmes in the country, such as cooperative learning, differentiation or promoting critical thinking. Statistical analyses showed some differences in this diverse group of teachers by gender, grade level and self-concept. Female teachers promote more independent activities than males, and as expected, primary school teachers are more concerned with differentiation. Teachers with high self-concept tended to do more class management activities and promote more independent learning and critical thinking than low self-concept teachers.

Keywords: Mexican teachers, teaching strategies.

* ADDRESS FOR CORRESPONDENCE: **Pedro Sanchez-Escobedo**, Universidad Autonoma de Yucatan, Apartado Postal 2017, Merida, Yucatan 97000 Mexico. ***E-mail address***: psanchez@correo.uady.mx / Tel.: +52 1 9999-478681

1. Introduction

A robust international body of literature leads investigators to analyse the outcomes of student-centred teaching, such as high-level thinking and achievement, meaningful relationships and positive psychological well-being (Gillies, Ashman & Terwel, 2008; Johnson & Johnson, 1989; Tomlinson, 2003). Additional literature demonstrates the widespread adoption of student-centred teaching practices, from Cyprus (Hursen & Soykara, 2012) to Vietnam (Nguyen Thanh, Dekker & Goedhart, 2008). Yet, there are relatively few empirical studies of teaching strategies in Mexico. Indeed, teachers across the Mexican educational system are rarely asked about what they do in their classrooms and how they feel as teachers. Do teachers in Mexico use student-centred strategies that promote student learning and development? This study seeks to understand the teaching strategies of teachers across the educational system in Mexico and to understand teachers' self-efficacy in relation to their teaching strategies.

Student-centred teaching fosters a host of positive outcomes for students. For example, in a meta-analysis of research about cooperative learning compared with competitive or individualistic learning, Johnson and Johnson (1989) found that cooperative learning fosters considerably greater effort to achieve cooperation among students. These scholars also found cooperative learning promotes supportive social and peer relationships, as well as maturity in cognitive and moral decision making (Johnson & Johnson, 1989). In another example, studies of differentiation strategies demonstrate the effectiveness of differentiation as responsive to individual student needs, especially in schools where programmes for special education or gifted education do not exist (Emanuelsson, 2003; Tomlinson, 2003). Similarly, research shows effective class management strategies are the 'art' of establishing environments that foster student cooperation (Cangelosi, 2014). Additionally, students experience positive outcomes from teaching practices that promote independent or autonomous work (Stefanou, Perencevich, DiCintio & Turner, 2004) and critical thinking (Abrami et al., 2008; Hooks, 2010). How are these teaching strategies, which are known to promote positive outcomes for students, used in Mexico?

To further understand teaching strategies, teacher's self-concept was explored with two questions related to the two major dimensions of self-concept: self-perception (How good of a teacher you are?) and self-efficacy (How efficient is your teaching?). Teacher self-concept was thus defined as the evaluation that teachers make about themselves regarding how good and effective they are as teachers.

1.1. Purpose

The purpose of this study is to identify teaching strategies frequently used in Mexico and to explore differences by gender, grade level and self-concept as a teacher.

2. Method

2.1. Participants

A paper and pencil anonymous questionnaire was voluntarily responded by 573 teachers from the different educational levels in the state of Yucatan, Mexico. From these, 185 (32%) were males and 388 (68%) females. Teachers were on the average 32 (SD = 3.2) years old, with a modal seniority of 13 years in the school system. Almost half of them worked full time, a quarter of them worked half time and the remaining quarter were teachers hired on an hourly basis. Teachers showed, in general, similar characteristics to teachers in other states in Mexico.

Special fields of teaching were: Spanish language (23%), social sciences (32%), STEM subjects (20%), Arts and Physical Education (5%) and others (20%). Table 1 depicts participant teachers by gender and grade level taught.

