Twenty-Six Years of Changes in Education Students' Attitudes

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Abstract

The main purpose of this quantitative study was to compare graduate education students from 1988 with graduate and undergraduate education students from 2014 in regard to their attitudes and expectations about teaching, schools, and students. The sample of participants for this study was chosen from a large public research university in North Texas and it was comprised of 50 graduate education students from 1988, 119 undergraduate and 147 graduate education students from 2014.The 2014 graduate education students were found to be significantly more negative and to have significantly lower expectations than either the graduate education students of 1988 or the undergraduates of 2014. The 1988 graduate education students were significantly more positive toward their careers than the 2014 undergraduate students. Predictive variables were identified and the possible consequences of increased educators' negativity toward students and schools are discussed.

Keywords: graduate and undergraduate education students, expectations, attitudes, self-fulfilling prophecy, self-efficacy.

The United States was a very different place 26 years ago in 1988, and education students at that time were a part of that very different place. During the academic year of 1987-1988, graduate students could buy a new house for about $92,000 and a new car for about $10,000 if they could afford it. The average national salary for classroom teachers at that time was about $26,000, but graduate students in education were looking forward to adding to their salary by either moving into administration or just by earning a master's degree. On weekends, when caught up with their schoolwork and their current teaching jobs, they could see a movie for $3.50 or stay home and watch popular television shows like Cheers. In education, there were the beginnings of feminist scholarship, a stronger emphasis on teachers' subject matter knowledge, early multiculturalism, and competency/performance based education (Burns, 2001).Twenty-six years later, in 2014, numerous changes had taken place. If today's education students can afford to buy a new house, they would need to be prepared to pay about $128,000. New moderate size cars cost about $25,000. A beginning teacher's salary in the school district closest to this university is $46,000. Due to the economic recession, Texas schools are hiring fewer teachers and administrators, so many education students (both graduate and undergraduate) are unhappily aware that they might not be able to find jobs after graduation. For recreation, movie tickets cost $12.25 or students can stay home with the family and watch one of the many reality television shows like American Idol. In 2014, in education, there was very strong emphasis on technology, inclusion, multiculturalism (even more so than in 1988), mentorships for first-year teachers in the induction year, and newer ways to accomplish teacher evaluation.

Because the current research covers attitudes, perceptions and expectations of teachers and future teachers over a span of several decades, literature covering earlier years has also been reviewed. One of the earliest USA rating scales to measure teachers' attitudes and perceptions was by Wickman (1928). Wickman's study compared the attitudes of 511 elementary school teachers and 30 mental hygienists towards children's behavior problems. The teachers and the hygienists differed in their perceptions in that the teachers rated children's misbehavior in class (like disobedience and destroying school materials) as the most serious issue, whereas the hygienists rated children's personality and emotional problems (like shyness and unsocialness) as the most serious.

In a different Wickman study which was his introduction of the Wickman Rating Scale, he found no significant differences in teachers' judgment of the seriousness of behaviors when manifested by boys as compared to girls. Jacobs (1968), writing about teacher attitudes, contended that he believed it ought to be the purpose of a teacher education program to mold attitudes that will equip candidates to deal with their role in a way that will bring the greatest benefit to students. Jacobs believed that most teacher education programs at the time were oriented toward changing attitudes toward the democratic point of view, but that as students became involved in the schools, they began to find those attitudes were unrealistic in terms of what prospective teachers found in the real classroom. This then created a conflict with previous learning in education courses (p. 414). Ziv (1970), in an Israeli study, asked 82 elementary school teachers, 45 psychologists and 165 children to rank (in order of seriousness) 30 different categories of student behaviors. Results showed that the teachers and the psychologists agreed that cruelty, dishonesty, aggressiveness, and stealing were the most serious. A narrowing of the gap between teachers and psychologists' perceptions of what is and is not serious behavior of children was noted.

Several years later in the United States, in May of 1984, the first Gallup poll of teachers' attitudes toward the public schools was conducted by Phi Delta Kappa (Gallup, 1984). Survey findings indicated that there were very few differences between the attitudes of teachers other than those differences that typically existed between elementary and secondary teachers. There were, however, significant differences between the teachers and members of the public who were also surveyed. Of the total of 30 attitudes surveyed, school teachers and the public agreed on 1/3 of the issues but disagreed on 2/3 of them. Using letter grades like in school, 2/3 of the teachers in 1984 said their attitude toward the US public schools would be an A or a B which are the same grades that 78%of them also gave to their peers. Substantially few of them (44%), however, gave their administrators A's or B's. Nine-tenths of them complained that their salaries were too low and this was causing many of them to leave the profession. Another 46% of them, however, said that teachers were leaving the profession because of student discipline problems.

Thirty-seven percent said that students were unmotivated and uninterested, and 31% mentioned how difficult it was to get parents interested. Parent disinterest actually was ranked as the single worst problem confronting the public schools that year. Even though student discipline issues were a serious concern overall, specific student issues were considered to be less serious: 4% said students were disrespectful, and only 2 to 5% mentioned alcohol, drugs, or one-parent families as problems. ive years later, in June 1989, the second Gallup poll was conducted, and the primary finding at this time was that teachers regarded themselves as martyrs (Elam, 1989). At this time, 82% of teachers believed that they were underpaid, and that they did not have the authority they needed to do their jobs which included establishing discipline policies, setting grading policies and determining academic standards."Predictably, teachers do not generally believe that, after five years of 'school reform,' public schools in their community have improved. Thirty-six percent said that schools have improved, 38% think they have remained the same, and 25% think they have gotten worse" (Elam, 1989, p. 785).Overall, differences between teachers' attitudes in the 1984 and 1989 surveys were relatively rare (Elam, 1989).

According to Nespor (1987), relatively little attention had up until that time been accorded to the structures and functions of teachers' beliefs about their roles, their students, their subject matter areas, and their schools (p.317). He argued that teachers' beliefs played a more major role in how they defined their teaching tasks and how they organized the knowledge and information relative to those tasks than researched-based knowledge or academic theory (p. 324). His conclusion was those prospective teachers' perceptions of and orientations to the knowledge they are presented with may be shaped by belief systems beyond the immediate influence of teacher educators (p.326). Teacher education students in 1987, in a survey of attitudes toward different ethnic and national groups, were no more accepting than the general population over the previous 6 decades (Law & Lane, 1987 p.3). On that same topic, several other studies (Klassen & Leavitt, 1982; Kinghorn, 1979) found that American schools were not stressing knowledge about other cultures or about international studies. Apparently a "cultural lag" existed in our society (i.e. technological advances were evident but the accompanying cultural changes in values and attitudes and specifically multicultural awareness is lacking) (Law& Lane, 1987, p. 8).

