Graduates' satisfaction with the Chilean basic education teacher training degree program

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Abstract

Purpose – The purpose of this paper is to improve future teacher training by assessment of university graduates' satisfaction with their preparation in Basic Education teaching.
Design/methodology/approach – This descriptive study employed a self-administered survey questionnaire to a representative sample of 235 graduates between 2014 and 2016 from three universities in Chile. The questionnaire generated information about the graduates' background (age, gender, parents' education and prestige of secondary school attended); an evaluation of three dimensions of their degree program (instructional quality, infrastructure and employability), and experiences in the labor market (including salary). Analysis of variance was used to assess relationships between satisfaction, and other variables.
Findings – In general, graduates were satisfied with all aspects of their training. Satisfaction levels were higher from those assumed to have lower expectations. Contrary to this hypothesis, university prestige is not directly related to satisfaction. Instead, expectations and employability moderate the effect of prestige.
Research limitations/implications – The sample is not representative of the 59 universities in Chile nor of the many other degree programs offered in those universities.
Practical implications – Program directors concerned about improving the public reputation or prestige of their program will benefit from efforts to improve the quality of the program and its infrastructure, and relevance for entrance into the world of work.
Originality/value – This study provides information not previously available about graduate satisfaction in teaching degree programs in Chile.

Keywords Higher education, Chile, Satisfaction, Employment, Quality of training, Teaching in basic education

Paper type Research paper

Introduction

Attention to the quality of higher education in Chile has grown with the rapid expansion of enrollments since 1990. This has been expressed in two major ways. In 2006, the government passed the Quality Assurance Law, which decreed that degree programs in Teaching (Pedagogy) and Medicine were obliged to be accredited, although overall accreditation for

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universities was optional. The 2018 Law of Higher Education, which specified that all universities must be accredited, reconfirmed accreditation of programs in Teaching. Several years later, students and graduates protested low quality in massive public demonstrations (Cummings, 2015). One major complaint of students and graduates was difficulty in finding employment (Bellei and Cabalin, 2013).

Universities in Chile now use surveys of student satisfaction in the accreditation process. These surveys had previously been used in marketing campaigns seeking to increase enrollments. The surveys have focused principally on perceptions of the quality of facilities and the training offered (De la Fuente *et al.*, 2010; Olea, 2009; Valenzuela and Requena, 2006).

Previous surveys have been criticized as lacking scientific objectives and methodological rigor. In response to that critique, the study described in this paper used more systematic procedures to identify some of the factors that affect levels of satisfaction of graduates in the degree program Teaching in Basic Education. This program was chosen for three reasons: in recent years, there has been a gradual decline in enrollments in this level of Teaching (SIES, 2018); universities lack information about the satisfaction of graduates with their training and experience in the labor market; and concern about accreditation has prompted efforts to improve the quality of degree programs.

Previous research had noted that graduates' satisfaction with their university training is a joint product of two factors: experiences in the university and the degree program as a student; and experiences after graduation (García, 2009; Mora *et al.*, 2007). Accordingly, these studies focused on how graduates assess their university training in the context of their employment. Satisfaction is understood to be the outcome of an individual's comparison of objectives or expectations of a given experience or situation with fulfillment or realization of those objectives or expectations.

Those studies considered three dimensions of satisfaction: graduates' judgments of the academic quality of the program; judgments of program infrastructure experienced; and employment experiences after graduation.

Satisfaction with the degree program

Most studies on the satisfaction of graduates are based on service quality models, described by Parasuraman *et al.* (1985) and Seth *et al.* (2005). For example, Garcia (2009) carried out a study in Europe where he examined the factors that influence students' perceptions of satisfaction with program quality. Course content and non-academic social aspects – for example, relationships with other students – were the features most appreciated. The principal determinants of dissatisfaction were limited opportunities to participate in research projects, limited supplies of teaching materials and poor facilities (García, 2009).