Table 1. Participant teachers

Primary		Junior high		High school		Colleges		Total	
m	f	m	f	m	f	m	f	m	f
39	141	34	141	47	74	23	34	185(32)	388(68)
180(31)		215(38)		121(21)		57(10)		573(100)	

Legend: m = males; f = females; (%)

2.2. Instrument

A questionnaire was designed asking for general demographic and labour information. In addition, teachers were presented with a list of 18 teaching activities (Table 2). They were asked to rate the frequency of use in a six-point Likert scale. Cronbach Reliability coefficient was 0.766.

Table 2. Dimensions of instructional strategies and corresponding survey items

Dimension	Items
Critical thinking	I design activities in a step-wise manner
Instructional activities that foster intellectually	I ask students to suggest activities for the class
disciplined processes as the basis of learning	Students reflect upon their own work
	I posit questions to check if they had understood
	I make them express their thoughts
Class management	I introduce new topics
Activities to create and maintain a structured and	I present the class objective
intentional learning environment	I make a summary from the previous class
	I administer tests to assess their learning
Differentiation	I assign tasks according to the student capacity
Instructional activities that mean to account for	I organise debates
variation in students' abilities, styles and preferences	I make groups according to abilities
Cooperative learning	I promote group-work
Classroom activities that attend to increasing social	They develop products to be used by other people
interaction and fostering academic and social learning	
experiences	
Independent work	I check their work
Instructional strategies that promote individual	I check the homework
learning activities under control of the student	I ask the students to work/use their textbook
	I assign long-term projects

A factor analysis with varimax rotation of results allowed the establishment *post-hoc* of five factors/dimensions. These activities were clustered in five groups according to their factorial loads. Each dimension represented a categorical teaching strategy as described in Table 2, including the items clustered by this method. Finally, teachers were asked to self-assess in a six-point Likert scale: (1) how good they were as teachers and (2) how efficient their instruction was.

2.3. Data analysis

Data were fed into SPSS version 20 for statistical analysis.

3. Results

3.1. Gender differences

Gender differences were explored using simple *t*-tests. Scores in each category of teaching strategy were pondered in a scale from 1 to 6 by dividing the mean score by the number of items in each dimension, so everyone had the same directly comparable scale. Table 3 depicts the results of this analysis by gender.

Table 3. Differences in teaching strategies by gender

	Men (*n* = 165)	Women (*n* = 388)	*t*	*p*
Class management	4.23(0.56)	4.26(0.56)	0.64	0.69
Independent study	4.17(1.2)	4.22(0.89)	3.19	0.001*
Cognitive skills	3.91(0.61)	3.94(0.58)	0.249	0.265
Cooperation	3.74(0.99)	3.75(1.03)	0.126	0.11
Differentiation	3.29(0.97)	3.27(0.88)	1.3	0.62

In general, class management seems to be the major concern of these teachers. The only statistically significant difference in teaching strategies by gender was found in the analysis of the independent study. Female teachers promote more independent activities than male. No other statistically significant differences were found. In general, women showed higher scores than men across most teaching strategies. And when asked how good of a teacher they were, women tended to consider themselves better teachers than men ($t = 2.33$; $p = 0.027$).

3.2. Grade level differences

One-way ANOVAS were carried out to explore differences in the use of teaching strategies by grade level. Table 4 summarises results.

Table 4. ANOVA: teaching strategies by level of teaching

Level	Primary	Secondary	High school	College		
Grade/years	1–6	7–9	10–12	≥13		
N	**181**	**214**	**121**	**54**	***F***	***p***
Class management	4.32(0.56)	4.21(0.58)	4.22(0.52)	4.15(0.57)	1.68	0.151
Independent study	4.35(1.14)	4.13(1.21)	4.17(0.53)	4.0(0.90)	1.76	0.134
Cognitive skills	3.99(0.55)	3.85(0.61)	3.93(0.61)	4.04(0.58)	2.33	0.055
Cooperation	3.89(0.99)	3.62(1.04)	3.69(0.95)	3.76(3.7)	1.79	0.129
Differentiation	3.46(0.88)	3.23(0.86)	3.04(0.92)	3.4(0.93)	3.67	0.001

Frequency of teaching strategies ranked similarly in every level. The only significant difference was in differentiated instruction that logically was more frequently used by primary school teachers. No statistically significant differences were found in college teachers that primarily work with graduate students than with those who work with undergraduates.