Guskey (1989) discussed the relationship between teachers' attitudes and perceptions and their effectiveness in the classroom. Whereas he admits that as a recent graduate, he personally started out with high positive expectations, he found that due to the realities of the classroom he had to accept certain limitations "to survive psychologically" (p. 440). He claims that this kind of change in attitude erodes the desire for teachers to make fundamental instructional changes.

He also cited studies that showed that teachers who are unusually effective in having their students learn well, share a number of common perceptions including having a strong sense of teacher efficacy. These same teachers also tended to be very positive about their feelings about teaching and about their confidence in their own teaching (McLaughlin & Berman, 1977).Sparks (1988) explored the relationship between teachers' attitudes toward teaching practice in the in-service training and the subsequent use of these same practices in their own classrooms. She found that when teachers improved, they were more willing to experiment, but when they did not improve, they instead defended their natural style of teaching. Of specific interest to her, as it was to Guskey (1988), was teacher efficacy which Sparks defines as confidence in one's own ability to handle things in one's own classroom. She concluded that those teachers who improved during their in-service training experienced a heightened sense of control over their teaching environment or self-efficacy. Those teachers who did not improve, on the other hand, attempted fewer changes and had lower expectations for themselves and for their students.

Borg and Flazon (1989) reported on a questionnaire survey of teachers' attitudes toward selected undesirable student behaviors in all of the state primary schools in Malta and Gozo. They found that stealing, cruelty/bullying, and rudeness/impertinence were perceived as the three most serious behaviors. The gender of the teachers as well as the gender of the students doing the undesirable behaviors was both found to be significant moderators of the teachers' attitudes. The National Center for Educational Statistics (1999) surveyed over 50,900 teachers from all grade levels and found that teachers were more likely to feel satisfied with teaching if they perceived more support from parents, better control over classroom discipline and more influence on school policy and decision making. Craig, Henderson and Murphy (2000) investigated prospective teachers' attitudes toward bullying and victimization. Among their findings were that females expressed more negative attitudes toward bullying than males. They found that prospective teachers' attitudes as well as their level of empathy may be important in determining their definitions of bullying, the seriousness of bullying incidents, and their likelihood of preventing or intervening in such incidents. Rimm-Kaufman and Sawyer (2004) found that teachers who taught at Responsive Schools (RC) were more likely to report positive attitudes toward teaching as a profession. They also explored the self-efficacy of the teachers and concluded that teachers who were high in one type of self-efficacy were likely to be high in another.

Kessler (2007) investigated teacher attitudes toward technology, specifically, computer-assisted language learning, and noted that such attitudes may determine the degree of success they will encounter as they prepare to teach. When comparing attitudes of teachers in 2005 with attitudes of teachers over the previous decade, he found a slight increase in perceived effectiveness among those who had graduated within the past decade, but that increase did not reflect the extent to which technology actually impacted daily life in the actual classroom. Kessler found it interesting that there was barely a difference in the perception toward technology from 1986 to 1995 and from 1995 to 2005. This was true even though there had actually been a significant rise in the use of technology since 1996.Hallinan (2008), working with 6th, 8th and 10th grade students in Chicago, found that those students who perceived that their teachers cared about them, respected them and praised them, were more apt to like school than were students whose teachers did not do those things. They also, however, found that teacher expectations for students' achievement had a negligible effect on whether students liked school.

That same year, a Turkish study (Özden, 2008) explored the attitudes of 830 student teachers and concluded that there were a number of characteristics that had a positive effect on the way student teachers perceived the environment and environmental problems. These specific demographic characteristics were: female elementary school teachers in the last year of their program, which had less than three brothers and sisters, and were of a high SES class. Palardy and Rumberger (2008), again studying first grade teachers, found that although the No Child Left Behind legislation screens teachers on whether or not it predicts "highly qualified" based on a candidate's background qualifications, a better way would be to use instructional practices and teacher attitudes as predictors. Teo (2008) examined the attitudes of 139 pre-service teachers toward computer use and found no gender or age differences among the subjects, but did find correlations between years of computer use and level of confidence and their attitudes toward computers. Teo further concluded that teachers are the change agents in schools, and as such, it is important for them to possess positive rather than negative attitudes. As seen, much has been written specifically about the attitudes and perceptions, and expectations of teachers and pre-teachers since as early as the 1920's and more heavily since the 1970's.Rubie-Davies, Flint, and McDonald (2012) argue that these teacher factors are important to consider since beliefs mold thoughts and resultant instructional behaviors that, in turn, can contribute to student outcomes (p. 270).

Many of these studies have focused on the relationship of teachers' beliefs about their capability to impact students' motivation and achievement to what actually happens in the schools, like student achievement (Tschannen-Moran & Hoy, 2007). "An example of the fact that teacher attitudes are associated with student achievement is the finding that one of the few attitudes that differentiated teachers who were getting good student gains in their classes from those who were not was the belief that students could and would learn"(Brophy & Evertson, 1976; as cited in Good & Brophy, 1978, p. 70). Some of the most relevant theories regarding the possible consequences of those attitudes and expectations came from the work of Merton's self-fulfilling prophecy in 1948, Rosenthal and Jacobsen's book on the Pygmalion effect in classrooms written in 1968, and the self-efficacy studies in the 1980's and 1990's. Pygmalion in the Classroom, citing the self-fulfilling prophecy, described how early grade-level teachers' expectations for student achievement were indeed associated with enhanced student performance and student/teacher interactions. Tauber (1997), in his newer version of the Self-Fulfilling Prophecy, emphasized that the reverse is also true—that lower expectations lead to lower performance. There has, however, been very little research on this reverse belief (Harris, 1985, p. 21).Published research, however, does not always support the ability of teachers to affect student learning. Dusek (1975) in his discussion of the effects of teacher bias, examines the Pygmalion research with regard to its critics and supporters and concludes that "with regard to tutoring students . . . these studies do not lend strong support to the notion that teachers bias the learning of children"(p.668).