In a study carried out in Portugal, María *et al.* (2018) reported that satisfaction with the academic and social aspects of a university resulted in a positive attitude toward the institution. In addition, a series of authors have proposed that program satisfaction is directly related to the presence or absence of physical facilities (Asiabaka, 2008; Uka, 2014; Zineldin *et al.*, 2011). Most of these studies were carried out with students rather than graduates, and their principal focus has been on libraries (Oluwunmi *et al.*, 2015). Abbasi *et al.* (2011), on the other hand, studied the relative importance of a number of infrastructure elements including transportation, laboratories including computer labs, residential facilities, medical services, facilities for sports and religious services and classrooms. Of these, only transportation, classrooms and religious facilities were significantly related to satisfaction.

Zineldin *et al.* (2011) identified quality of infrastructure as a fundamental determinant of student satisfaction in Turkey. Especially important were physical appearance and cleanliness of classrooms, and computer labs. In the same line, Uka (2014), studying Albanian universities, showed how certain physical factors, such as size of classrooms, the technology used in teaching, library, computers, WiFi connections and the cafeteria,

among others, could have a strong effect on students' satisfaction and attitudes toward the institution.

Just as experiences while in the university (the training process, infrastructure and facilities, etc.) can affect graduates' satisfaction, so too can their employment outcomes, that is, what happens after graduation. For example, graduates can feel satisfied with their training if they find a job that matches their academic preparation. Ease of obtaining employment after graduation is another element that contributes to the perceived value of services received (Teixeira *et al.*, 2015).

A number of studies have linked students' and graduates' satisfaction with their perception of the likelihood of finding (well-rewarded) employment (Abas and Imam, 2016; De Vries *et al.*, 2013; Teixeira *et al.*, 2015). Employability has been defined by some researchers as the degree or level of acquisition of professional knowledge and skills and general abilities, or "capitals" not directly related to any academic discipline or field (Clarke, 2018; McQuaid and Lindsay, 2005; Tomlinson, 2012). These capitals or abilities include, among others, skills in communication, critical reasoning, collection and analysis of information, social relationships, self-esteem and self-understanding (Gutman and Schoon, 2014; Heckman *et al.*, 2006). For success in a competitive labor market these skills are regarded as more important than academic skills. As employment is a transaction, however, employability is a subjective judgment (of the graduate or others) of the likelihood of employment:

> Employability is having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful. (Pool and Sewell, 2007, p. 280)

Among the personal attributes is self-confidence, which affects how a candidate for employment presents him/herself. This self-confidence is one of the forms of "capital" that facilitate the achievement of the candidate (Tomlinson, 2017).

Some researchers look askance at universities' increased emphasis on training for employability. They argue that many factors influence a graduate's likelihood of employment, and that we have not yet understand all the relationships between these factors. For example:

> […] it cannot be taken for granted that employability is a direct result of individual attributes and responsibility. Social inequalities affect individuals' opportunities to access education and to get a place at certain universities in particular. Furthermore, labour markets are fragmented, and certain categories of worker are badly treated. This stratification of HE institutions and labour markets may cancel out eventual gains obtained through improving employability skills. (Suleman, 2018)

Prestige, expectations and salaries

The major systems for ranking universities in terms of their presumed quality are based fundamentally on institutional prestige (Bowman and Bastedo, 2011; Gibbons *et al.*, 2015; Wächter *et al.*, 2015). These rankings usually are constructed on the basis of a combination of subjective perceptions and quantitative information about the results and characteristics of the institution, and admission requirements.

The prestige of a university is related especially to the public's perception of the academic quality of students admitted, that is, the university's selectivity (Kunanusorn and Puttawong, 2015; Schlesinger *et al.*, 2017). Admission standards are a "signal" for employers, such that higher standards result in higher levels of employment of graduates, and higher salaries (Meller and Lara, 2010; Urzúa, 2012; Weinstein, 2017).