3.3. Self-perception and teaching strategies

Self-perception was measured in two dimensions of perception—self-esteem and self-efficacy. The distribution of both measures, as expected, was skewed to the right, having 78% of teachers with high self-perception and 22% with low self-perception. No differences in self-efficacy were found by either level taught (primary, secondary, high school and college) or in the use of teaching strategies. Regarding general self-concept as a teacher (how good of a teacher are you), there were significant differences in three of the five categories of teaching strategies, as depicted in Table 5.

Table 5. Teaching strategies by level of self-perception

	Low (*n* = 165)	High (*n* = 388)	*t*	*p*
Class management	3.96 (0.60)	4.33 (0.52)	6.75	0.001
Independent study	3.95 (0.69)	4.28 (1.06)	3.29	0.001
Critical Thinking	3.73 (0.59)	3.98 (0.57)	4.32	0.001
Cooperation	3.75 (0.92)	3.72 (1.02)	0.281	0.779
Differentiation	3.20 (0.97)	3.30 (0.88)	1.08	0.278

Legend: *t* = Student's *t*; *p* = alpha probability level.

This analysis shows that teachers with low self-concept tend to carry out less instructional activities than teachers with high self-concept in three of the five dimensions under analysis—class management, independent study and critical thinking.

No other significant differences were found in these teachers when contrasted by training, experience, the field of study or the type of school.

4. Conclusions

In general, few gender differences were found. The only teaching strategy that seems to be different by gender was promoting independent study, with women teachers promoting independent study more frequently than men. This may be associated with women reporting interest in paying attention to students' homework, checking their homework and the management of textbook and learning materials. Traditional gender roles in Mexico align with this finding in that women, in this case, teachers, sometimes also mothers, tend to pay more attention to formative assessment, such as homework, while men pay more attention to summative assessment or grades. However, this difference needs to be better studied by observational and other research strategies.

Generally, teachers in Mexico were concerned with class management. This finding makes sense because teachers are concerned with facilitating their classrooms, viewing and creating a positive learning environment as their primary responsibility. This permeated across gender and all levels of instruction. Interestingly, cooperation and differentiation seemed to be the least of teachers' concerns even though these topics are highly recommended in the literature and teacher preparation and training programmes. Also, promoting critical thinking seemed to be in the middle, in spite of making students think or reflect is a challenge in current education.

When we examined teaching practices by grade level, the only difference was that primary school teachers focused more on differentiation than other teachers. This is logical given the developmental nature of young children. Educational challenges must be addressed among primary age students such that the students persist in school. In the absence of differentiation, students may drop out of school altogether.

Asking teachers to assess their own performance as teachers is not a common practice in Mexico. Yet, we asked teachers about their self-efficacy based on literature about their self-perception in two dimensions: their self-concept and their self-efficacy. In both dimensions, we observed patterns of two groups; nearly 80% of participants had a high self-perception and 20% a low self-perception. All in all, there are no differences between the self-perceptions of teachers and the strategies they use. However, when analysing the self-concept (how good of a teacher are you?), there were significant differences in the relationships with three of the five strategies. High self-esteem teachers reported more frequent class management, independent study and the promotion of critical thinking skills than low self-esteem teachers. This finding makes sense in light of teachers' desire to promote a positive learning environment, but we were surprised not to find these differences in the dimension of self-efficacy. This suggests that low self-esteem teachers may have an external locus of control that imputes effectiveness to things other than teaching.