When studying the same phenomenon with classroom teachers, Dusek (1975) again expresses caution by concluding that only three of the studies he analyzed offer support for the belief that "telling teachers that students will show academic blooming is sufficient to alter students' test scores" (p. 676). Dusek does, on the other hand, point to a major difference between teacher bias and teacher expectancy, defined as "significant effects due to the teacher's own expectancy, formed however teachers form it, which is related to students' performance" (p.679).The research support specifically for teacher expectations is abundant (Brophy & Good, 1970; Good & Brophy, 1972; Dusek & O'Connell, 1973; O'Connell, Dusek & Wheeler, 1974; Rist, 1970; Rothbart, Dalfen, & Barrett, 1971). Teacher "expectancies, and presumably their behavioral manifestations, have been shown to relate to students' performance" (Dusek, p. 680). Other researchers (Bandura, 1993, 2001; Goddard & Goddard, 2001; Goddard, Hoy,& Hoy, 2000; Tschannen-Moran, Salloum, & Goddard, 2014) support the belief that what teachers believe about students influences the teachers' behavior as well as their ability to serve students (Tschannen-Moran et al., 2014, pp. 301-314). Eden (1992) applied the Pygmalion effect to managers instead of teachers but nevertheless concluded that managers who are led to expect more of their subordinates do lead them to greater achievement (p. 271).

Harris (1985) reviewed 135 studies on the mediation of interpersonal expectancy effects and supported the importance of 16 behaviors in the mediation of expectancy effect which included: creating a more positive climate, having longer interactions, longer wait times, maintaining closer physical distances, creating a warmer socio emotional climate, greater input by attempting to teach more material or more difficult material, engaging in more eye contact, giving more praise, and smiling more (p. 363). In other words, teachers who hold positive expectations for their students are more likely to do these specific behaviors which may promote positive student achievement. In September of 2015 the American Psychological Association published its top 20 teaching and learning principles for pre-K through 12th grade. Based on years of published research on the psychology of teaching and learning, number 11 is this principle: "Teachers' expectations about their students affect student opportunities to learn, their motivation and their learning outcomes." Principle number 17 states: "Effective classroom management is based on ... setting and communicating high expectations…" (APA, 2015, p. 55).

Regarding the relationship between teacher expectations and students' performance, Tschannen-Moranet al. (2014) conclude that "When teachers trust their students, when they believe that their students are respectful, honest, competent, and reliable, they are more likely to create learning environments that facilitate student success" (p. 305). Good and Brophy (1978) conclude that "our expectations do affect the way we behave in situations and the way we behave affects how other people respond" (p. 70).What makes the research findings on teacher perceptions of academic success particularly noteworthy is that these perceptions are strongly correlated to both collective teacher efficacy and faculty trust in students. This set of variables forms a trifecta of constructs that are among the only school variables in the fifty years since the publication of the Coleman Report (1966) that researchers have found to maintain its predictive value even when controlling for the SES of students (Tschannen-Moran et al., 2014, p.308).

"Teacher efficacy, teachers' expectations about their ability to perform the actions required to bring about student learning, is increasingly recognized as a pivotal variable in influencing teacher practice and student outcomes" (Ross, 1992, p. 381). Bandura's theory of self-efficacy is that one's perceived level of competence, rather than one's actual level of competence, has great power to determine one's motivation, level of effort, goals, and outcomes such as academic achievement by their students (Bandura, 1977). Rubie-Davies et al. (2012) explain that whereas "teacher expectations relate to where the teacher believes the students in her/his class will get to, teacher efficacy relates to what she/he believes she/he can do to get the students there" (p. 272).The literature often separates self-efficacy into two separate dimensions –personal teaching efficacy and general teaching efficacy. "Personal teaching efficacy is a teacher's expectation that he or she will be able to perform the actions that lead to student learning; general teaching efficacy is the belief that the teacher population's ability to perform these activities is limited by factors beyond school control" (Ross, 1994, p.382). Our current study includes15 references to the individual teacher's belief in his/her own ability to accomplish these changes (all the survey items relating to how easy or how hard specific required teaching activities will be), and these items most closely relate to personal teaching efficacy. There are 20 references in our survey to the teachers' beliefs as to whether or not the educational system as a whole is positive, or if instead education and the schools are limited by factors beyond school control.

This includes items delineating the level of positive or negative attitudes regarding the teaching profession overall, and those items are most clearly related to general teaching efficacy. Bandura(1997) also describes the belief system of the staff as collective efficacy and says that this phenomenon can create an organizational culture that can either have vitalizing or demoralizing effect on the perceived efficacy of its members. Collective efficacy therefore influences how teachers instruct, how they manage their classrooms and how they motivate their students (Bandura, 1993).The survey used in our current research does ask about students' attitudes and expectations regarding classroom instruction, classroom management issues, and student motivation. Research on the effect of increased teacher efficacy is that it is associated with using more difficult teaching techniques, encouraging student autonomy, innovative programs, cooperative learning and other activity-based methods, and enhanced student motivation (Ross, 1992; Capara, Barbaranelli, Steca, & Malone, 2006). Whereas personal teaching efficacy has been shown to contribute to student achievement involving language, general teaching efficacy contributes to student achievement in math (Ross, 1992). Capara et al. (2006) also note that "Teachers' self-efficacy may also contribute to promote students' sense of efficacy, fostering their involvement in class activities and their efforts in facing difficulty" (p.474).

Method

Design

This quantitative study employed a paper-and-pencil based survey questionnaire, developed by the first author, for the purpose of collecting data from 316 participants.

Participants

Participants were 316 undergraduate and graduate education students enrolled in campus-based education courses at a large university in the Southwest. Of these participants, 50 were graduate education students from the year 1998, 119 undergraduates and 147 graduate educations students were from the year 2014.

Data Collection Procedure

Data from graduate education students of 1988 were collected by the first author in 1988 using a self-developed paper-and-pencil-based survey questionnaire, whereas data from undergraduates and graduates of 2014 were collected by both authors using the same survey questionnaire. Survey questionnaires were administered to three groups using the same standard explanation format during regular class hours. Participants were given the option of not participating (which none took), and were told that the intent of the survey questionnaire was research and that all responses would be anonymous. They were even encouraged to omit real names on the survey forms. The participants' information on demographic variables was as in Table 1.