In a recent study of graduates, Espinoza *et al.* (2019) found a significant relationship between the level of selectivity of the university attended, and satisfaction with the degree program completed. On analyzing the level of satisfaction with employment and academic

training in psychology, Espinoza and McGinn (2018) and Espinoza *et al.* (2018) concluded that satisfaction is associated principally with the prestige of the university attended.

Higher salaries are given to candidates from universities believed to be of higher quality, which at the same time are also more selective (Cai, 2013; De Vries *et al.*, 2013; Humburg *et al.*, 2013). In South Korea, for example, university prestige has an important influence on the salaries offered to graduates, but has only a small relationship with the graduates' satisfaction with the job they take (Jung and Lee, 2016). The reputation effect is significant, even though logically it explains only part of the differences in salaries of individuals. Profession certainly is another determinant of salary level. Even taking family SES into account, it is likely that engineers earn more than social scientists, who in turn are paid more than teachers, and each category is paid less if they graduated from a low prestige university (Eide *et al.*, 2015). A study in Australia found that the principal determinant of graduates' salary levels was field of study; university prestige had a much smaller (although significant) effect on salaries (Lee, 2014). We conclude that employability, while contributing to graduates' satisfaction, is an unreliable predictor of productivity.

Do graduates' expectations play a role in their level of satisfaction with the quality of their degree program, its infrastructure and their employability? Relative deprivation theory (Crosby, 1984) suggested that people's satisfaction with a current or past situation is conditioned by comparison of the experience with prior expectations about what would be experienced. People are less satisfied when the current experience is less than expected, when other persons receive more than they do and when they feel entitled to or deserving of more. For example, Sweeney *et al.* (1990) showed that employees are more satisfied with their salaries when the amount received exceeds their expectations. Manstead (2018) reviews research that shows how socio-economic status affects our judgments about ourselves, and therefore what we expect we will accomplish in the future. Those who receive more, expect more and are more likely to be dissatisfied if they do not.

In Chile, as happens in other countries, children raised by parents with low levels of education tend to have lower levels of aspiration about their adult life (Carrasco *et al.*, 2014; Hossler and Stage, 1992; Schneider and Lee, 1990). Their level of expectations is molded not only by their mother's education level, but also by their experiences in primary and secondary school.

There are three kinds of secondary schools in Chile: municipal schools that depend on state resources; subsidized private schools that receive some financial assistance from the state; and private schools that receive no state funds. Subsidized private and private schools strive to attract students from upper middle and upper income families, while municipal schools admit all applicants. Private schools are commonly seen as offering higher quality instruction, and in fact students in subsidized and private secondary schools on average score higher on standardized examinations than do those in municipal schools. These differences disappear when family SES is taken into account, however, suggesting that there is no significant difference in the quality of instruction provided (Carnoy and McEwan, 2000; Hsieh and Urquiola, 2006).

International research confirms that quality of secondary education is associated with the satisfaction of graduates (DeWitz *et al.*, 2009; Perry and McConney, 2010). Students whose mothers had lower education levels, and who went to a municipal secondary school, should have entered university with lower expectation levels and therefore have higher levels of satisfaction as graduates.

It is reasonable to ask whether salary levels of graduates are indicators of their satisfaction with the quality of their degree program and its infrastructure. Prior studies suggest that salary is one of the factors that contributes to the perceived value of training. Pike (1994) found that graduates who had positive experiences in their job (including financial income) were more likely to indicate high satisfaction with their degree program.

Also, studies by Abas and Imam (2016), De Vries *et al.* (2013) and Teixeira *et al.* (2015) confirm the positive relationships between salary and satisfaction with the program completed. Another study in the USA provided evidence that income is strongly associated with satisfaction with university studies (Gallup–Purdue University, 2015).