5. Discussion

Asking teachers what they do and how they feel in educational research is useful to collect empirical data and not often done in a Mexican context. Although this study approach is simple with direct variables, it generates important information to understand the teaching situation and teacher training in Mexico. Results, for example, indicate that teachers are most concerned with class management and promoting independent study, which is in contrast with teacher preparation that emphasises cooperative learning and differentiation. Most importantly, the promotion of critical thinking skills—an aspect salient to many educational reforms and pedagogies—does not seem to be a centrally used strategy by teachers in Mexico. These results encourage further study of critical thinking pedagogies in Mexico. Although we might anticipate more critical thinking pedagogies in high school and higher education, these data show no differences in grade level. This needs to be further analysed because of the developmental nature of high school and college-age students who are preparing for adult life.

References

Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M. A., Tamim, R. & Zhang, D. (2008). Instructional interventions affecting critical thinking skills and dispositions: a stage 1 meta-analysis. *Review of Educational Research, 78*(4), 1102–1134.

Baksh, I. J. & Martin, W. B. (1984). Teacher expectation and the student perspective. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 57*(8), 341–342.

Beady, C. & Hansell, S. (1981). Teachers race and expectations for student acheivement. *Amercian Educacional Reserach Journal, 18*, 191–206.

Brophy, J. & Good, T. (1974). *Teachers-students relationships: causes and consequuences*. New York, NY: Rinehart & Winston.

Brophy, J. E. (1983). Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology, 75*, 631–661.

Cangelosi, J. S. (2014). *Classroom management strategies: gaining and maintaining students' cooperation* (7th ed.). San Francisco, CA: Wiley.

Emanuelsson, I. (2003). Differentiation, special education and equality: a longitudinal study of self-concepts and school careers of students in difficulties and with or without special education support experiences. *European Educational Research Journal, 2*(2), 245–261.

Gillies, R. M., Ashman, A. F. & Terwel, J. (Eds.). (2008). *The Teacher's role in implementing cooperative learning in the classroom*. New York, NY: Springer.

Hooks, B. (2010). *Teaching critical thinking: practical wisdom*. New York, NY: Routledge.

Hursen, C. & Soykara, A. (2012). Evaluation of Teachers' beliefs towards constructivist learning practices. *Procedia Social and Behavioral Sciences, 46*, 92–100.

Johnson, D. & Johnson, R. (1989). *Cooperation and competition: theory and research*. Edina, MN: Interaction Book Company.

Jussim, L., Smith, A., Madon, S. & Palumbo, P. (1988). Advances in research on teaching: expectations in the classroom. In *Teacher expectations* (p. 148). Greenwich, CT: JAI Press.

Muller, C., Katz, S. R. & Dance, L. J. (1999). Investing in teaching and learning: dynamics of the teacher-student relationship from each actor's prespective. *Urban Education, 34*, 292–337.

Nguyen Thanh, T., Dekker, R. & Goedhart, M. J. (2008). Preparing Vietnamese student teachers for teaching with a student-centered approach. *Journal of Mathematics Teacher Education, 11*(1), 61–81.

Rosenthal, R. (1994). Interpersonal expectancy effects: a 30-year perspective. *Current Directions in Psychological Science, 3*, 176–179.

Rubie-Davies, C. (2009). Teacher expectations and labeling. In *International handbook of research on teachers and teaching* (pp. 695–707). New York, NY: Springer.

Rutter, M. & Madge, N. (1976). *Cycles of disadvantage: a review of research* (Vol. 1). London, UK: Heinemann Educational Books.

Stefanou, C. R., Perencevich, K. C., DiCintio, M. & Turner, J. C. (2004). Supporting autonomy in the classroom: ways teachers encourage student decision making and ownership. *Educational Psychologist, 39*(2), 97–110.

Todd, J. J. (2011). *Under pressure: teacher expectations and student achievement in the era of school accountability* (Doctoral dissertation). Cornell University, Ithaca, NA.

Tomlinson, C. A. (2003). *Fulfilling the promise of the differentiated classroom: strategies and tools for responsive teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.