Instrument

The only instrument used in this study was a survey questionnaire that included open-ended questions for collecting demographic information and35 rating-scale questions for measuring attitudes of participants.

The first 15 items were on a 10-point rating scale where 10 represented an attitude of extreme positivism and 1 represented an attitude of extreme negativism. The questions covered attitudes toward the teaching profession and public schools. This group of items most closely represents Bandura's General Teaching Efficacy. The remaining 20 items (also on a 10-point rating scale) concentrated on the participants' beliefs or expectations of how easy (1 on the scale) or how difficult (10 on the scale) various requirements in teaching would be to fulfill. These activities included interactions with students, paperwork and planning, teaching, and their overall careers. This group of items most closely represents Bandura's Personal Teaching Efficacy. The categories for rating responses in the attitudinal section of the survey were as follows:

Positive vs. negative attitudes. How positive or negative are you toward the teaching profession? The continuous variable: Attitude toward Teaching Profession (ATP) was obtained by averaging participants' responses to four items (e.g., the teaching profession in general, the teaching profession today, school teachers' qualifications in general, school teachers' academic abilities). Cronbach's alpha for internal consistency reliability for the construct of ATP was 0.80 (Cronbach, 1951).How positive or negative are you toward the public schools? The continuous variable: Attitude toward Public Schools (APS) was obtained by averaging participants' responses to eight items(e.g., public school teachers today, public school administrators today, children who attend public schools, attitude of the public toward today's public schools, teachers' salaries, discipline in schools, academic standards, the value of a public school education today). Cronbach's alpha for internal consistency reliability for the construct of APS was 0.86.

Easy vs. difficult expectations. How easy or difficult do you expect activities involving students will be? The continuous variable: Attitude toward Activities Involving Students (AAIS) was obtained by averaging participants' responses to six items (e.g., disciplining students, caring about today's students, motivating students, and dealing in one classroom withall the different kinds of students, serving as a role model, teaching students who are disrespectful to you). Cronbach's alpha for internal consistency reliability for the construct of AAIS was 0.70. How easy or difficult do you expect paperwork and planning will be? The continuous variable: Attitude toward Activities Involving Paperwork (AAIP) was obtained by averaging participants' responses to four items (e.g., constructing examinations, making lessons plans, coping with after-school-hours responsibilities such as grading, supervising school events, etc., dealing with clerical duties and non-instructional paperwork). Cronbach's alpha for internal consistency reliability for the construct of AAIS was 0.70.

How easy or difficult do you expect teaching to be? The continuous variable: Attitude toward Activities Involving Teaching (AAIT) was obtained by averaging participants' responses to six items (e.g., learning how to teach, learning a variety of instructional strategies or methods, staying competent in the subject areas you teach, keeping your class relevant to today's students, maintaining enthusiasm about teaching, and coping with problems students face such as drugs, alcohol, suicide, running away, divorced families, blended families, etc.). Cronbach's alpha for internal consistency reliability for the construct of AAIT was 0.83. How easy or difficult do you expect your career will be? The continuous variable: Attitude toward Teaching Career (ATC) was obtained by averaging participants' responses to two items (e.g., leaving one professional field to go back to a university to learn a new field, and moving up the professional ladder in education). Cronbach's alpha for internal consistency reliability for the construct of ATC was 0.41.

Research Hypotheses

We hypothesized that the education students of 2014, both graduate and undergraduate, but particularly the graduate students (as a majority of them were already employed in the schools) would have more negative attitudes and more negative expectations regarding what was expected of them than did the education graduate students in 1988. We also hypothesized that the 1988 graduate students would be more optimistic and have higher expectations than either of the two 2014 groups of students.

Data Analysis Procedures

For the analyses of data, the SPSS statistical software package was used (IBM Corp., 2013). The frequency analyses for categorical variables (Table 1) and descriptive statistics for continuous variables (Table 2) associated with three independent groups of participants were obtained to describe the data. The construct (defined by ATP and APS) that measures positive vs. negative attitudes was assumed to be independent of the construct (defined by AAIS, AAIP, AAIT, and ATC) that measures easy vs. difficult expectations.

The bivariate correlation between ATP and APS (as in Table 3) and the pair wise bivariate correlations among AAIS, AAIP, AAIT, and ATC (as in Table 4) were significant at 5% level of significance. Therefore, two separate multivariate analyses of variance (MANOVA) were run to compare the three groups of participants in regard to their positive vs. negative attitude and easy vs. difficult expectation scores, respectively, at the multivariate level.

Following MANOVAs, separate univariate analyses of variance (ANOVA) were run for each of the variables ATP (Table 5), APS (Table 6), AAIS (Table 7), AAIP (Table 8), AAIT (Table 9), and ATC (Table 10) to compare the three groups of participants in regard to these attitude scores at the univariate level. Additionally, using the demographic data collected on each participant, multivariate and univariate regression analyses were run using the set of aforementioned variables that define attitudes as dependent variables. Independent variables included were: Age, gender, undergraduate GPA, number of siblings, marital status, number of children, and previously earned degree. These procedures were run for separate samples.

Table 1: Frequency Distributions of the (Categorical and Discrete) Independent Variables Used in the Study.

	Grads1988		Undergrads2014		Grads2014	
Variable	Valid *n*	Frequency (%)	Valid *n*	Frequency (%)	Valid *n*	Frequency (%)
Gender	50		118		145	
Female		60		92.4		82.1
Male		40		7.6		17.9
Children	48		115		143	
0		56.3		76.5		55.9
1		12.5		9.6		14.0
2		22.9		7.8		19.6
3		6.3		3.5		7.7
4		2.1		---		0.7
5		---		1.7		0.7
6		---		0.9		1.4
Sibling	46		116		141	
0		21.7		6.9		9.2
1		30.4		36.2		29.8
2		19.6		21.6		21.6
3		19.6		17.2		24.8
4		4.3		5.2		20.6
5		4.3		5.2		5.0
6		---		1.7		6.4
7		---		1.7		0.7
8		---		1.7		0.7
9		---		2.6		1.4
10		---		---		1.4
Status	50		114		138	
Single		38		74.6		46.4
Married		58		22.8		45.7
Divorced		4		2.6		8.0
Degree	49		37		134	
AA or HS		---		100		---
Bachelor's		93.9		---		77.6
Master's and PhD		6.1		---		22.4

Note. Children = Number of Children, Sibling = Number of Sibling, Status = Marital Status, and Degree = Earned Degree.