There is evidence, however, that salaries are not a reliable predictor of a new employee's future productivity (Bishop, 1989; Kjelland, 2008). Productivity is a joint function of factors such as innovation, efficiency, infrastructure, technology and organization as well as human capital (Kim and Loayza, 2017). As each varies across individual firms as well as economic sectors, no one factor is determinant of an individual employee's productivity. Some research suggests that in the current economy, marked by high levels of innovation and technological change, education places an increasing smaller role in influencing productivity (Marginson, 2019). The salary a new employee receives can, however, affect his/her job satisfaction and, consequently, *post hoc* judgments about the quality of training received in the university.

As reviewed above, the satisfaction of university graduates with their training is influenced by several independent factors. This conclusion holds independent of field of study, although apparently no research has compared systematically influences on satisfaction in different fields. The factors influencing satisfaction with teacher training in Chile include: the prestige of the university attended; the perceived quality of the university degree program completed; and qualities (relevance and salary) of the employment offered after graduation. Perhaps because the Chilean higher education system has been modeled after those in the USA and Europe, findings from research elsewhere match studies been done in Chile.

The research suggests the following hypotheses to be validated in Chile:

H1. Chilean universities vary widely in their level of prestige in society. Because an institution's prestige is based on public judgments of quality, we expected to find that each of the three dimensions of satisfaction would vary positively with the level of prestige of the university attended.

H2. Students enroll in universities with expectations as to the quality of the programs offered, their infrastructure and the contribution to employability. Assuming that satisfaction increases when expectations are fulfilled or exceeded, we hypothesized that graduates' satisfaction would vary inversely with their level of expectations.

H3. Income from employment is a third factor that could condition satisfaction once graduated. We hypothesized that the level of initial salaries of graduates would be positively related to all three dimensions of satisfaction.

Methodology

Sample

The participants in this exploratory study were 235 graduates in full-time degree programs of Teaching of Basic Education during the period 2012–2016. They graduated from three Chilean universities that vary in terms of prestige, defined by admission selectivity (low, medium and high) and their official accreditation[1].

The level of selectivity of each of the universities is defined by required scores on the national University Selection Examination (PSU), a battery of standardized tests to assess students' knowledge of fundamental subjects. The results of the combined tests are reported in a single measure with a mean of 500, a minimum of 150 and a maximum of 850 points, with a standard deviation of 110 (Departamento de Evaluación, Medición y Registro Educacional, DEMRE, 2017). The accreditation rating is reported in years, with a maximum of 7. This rating can be taken as an indicator of quality and is related to level of admission selectivity.

To respect confidentiality, we have not identified the universities by name but instead refer to them as the Highly Selective University (HSU), the Moderately Selective University (MSU) and the Low Selectivity University (LSU). The HSU is accredited for six years, and the MSU for three years. The LSU is not accredited. The HSU admits applicants with PSU scores higher than 600; the MSU admits students with scores 475 and above; and the LSU accepts practically all applicants.

The graduates were selected randomly from a list of the total of 488 graduates in Teaching of Basic Education during the period. The randomization was carried out with the "sample" command of Stata IC/15. A larger sample was chosen in order to prevent a lower than expected response rate. The sample is representative of all graduates with a confidence level above 95 percent and a margin of error less than 0.05. Each graduate selected responded to an online questionnaire. The data collection occurred in two moments of time. Graduates in the years 2012–2014 answered the online questionnaire in 2015, while graduates in 2015 or 2016 answered in 2017. Details of the sample are provided in Table I.

Instrument and variables

The survey administered to graduates of the three universities presents a variety of questions in three sections. The first, general antecedents, includes university, degree program, graduation year, gender, residence, education level of mother and type of secondary school attended. The second section presents questions about employment after graduation (time to job, level of salary, type of work and evaluation of fit between training and work). The third presents 19 Likert-type items that solicit the graduate's opinion of different aspects of the degree program.

The questions in the third section were organized into three scales. The first scale included items about teaching practices, including the content, coverage and flexibility of the curriculum. These were designed to assess the academic quality of the program. The items are consistent with those used in prior research on academic satisfaction (García, 2009). The second scale was composed of infrastructure items such as labs and computers. The third scale included items designed to assess the graduates' employability, that is, the extent to which they felt prepared to exercise their profession once in the labor market. Details of the scales appear in Table II.

Principal component analysis was used to test the adequacy of the scales. Results of the statistical tests applied are reported in Table III. These results give us confidence that responses to the items in each scale are highly related to each other, in other words, they are seen by the respondent as a common feature of the same object or concept. This allows us to regard each factor as describing an independent set of practices or actions.

Two procedures were followed to analyze the data. Simple analysis of variance (one-factor ANOVA) was used, followed by the Bonferroni correction to detect significant statistical differences between average scores on the interval satisfaction variables linked to other categorical variables (Mitchell, 2015; Acock, 2018). As a proxy for expectations, we used mother's education, and the type of secondary school attended. All analyses were carried out using SPSS 18.0 and Stata 15.1.

Table I.
Sample by university

University	Graduates	Sample	Sample as % of Graduates
LSU	175	84	48.0
MSU	125	60	48.0
HSU	188	91	48.4
Total	488	235	48.2

Scale	Items
Satisfaction with the quality of the program	1. The training I received in my program was of high quality
	2. If I had the opportunity to study my career again, I would choose the university in which I studied
	3. The program gave me a training that allowed me to obtain the academic degree and professional title without difficulties
	4. The theoretical training that the program game me was adequate
	5. The practical training that the program gave me was adequate
	6. The personal and value training that the program game me was exceptional
	7. The study plan included activities that linked students with the profession
	8. The course contents were relevant for my development as a professional
	9. Some of the content was repeated unnecessarily in two or more courses
	10. The course activities allowed me to combine theoretical and practical knowledge for my development in the world of work
Satisfaction with the infrastructure of the program	1. The institution concerned itself constantly with improving the quality of the infrastructure
	2. The program I studied always provided the necessary means and equipment to carry out curricular activities necessary for my training (seminars, field trips, etc.)
	3. The institution and the program had an adequate library and study rooms
	4. The laboratories and/or workshops were correctly carried out
Satisfaction with employability	1. As a graduate of the program and institution where I studied, I have an identifiable professional profile
	2. The training I received was sufficient to develop me satisfactorily for my work
	3. The work preparation that the program gave me matched my job requirements
	4. On comparison with graduates of other programs I became aware that employers evaluated me more favorably

Table II.
Items on the scales

Scale	Cronbach's α	Kaiser–Meyer–Olkin sampling accuracy	Bartlett's sphericity	% of variance explained
Quality	0.935	0.923	0.000	67.0
Infrastructure	0.897	0.810	0.000	76.5
Employability	0.897	0.798	0.000	76.6

Table III.
Statistical tests of the scales

Results

Quality of program, infrastructure and employability

Table IV presents for each level of prestige, mean scores on the three dimensions of satisfaction considered in this study. First, we observe that Teaching graduates, independent of the prestige level of the institution attended, have a positive opinion of the quality, infrastructure and employability associated with their program.

	Quality		Infrastructure		Employability	
Prestige	Mean	SD	Mean	SD	Mean	SD
Low	2.85	0.91	2.75	1.03	2.81	0.99
Moderate	3.18	0.66	3.03	0.75	3.12	0.78
High	3.19	0.54	2.73	0.81	3.27	0.68
Total	3.06	0.72	2.81	0.89	3.06	0.85
ANOVA p	Sig. = 0.008		Sig. = 0.115		Sig. = 0.005	

Table IV.
Satisfaction with quality, infrastructure and employability by level of university prestige

All the means are above 2.5 on a scale that ranges from 1 (low) to 4 (high) satisfaction. Satisfaction with quality and employability are significantly higher for the MSU and HSU as compared to the LSU as shown in Table IV.