Table 2: Descriptive Statistics (Group Sizes, Means, and Standard Deviations) for the Continuous Variables across the three Groups.

	Grads1988			Undergrads2014			Grads2014		
Variable	*n*	*M*	*SD*	*n*	*M*	*SD*	*N*	*M*	*SD*
ATP	50	7.75	1.08	119	8.15	1.09	147	6.98	1.38
APS	50	6.45	1.00	119	6.33	1.29	147	5.39	1.44
AAIS	50	4.91	1.66	119	4.24	1.74	147	5.11	1.58
AAIP	50	4.51	1.50	119	4.60	1.81	147	5.41	1.75
AAIT	50	4.56	1.71	119	4.60	1.95	147	4.94	1.56
ATC	50	5.00	2.07	119	6.06	1.84	146	5.66	1.77
Age	50	30.5	6.26	116	24.6	6.88	142	34.3	9.55
UGPA	44	3.11	0.42	113	3.41	0.37	134	3.45	0.39

Note. ATP = Attitude toward Teaching Profession, APS = Attitude toward Public Schools, AAIS = Attitude toward Activities Involving Students, AAIP = Attitude toward Activities Involving Paperwork, AAIT = Attitude toward Activities Involving Teaching, ATC = Attitude toward Teaching Career, and UGPA = Undergraduate Grade Point Average.

Table 3: ***Pearson Correlations with Variance/Covariance in Parentheses for the First Set of Dependent Variables (n = 316).***

	ATP	APS
ATP	----- (1.80)	.70* (1.31)
APS		----- (1.98)

Note. ATP = Attitude toward Teaching Profession, APS = Attitude toward Public Schools and * implies that Pearson correlation is significant at 5% level of significance.

Table 4: ***Pearson Correlations with Variance/Covariance in Parentheses for the Second Set of Dependent Variables (n = 316).***

	AAIS	AAIP	AAIT	ATC
AAIS	----- (2.88)	0.55* (1.66)	0.79* (2.34)	0.42* (1.34)
AAIP		----- (3.16)	0.62* (1.94)	0.42* (1.38)
AAIT			----- (3.04)	0.54* (1.75)
ATC				----- (3.51)

Note. AAIS = Attitude toward Activities Involving Students, AAIP = Attitude toward Activities Involving Paperwork, AAIT = Attitude toward Activities Involving Teaching, ATC = Attitude toward Teaching Career. The sample size (*n*) for all of the vicariate correlations in the last column is 315 and * implies that Pearson correlation is significant at 5% level of significance.

Results

The undergraduates were enrolled in their first required teacher education courses, and the graduate students were at least half way through their graduate program at the time they responded to the surveys. Of the 316 students, 258 were female and 55 were male; data for three of them were missing on one or more variables. Age for the entire sample ranged from 19 to 63 years (M = 30.03, SD = 9.26). Number of siblings ranged from 0 to 10 (M = 2.22, SD = 1.84). Number of children ranged from 0 to 6 (M = 0.75, SD = 1.20). The mode of previously earned academic degrees was a bachelor's degree. The three independent groups of students compared were: 1988 graduate students (n = 50, females = 30) with mean age of 30.5 years (SD = 6.26) and mean undergraduate GPA of 3.11 (SD =0.42); 2014 graduates students (n = 147, females =119) with mean age of 34.30years (SD = 9.55) and mean undergraduate GPA of 3.45 (SD = 0.39); 2014 undergraduate students (n = 119, females = 109) with mean age of 24.60 years(SD= 6.88).

The results of one-way MANOVA indicated a significant difference in the mean scores of ATP and APS across the three groups of participants (Graduates of 1988, Undergraduates of 2014, and Graduates of 2014), Wilk's lambda ($\Lambda = 0.81, F(4, 624) = 17.10, p < .001$. (See first two rows of Table 2 for the means and standard deviations of ATP and APS). The one-way ANOVA results in Table 5 showed that the mean ATP scores were significantly different among the three groups of participants, $F(2, 313) = 30.42$, $p < .001$.A post hoc test based on Tamhane (1979) procedure, appropriate for unequal group sizes and unequal group variances, indicated that Graduates of 2014 (M = 6.97, SD = 1.38) had a significantly lower mean ATP score than that of Undergraduates of 2014 (M = 8.15, SD = 1.09) and Graduates of 1988 (M = 7.75, SD = 1.08), whereas the latter two groups were not significantly different in their mean ATP scores.

Similarly, the one-way ANOVA results in Table 6 showed that the mean APS scores were significantly different among the three groups of participants (Graduates of 1988, Undergraduates of 2014, and Graduates of 2014),$F(2, 313) = 21.46, p < .001$. A post hoc test based on Tamhane (1979) procedure indicated that Graduates of 2014 (M = 5.38, SD = 1.44) had significantly lower mean APS score than that of Undergraduates of 2014 (M = 6.33, SD = 1.29) and Graduates of 1988 (M = 6.45, SD = 1.00), whereas the latter two groups were not significantly different in their mean APS scores.

Also, the results of one-way MANOVA indicated a significant difference in the mean scores of AAIS, AAIP, AAIT, and ATC across the three groups of participants (Graduates of 1988, Undergraduates of 2014, and Graduates of 2014), Wilk's lambda ($\Lambda = 0.81, F(8, 618) = 8.75, p < .001$. (See third-sixth rows of Table 2 for the means and standard deviations of AAIS, AAIP, AAIT, and ATC). The one-way ANOVA results for each of these four variables are shown in Tables 7, 8, 9, and 10, respectively. The one-way ANOVA results (Table 7) indicated that the mean AAIS scores were significantly different among the three groups of participants (Graduates of 1988, Undergraduates of 2014, and Graduates of 2014), $F(2, 312) = 9.28, p < .001$. A post hoc test based on Tamhane (1979) procedure indicated that only Graduates of 2014 (M = 5.11, SD = 1.58) had significantly higher (i.e., more difficult) mean AAIS score than that of Undergraduates of 2014 (M = 4.24, SD = 1.74), whereas the remaining two groups were not significantly different in their mean AAIS scores.