Table V, which uses the Bonferroni correction, shows that there are significant differences between the HSU and the LSU and the MSU and the LSU, but not between the HSU and MSU. Similar results are obtained using Tukey's test.

Applying the same procedure to the comparison of scores on prestige and employability the result is different (Table VI). Only the HSU–LSU difference attains significance.

Given evidence that university prestige, defined in terms of admission selectivity and accreditation level, is related to graduates' satisfaction, we went on to explore judgments of quality, infrastructure and employability in terms of the graduates' expectations.

In Chile as elsewhere, children raised by parents with lower levels of education tend to have lower aspirations for their adult life (Carrasco *et al.*, 2014). We expected therefore that graduates whose mothers had low levels of education would expect less from their programs than those with better educated mothers. Experiencing the same level of fulfillment, those expecting less would be more satisfied. Most graduates (72.6 percent) in Teaching have mothers without some or complete postsecondary education. It is this group that was most satisfied with each of the three dimensions of satisfaction. As seen in Table VII, the differences are statistically significant, and an important indicator of the impact in Chile of family SES on students' expectations for employment.

If we assume that those who attend municipal secondary schools have lower aspirations or expectations with respect to their adult life, we also should expect that they will be more satisfied with their university training than those who entered with higher expectations. Most of the graduates (66.7 percent) went to subsidized secondary schools, and 26.8 percent to municipal schools. The data in Table VIII indicate how admission to a given university is

Table V.
Comparison of quality by prestige (Bonferroni)

Row mean – Col mean	MSU	LSU
LSU	−0.329389	
	0.041	
HSU	0.007	0.336389
	1.000	0.013

Table VI.
Comparison of employability by prestige (Bonferroni)

Row mean – Col mean	MSU	LSU
LSU	−0.309676	
	0.134	
HSU	0.149959	0.459635
	0.979	0.004

Table VII.
Satisfaction with quality, infrastructure and employability by whether mother received postsecondary education

	Quality		Infrastructure		Employability	
Mother had postsecondary education	Mean	SD	Mean	SD	Mean	SD
Yes	2.75	0.88	2.47	0.89	2.69	0.93
No	3.17	0.64	2.92	0.85	3.21	0.77
Total	3.06	0.74	2.80	0.88	3.06	0.85
ANOVA p	Sig. = 0.000		Sig. = 0.001		Sig. = 0.000	

influenced by the type of secondary school attended. Students who attended private schools were 10 percent more likely to have enrolled in the more HSU.

As Table IX indicates, it was the municipal school students who were more satisfied with the infrastructure of their program, while the graduates from subsidized schools were more satisfied with the quality of the program, and their employability. All the differences shown in the table are statistically significant, but those between graduates attending subsidized schools and private schools are larger.

Table X clearly shows that graduates of private schools differ significantly from former students of municipal and subsidized private schools in their evaluation of the quality of the university degree program. The differences between students from municipal and subsidized schools are not significant.

In Table XI, using the same procedure to assess the relationship between type of school and satisfaction with infrastructure, we see a similar pattern of relationships. Students who attended private secondary schools were least satisfied with the infrastructure of their

Table VIII. Percent attendance at universities of different selectivity by type of secondary school attended

	Municipal	Subsidized	Private
HSU	44.03	41.19	52.24
MSU	30.19	24.72	26.87
LSU	25.79	34.09	20.9

Table IX. Satisfaction with quality, infrastructure and employability by type of secondary school attended

	Quality		Infrastructure		Employability	
Type of school	Mean	SD	Mean	SD	Mean	SD
Municipal	3.02	0.80	2.94	0.89	2.97	0.93
Subsidized	3.17	0.59	2.82	0.85	3.17	0.76
Private	2.10	1.11	1.88	0.84	2.38	0.96
Total	3.06	0.74	2.77	0.89	3.05	0.85
ANOVA p	Sig. = 0.000		Sig. = 0.001		Sig. = 0.001	

Table X. Comparison of quality by type of school (Bonferroni)

Row mean – Col mean	Municipal	Subsidized
Subsidized	−0.148143	
	0.536	
Private	−0.917241	−1.06538
	0.000	0.000

Table XI. Comparison of infrastructure by type of school (Bonferroni)

Row mean – Col mean	Municipal	Subsidized
Subsidized	−0.118798	
	1.000	
Private	−1.06548	−0.946678
	0.000	0.001

university degree program, while evaluations by students from municipal and subsidized private schools were essentially the same.

The comparison in Table XII is from satisfaction with the level of employability provided by the degree program. Once again, students who attended private schools are less satisfied than those who attended municipal or subsidized private schools.

The satisfaction of graduates could also be explained by differences in the economic returns to their training. Table XIII divides salaries of graduates into two groups, less than \$750 per month and more than \$750. Most of the graduates (70.5 percent) are in the higher bracket. There are clear differences in level of satisfaction between those who receive smaller and those who receive larger salaries, the latter being more favorable. Analysis of variance reveals that these differences are, for each dimension of satisfaction, statistically significant ($p < 0.005$). This suggests that one of the factors that influence satisfaction with employment is the salary received. But it also helps to explain the graduates' satisfaction with program quality and infrastructure. This illustrates how events that occur after graduate can have an impact on graduates' appreciation of their university experience.

In summary, graduates of Teaching in Basic Education in general are satisfied with the quality and infrastructure of their training program as well as with their employment. Of the three dimensions, quality receives the higher average rating (3.07 out of 4), followed by employability (2.90) and then infrastructure (2.77). The factors that produce statistically significant differences in satisfaction are not those related to the institution attended but rather to their level of expectations and current salary.

Discussion

Satisfaction of graduates with a Teaching degree, defined by the three dimensions studied, is determined principally by expectations formed prior to attending university and by the salary received when employed. Our two proxy measures for expectations, Mother's Education and Type of Secondary School, showed that students from less privileged backgrounds had higher levels of satisfaction with their university training, consistent with research in other countries.

Studies in other countries (Abas and Imam, 2016; De Vries *et al.*, 2013; Gallup–Purdue University, 2015; Pike, 1994; Teixeira *et al.*, 2015) have obtained similar findings as these in respect to the influence of salaries on satisfaction with the academic program, infrastructure and employability.

Table XII.
Comparison of employability by type of school (Bonferroni)

Row mean – Col mean	Municipal	Subsidized
Subsidized	−0.193067	
	0.465	
Private	−0.597222	−0.790289
	0.051	0.003

Table XIII.
Satisfaction with quality, infrastructure and employability by salary level

	Quality		Infrastructure		Employability	
Salary	Mean	SD	Mean	SD	Mean	SD
Less than \$750/month	2.71	0.88	2.43	0.93	2.68	0.95
More than \$750	3.19	0.64	2.97	0.82	3.21	0.74
Total	3.06	0.74	2.82	0.88	3.05	0.84
ANOVA p	Sig. = 0.000		Sig. = 0.000		Sig. = 0.000	

Contrary to our hypothesis based on studies in Great Britain, South Korea and China (Drydakis, 2016; Jung and Lee, 2016; Liu *et al.*, 2010), university prestige is not an important factor in explaining level of satisfaction with infrastructure. The finding is consistent with other studies on graduates' satisfaction (De la Fuente *et al.*, 2010; García, 2009; Mora *et al.*, 2007; Opazo *et al.*, 2012), which report that the least favorable evaluations are about infrastructure. Perhaps satisfaction with infrastructure is not associated with institutional prestige because infrastructure is a more tangible subject compared to quality and employability, which are linked to learning which is fundamentally subjective. A closer look at the data reveals that it is graduates of the HSU who are most negative about infrastructure. This is understandable given that more of these graduates attended private schools that are better equipped than the schools attended by MSU and LSU graduates. The HSU graduates entered with high expectations that were met but not exceeded, while MSU and LSU graduates got more than they had expected.