Similarly, the one-way ANOVA results (Table 8) indicated that the mean AAIP scores were significantly different among the three groups of participants (Graduates of 1988, Undergraduates of 2014, and Graduates of 2014), $F(2, 312) = 8.93$, $p < .001$. A post hoc test based on Tamhane (1979) procedure indicated that Graduates of 2014 (M = 5.40, SD = 1.75) had significantly higher (i.e., more difficult) mean AAIP score than that of Graduates of 1988 (M = 4.51, SD = 1.50) and Undergraduates of 2014 (M = 4.60, SD = 1.81), whereas the latter two groups were not significantly different in their mean AAIP scores. The one-way ANOVA results (Table 9) indicated that the mean AAIT scores were not significantly different among the three groups of participants (Graduates of 1988, Undergraduates of 2014, and Graduates of 2014), $F(2, 312) = 1.48, p = 0.229$.The one-way ANOVA results (Table 10) indicated that the mean ATC scores were significantly different among the three groups of participants (Graduates of 1988, Undergraduates of 2014, and Graduates of 2014), $F(2, 312) = 5.93$, $p = .003$. A post hoc test based on Tamhane (1979) procedure indicated that Graduates of 1988 (M = 5.00, SD = 2.07) had significantly lower (i.e., easier) mean ATC score than that of Undergraduates of 2014 (M = 6.06, SD = 1.84), whereas the latter two groups were not significantly different in their mean ATC scores.

For the group of 1988 graduates, based on the results of multivariate regression analyses, undergraduate GPA was the only significant predictor for attitudes toward teaching profession (ATP) and public schools (APS). Further, univariate regression analyses indicated that undergraduate GPA was a significant predictor, $t(31) = -2.37$, $p = .024$, only for the variable APS. For the second set of dependent variables (AAIS, AAIP, AAIT, and ATC), even though none of the independent variables was a significant predictor for the dependent variables at the multivariate level of analysis, the following independent variables were significant predictors of individual dependent variables: (1) Gender, $t(31) = -2.17$, $p = .038$, and marital status (Single vs. Others), $t(31) = 2.07$, $p = .046$, were significant predictors for AAIS; (2) marital status (Single vs. Others), $t(31) = 2.28$, $p = .029$, was a significant predictor forAAIT; and (3) age was a significant predictor, $t(31) = 2.13$, $p = .041$,forATC, at the univariate level. For the group of 2014 undergraduates, number of siblings was the only significant predictor for attitudes toward teaching profession (ATP) and public schools (APS) at the multivariate level. Further, univariate regression analyses indicated that number of siblings was a significant predictor for both the variables ATP ($t(26) = 2.19$, $p = .038$) and APS ($t(26) = 2.73$, $p = .011$).

For the second set of dependent variables (AAIS, AAIP, AAIT, and ATC), even though none of the independent variables was a significant predictor for the dependent variables at the multivariate level of analysis, number of siblings was a significant predictor for the variables AAIS ($t(26) = -2.31$, $p = .029$) and ATC ($t(26) = -2.46$, $p = .021$), at the univariate level.

For the group of 2014 graduates, even though none of the independent variables was a significant predictor for attitudes toward teaching profession (ATP) and public schools (APS) at the multivariate level, the undergraduate GPA was a significant predictor, $t(114) = 2.21$, $p = .029$, for the variable APS, at the univariate level. For the second set of dependent variables (AAIS, AAIP, AAIT, and ATC), even though none of the independent variables was a significant predictor for the dependent variables at the multivariate level of analysis, the independent variable (1) number of children was a significant predictor for the variable AAIS, $t(113) = -2.78$, $p = .006$, and (2) age was a significant predictor for the variable AAIP, $t(113) = 2.10$, $p = .038$, at the univariate level. We note that inferential statistics (e.g., Wilk's lambda) associated with multivariate regression analyses can be computed using the descriptive statistics from Table 2 and correlation (variance-covariance) matrices from Tables 3 and 4 (e.g.,Zientek & Thompson, 2009).

Table 5: ***One-way ANOVA Results for the Dependent Variable ATP.***

Source	Sum of Squares	*df*	Mean Squares	*F*
Between	92.23	2	46.11	30.42**
Within	474.49	313	1.52	
Total	566.72	315		

Note. ATP = Attitude toward Teaching Profession and ** implies that *p*-value associated with the *F*-statistic is less than 0.001.

Table 6: ***One-way ANOVA Results for the Dependent Variable APS.***

Source	Sum of Squares	*df*	Mean Squares	*F*
Between	75.04	2	37.52	21.46**
Within	547.32	313	1.75	
Total	622.36	315		

Note. APS = Attitude toward Public Schools and ** implies that *p*-value associated with the *F*-statistic is less than 0.001.

Table 7: ***One-way ANOVA Results for the Dependent Variable AAIS.***

Source	Sum of Squares	*df*	Mean Squares	*F*
Between	50.87	2	25.44	9.28**
Within	854.60	312	2.74	
Total	905.47	314		

Note. AAIS = Attitude toward Activities Involving Students and ** implies that *p*-value associated with the *F*-statistic is less than 0.001.

Table 8: ***One-way ANOVA Results for the Dependent Variable AAIP.***

Source	Sum of Squares	*df*	Mean Squares	*F*
Between	53.78	2	26.89	8.93**
Within	938.72	312	3.01	
Total	992.50	314		

Note. AAIP = Attitude toward Activities Involving Paperwork and ** implies that *p*-value associated with the *F*-statistic is less than 0.001.

Table 9: ***One-way ANOVA Results for the Dependent Variable AAIT.***

Source	Sum of Squares	*df*	Mean Squares	*F*
Between	8.92	2	4.46	1.48
Within	938.72	312	3.01	
Total	947.64	314		

Note. AAIT = Attitude toward Activities Involving Teaching.

Table 10: ***One-way ANOVA Results for the Dependent Variable ATC.***

Source	Sum of Squares	*df*	Mean Squares	*F*
Between	40.34	2	20.17	5.93*
Within	1061.33	312	3.40	
Total	1101.67	314		

Note. ATC = Attitude toward Teaching Career and * implies that *p*-value associated with the *F*-statistic is less than 0.05.

Discussion

When comparing the three groups of students, the 2014 graduate education students had significantly lower attitude scores meaning more negative attitudes than either the 2014 undergraduate education students or the 1988 education graduate students toward the category of responses called teaching profession. These same 2014 graduate education students also had significantly more negative attitudes than either the 2014 undergraduate education students or the 1988 graduate education students toward the category of responses called the public schools. These same 2014 graduate education students also expected, at a statistically significant level, that activities they were required to do would be more difficult to accomplish than what was believed by the other two groups (1988 graduate students and 2014 undergraduate students).Categories of responses where this was found to be true included attitudes toward activities involving students (AAIS) and teaching (AAIT).The last finding was about the 1988 graduate education students who were found to have significantly more positive expectations regarding the category of responses called careers when compared to the 2014 undergraduate education students. Mean expectations regarding careers were about the same for 1988 graduates (M = 5.00, SD = 2.07) and 2014 graduates (M= 5.66, SD = 1.77).

In the group of 2014 undergraduate education students (n = 119), the number of siblings was found to be a significant predictor for having a more positive attitude toward the teaching profession (ATP) and attitude toward public schools (APS), and also for having more expected ease of activities involving students and their careers. In the group of 2014 graduate education students (n = 147), students without children of their own had a significantly more positive attitude about how easy activities involving students would be. Also in the group of 2014 graduate education students, their undergraduate GPA was found to be a significant predictor of more positive attitudes toward the public schools(i.e., the higher the GPA the more likely the students would move toward positivity).Additionally, in the group of 2014 graduate education students, age was found to be a significant predictor for how difficult paperwork and planning would be. The older students expected it would be more difficult. In the group of fifty 1988 graduate education students, their undergraduate GPA was found to be a significant predictor of their having a more negative attitude toward public schools (APS), i.e., the higher the GPA, the more likely the student would move toward negativity.

Additionally, in this group, gender was found to be a significant predictor in that single females expected activities involving students (AAIS) and teaching (AAIT) would be harder than either the married or the divorced students expected them to be. To sum, taking into consideration the predictive variables from all three subgroups of the 316 students, the following trends were identified: Positive/easier expectations occurred for those who had siblings, were younger, were female, and were without children of their own. By contrast, more negative/difficult expectations occurred for those who were older and single. Whereas a higher GPA predicted positive/easier expectations for the 2014 graduate students, a higher GPA for the 1988 graduate students predicted more negative/difficult expectations.

"Contemporary education policy has shifted from school accountability to holding individual teachers accountable for student achievement" (Tschannen-Moran et al., 2014, p. 312). It is therefore important to consider the relative importance of an individual teacher's attitudes and expectations with regard to the impact that this might have upon the students and schools where he/she will be employed. Results of this study indicate that the 2014 graduate education students were significantly more negative than the 1988 graduate education students or the 2014 undergraduate students, but how negative in an absolute sense, were the 2014 graduate education students? Measured on a ten-point Likert-type scale, there was no actual pre-determined cut-off established to determine absolute positivity or negativity. If, however, five is considered the midpoint, all but one of their mean scores did fall on the negative end of the continuum.

What factors, then, may have caused the 2014 graduate education students to express more negative attitudes and expectations than were held by the 1988 students with regard to teaching, schools, and students? This same tendency toward more negativity and more expected difficulty of requirements was also found when comparing both groups of graduate students (1988 and 2014) with the undergraduate students of 2014. This is similar to the findings of Hoy and Spero (2005) who found that efficacy rose during teacher preparation but fell with actual experience as a teacher. Differences between graduate and undergraduate education students may have occurred because both groups of graduate students were already working in area public schools while pursuing their graduate degrees and would therefore be expected to have a greater familiarity with students, schools, and teaching. The 2014 undergraduate students, on the other hand, with little direct experience in the schools, were speculating, picking up on the attitudes or expectations of other teachers, or perhaps even remembering their own recent experiences as public school students. It is of course possible that teacher educators could present different views (from positive to negative) regarding education to graduates than they would to undergraduates. Although both of the researchers in this study teach both levels of students, only one of them taught the 1988 students, so the professor variable as it concerns the way professors teach the two different levels of students was not controlled for.

Technological, political, social, geographical and economic changes that have occurred in public schools over the 26-year-span of time covered in the study no doubt had an impact toward greater negativity on the part of the 2014 graduate students who were already teaching in the schools. These changes include a larger number of public school children who live in poverty (Goral, 2015); more serious disciplinary offenses including higher rates of school violence; the advent of social media and its effects on students; laws that require more paperwork for educators; higher rates of mental/emotional illness (Crow, 2015); gang prevalence; higher drop-out rates (TEA, 2014); greater classroom diversity with languages, cultures, and values (Jordan, 2015); increased instances of bullying; more at-risk students; and stiffer regulations regarding school accountability. Also, many bright females are no longer choosing careers in education because so many other occupational fields have opened for them since 1988, and this change has had an impact on the number of qualified females who have chosen to become teachers.

What additional possible reasons exist that might shed light on the finding that 2014 graduates had more negative reactions than the other two groups to the teaching profession in general, the teaching profession today, and schoolteachers' qualifications in general, and school teachers' academic abilities? Regarding their comparison with the 2014 undergraduate students who were taking their first education courses in the same university, the graduate students had at least one year of actual teaching experience (and sometimes many years) and were still working in the schools every day. They worked side by side with other educators and would therefore be better able to comment on their qualifications and academic abilities. They would also be keenly aware of criticism of today's public schools. Even if the survey respondents themselves did not feel their profession is negative, they would be aware of media criticism and the public view. The 2014 education graduate students also felt more negative about public school teachers today, public school administrators today, children who attend public schools, attitude of the public toward today's public schools, public school salaries, discipline in public schools, academic standards in public schools, and the value of a public school education today. Their concerns may have included the state's greatly increased population growth (Parker, 2015); students' mental and emotional problems (Crow, 2015); and the large number of homeless children. Regarding their attitudes on what the public thinks about academic standards, and the value of a public education today, most Texas educators are unhappily aware that Texas ranks 46th among the states in per capita spending and 35th on teachers' average salary (Stutz, 2014).