Prestige is, however, associated with the perceived quality of the program and with employability. This has been demonstrated also in other studies we have done using the data reported here (Espinoza *et al.*, 2018, 2019). The effect while statistically significant, is not as large as that of the other factors considered. The prestige level of the university attended influences students' expectations of the quality of the degree program. Judgments about this quality are modified by actual experiences in the program, and then again by experiences in the labor market. With more experience, graduates learn to distinguish between distinct applications of what was learned in their degree program.

Limitations and implications of this study

Even though the results obtained are suggestive, they should not be generalized to other degree programs in Chile or elsewhere. It is possible that graduates' evaluations will vary as a function of the type of degree program, the university where training is provided and the labor market, as well as a function of other factors.

The results can, however, have practical implications for revising degree programs in Basic Education. This seems most likely with respect to curriculum innovation and planning, and consequently for the graduate profile of future generations. The improvement of the reputation, prestige and quality of those programs today considered inferior would benefit from central government policies and interventions. These should be directed at improving program relevance, in order to raise student and graduate satisfaction.

This will require an explicit attempt to include training content and experiences that match the reasons why students have chosen a career in teaching. Most students see teaching as a service profession that can serve their altruistic ambitions. Others are attracted to its working conditions, or to the intellectual content of the activity (Struyven *et al.*, 2013).

The research reported here covers only recently hired graduates. It may be that the impact of university prestige on earnings changes over time. This could be assessed with a follow-up study of the graduates included in this study.

Conclusions

Our first hypothesis suggested that institutional prestige and the satisfaction of graduates of Teaching in Basic Education with the quality and infrastructure of their degree program and its employability are associated positively. This was supported in the case of quality and employability but not infrastructure. We could not reject the null hypothesis in this case.

The second hypothesis anticipated a negative relationship between expectations of the graduates and the three dimensions of satisfaction defined in the study. In this case we can reject the null hypothesis; there is a strong but negative association between graduates' expectations and their satisfaction with the quality, infrastructure and resulting employability.

The third hypothesis posited a relationship between the three dimensions of satisfaction, and the salary received by graduates once employed. The data allow us also in this case to reject the null hypothesis and affirm that, for this degree program, higher levels of salary are associated with more favorable evaluations of the quality, infrastructure and levels of employability of graduates.

Another finding of this study is that graduates assigned great importance to their current work situation when they evaluate the quality of their degree program. This is unrelated to the (prestige level of the) university in which they studied. This should signal both university as well as governmental authorities that, in order to improve the perceived quality of Teaching degree programs, more attention should be paid to job placement.

Almost three times more of the Chilean graduates in Teaching attended subsidized secondary schools. On average, the cost of attending a subsidized secondary school is higher than that in a (public) municipal school. There is no evidence that, on average, the quality of instruction is higher in subsidized than in public schools. It is likely, however, that teachers who attended municipal schools are more familiar with the problems faced by low income students in basic schools. Given equivalent training, they might be expected to be more successful teachers than their counterparts who attended more expensive secondary schools. The central government might work with municipalities to encourage more municipal secondary students to become teachers, benefitting the currently less advantaged sector of the population. This requires formulation and implementation of strong policies with respect to job placement. These policies would be designed to match the skills and motivations of teachers to the abilities and needs of specific groups of students. This will require developing instructional strategies consistent with specific sub-populations among school students, facilitating their employment.

Note

1. University accreditation in Chile is based on an evaluation of fulfillment of the educational plan of the institution. It verifies the existence of mechanisms to assess quality, leading to the reinforcement of capacity of self-regulation and continuous improvement (Comisión Nacional de Acreditación, 2007).

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