The 2014 graduate education students also expected (significantly more so than did the other two groups) that certain school tasks would be more difficult to accomplish including: disciplining students, caring about today's students, motivating today's students, dealing in one classroom with all different kinds of students, serving as a role model for students, and teaching students who are disrespectful. Also, constructing examinations, making lesson plans, coping with after-school hours such as grading papers, supervising school events, and also dealing with clerical duties and non-instructional paperwork. Also, learning how to teach, learning a variety of instructional strategies or methods, staying competent in the subject areas, keeping class work relevant to today's students, maintaining enthusiasm about teaching, and coping with problems today's students face such as drugs, alcohol, suicide, running away, divorced families, blended families, etc. When compared to the public schools of 26 years ago, today's public schools are more complex; have a more diverse student population regarding languages and cultures; and have more serious disciplinary issues to handle. There is added pressure to construct assessments that can document student achievement in order to meet increasing standards for accreditation and ranking. Today's litigious climate makes it problematic for teachers to deal ethically, legally, and safely with student behaviors and classroom management. Finally, clerical duties and non-instructional paperwork have increased because of federal, state, and district level regulations and accreditations.

Most of the significant findings in this research focus on the group of 2014 graduate education students, but there was also a significant finding related to the education graduate students of 26 years ago. That group of 1988 graduate students had a more positive attitude about how easy it was to go back to the university to learn a new field and move up the career ladder in education. That was, in fact, exactly what they were in the process of doing –going back to the university to earn another degree in the hopes of moving up the career ladder in education. For that particular group of students, it seemed to them to be a fairly easy thing to do. For the 2014 graduate students, on the other hand, it no longer seemed so easy. Causes include higher admission standards for entry into graduate school, tuition increases, and stiffer job competition upon graduation.

Area schools usually receive a large number of applications for both teaching and administrative positions, and interviews for those positions can be rigorous. Candidates are also facing increasing pressure to speak additional languages, particularly Spanish. Non bilingual graduates have a harder time locating positions they might otherwise be qualified for. Finally, mandated state certification and licensing requirements are more rigorous and are required for a broader array of content and positions. Three of the four findings in this study are that the 2014 graduate education students at one university, when compared to the 1988 graduate education students and the 2014 undergraduate students at the same university, were significantly more negative toward teaching, schools, and what today's educator would be expected to do. Building on the self-fulfilling prophecy, personal teaching efficacy, and general teaching efficacy, there are possible consequences to the trend toward negativity in this group of students. Research indicates that if teachers do not expect that their students will be able to learn, their students will probably not learn as much as they might if their teachers had more positive expectations. Further, if teachers believe their required activities will be difficult to accomplish, they may not bring to those tasks as much energy or expectations of success. Their efficacy beliefs would be related to the amount of effort they invest in teaching, the goals they set, and their persistence in the face of setbacks (Tschannen-Moran & Hoy, 2007, p. 907).

General teaching efficacy was alluded to in fifteen of the survey questions used in this study as they dealt with how positive or negative teachers felt about broad educational issues such as the teaching profession in general and the public schools. Personal teaching efficacy was alluded to in the other twenty questions used in the study which dealt with how difficult or how hard a particular teaching activity (paperwork, planning, teaching, etc.) would be for a teacher to accomplish. All 35 questions therefore can be considered to refer to either personal or general teaching efficacy, and the 2014 graduate education students were found to be negative in both efficacy categories. There are implications for the schools that employ educators whose attitudes or expectations are negative. According to Good and Brophy (1978), "…teachers' expectations may also have self-fulfilling prophecy effects, causing the teachers to behave in ways that tend to make their expectations come true" (p. 70). When educators have high expectations, students more often live up to those high expectations (Brophy, 1983; Dusek, 1975; Rosenthal & Jacobson, 1986). On the contrary, when educators have low or negative expectations for students, students may therefore more often live down to meet those low expectations. There has been, however, less support in the literature for the mediation of negative expectations (Harris, 1985, p. 21).To the degree that this group of 2014 graduate education students, more than the other two groups studied, meets the criteria of being negative, there are possible consequences.

One possible consequence according to Kaufman (2012) and Tauber (1997) is that these 2014 graduate educators may experience what they expect to experience and will either stay in education with a negative attitude and therefore influence students and schools negatively, or else will leave the field prematurely. This has implications for teacher educators as well as for public school mentors. Because of the influence of these two groups on education students and beginning teachers, there is a need for teacher educators and mentors to not only verbalize a more positive attitude but also to model it. This would seem to be especially true during the induction year when mentors of first-year teachers should be alert to identify and modify the negative expectations of their mentees, especially if those attitudes and expectations are not based on accurate information. Finally, Meyer's work in 1988 on teacher expectations concludes that education students ought to be taught that students can learn regardless of the teacher's current level of expectation. A more balanced approach between philosophical optimism and a pervasively negative view of all things in the 'world of education' could make a difference for those entering or reentering today's schools.

Limitations to this study are that there was only one university involved, and no sampling techniques were used because all available students in the two researchers' classes were surveyed. Unfortunately, no undergraduate education students were included in the group of 1988 students surveyed. Finally, no breakdown by race/ethnicity was used as a demographic variable in 1988 because at that time the enrolled education students at this university were almost exclusively white so race was not considered to be a useful variable at that time.

Conclusion

Graduate education students of 2014, who were also public school educators, were found to be more negative toward teaching, schools, and students, and also to have more negative expectations of their required duties than did graduate education students 26 years earlier and also more than beginning undergraduate students in 2014 at the same university. The 1988 graduate education students, on the other hand, were much more positive about their potential future as educators. Based on the findings of Dusek (1975), Goddard et al. (2000), Goddard et al. (2014), Palardy and Rumberger (2008), Rubie-Davies (2010), Rubie-Davies (2012),Tschannen-Moran et al. (2014) and the American Psychological Association's Key Principles for pre-K–12 teachers (2015), we believe that teachers' attitudes, expectations, and efficacy feelings are related to student performance and learning outcomes and conclude that there may therefore be consequences for these graduate education students who are now in or moving into public school education as well as to the schools that employ them. An additional implication could occur when these 2014 graduates are hired to work collaboratively with educators who graduated years earlier and may therefore have conflicting attitudes, more positive expectations, and more positive general efficacy beliefs. As Rubie-Davies et al. (2012) and others continue to point out, there is a need to more closely consider teacher variables that potentially influence student learning (p. 286). We agree and add that further research is needed to learn whether our results of changing attitudes and expectations toward negativity over time are more widespread than in just this university. Further, follow-up research is also required to know whether or not the attitudinal and expected negativity identified will indeed impact student performance or even their collegial interactions.

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