Model for self-evaluation and hetero-evaluation of teaching practice in Normal Schools

José Ángel Vera Noriega
Gissel Bueno Castro
Noemí Guadalupe Calderón González
Francisca Leticia Medina Figueroa

Abstract

In this article, the topic of teacher evaluation in Normal Schools is addressed. The objective is to present a model of Self-evaluation and Hetero-evaluation of teaching practice in the state of Sonora, Mexico. The study is descriptive and factorial; students, teachers and managers of the Bachelors’ degree in elementary school (2012 plan) of the Normal Schools participated. The following instruments are used: teacher performance evaluation from the students’ perspective, management evaluation and teaching performance, self-evaluation of teaching performance and observation instrument and teacher interview, with Likert type responses. Some of the results are those in terms of perception of the students perception, the dimension in which their teachers performed best is in planning, with an average of 6.49 and a standard deviation of 0.348, while teaching competencies and attention to students, they show the lowest averages with 6.33 and 6.34 respectively, despite their confidence intervals being quite broad. In the analysis of the exploratory factor, the dimensions are grouped into two factors and it is concluded that students and teachers have very similar perspectives in terms of teaching practice, while managers are at the opposite end of the evaluation. Students show a tendency to bestow their teachers high grades in their assessment. In order to improve the training of students and teachers, the importance of evaluating teachers in an objective way must be emphasized.

Keywords

Self-evaluation – Teachers – Students – Teacher training.
Introduction

The term *Educational Evaluation* has grown as a specialized professional activity, which requires constant updating. As the realities of the context change, so do educational models and study plans, didactic materials, among other elements, which in turn have an impact on evaluation strategies, techniques and instruments (RUEDA, 2008).

Due to the country’s current tendency on teaching task evaluation, society demands account of the results of the education that students receive in educational institutions.

Mexico began to implement teacher evaluation measures at the end of the 1980s, when the Incentives for Academic Performance in Higher Education Program was formulated and applied. This evaluation caused dissatisfaction with teachers, since they would be subject to evaluation to estimate increases in salary and position, and that would have enough impact to cause their dismissal (DE LA LLATA, 2012). In this case, the normal teachers were not affected. However, recent evaluation processes, led by the National Institute for the Evaluation of Education (INEE) include teachers of Normal Schools in the country. It is important to know the competences of teacher educators in order to improve their practice in all levels. However, these evaluative processes are not yet practiced by Normal Schools of Sonora.

Fernández, Mateo and Muñiz (1996) conclude that evaluations done by the students can be useful for the teachers, because they can highlight both strengths and weaknesses in their practice and thus the teachers can acknowledge what they need to polish to start improving their teaching practice.

In addition to the student’s perspective, there are other evaluation techniques and instruments in this area, such as self-assessment by means of evidence portfolios (ARBESÚ; ARGUMEDO, 2010), through which teachers reflect on their own practices; the in situ observation to know the generic competencies of the teachers in the school. The latter was a lesson learned in the case of Chile, where the aims are formative and the teacher is evaluated instead of the result of the students’ learning.

Teachers self-evaluating implies that they reflect on their teaching practice and their beliefs: Fuentes & Herrero (1999) consider that teachers constantly seek their improvement and self-assessment helps them to modify their performance, as long as they are trained how to do it. Barber (1997) mentions that the self-evaluation process helps them distinguish specific characteristics that they should improve in their teaching practice. Thus, the self-evaluation process is the method used to ensure that teachers are able to assess and appreciate their practice in an objective manner to strengthen the successes and correct errors in order to improve.

On the other hand, hetero-evaluation is the assessment made by one person over another and questions are measured regarding their work, attitude, performance, among other characteristics (CASANOVA, 1998). In addition, this process offers a large amount of data because it involves people outside the classroom environment and who belong to another level, either inside or outside the school context, whereby its application is often complicated.
Regarding Mexico, Canales and Luna (2003) argue that when hiring their teaching staff, higher education institutions do not give clear indications of what they expect the academic to do. They mention that every evaluation is partial and requires that each evaluative experience recognizes its limits. We must consider that it is possible to think of better teaching when only the results of the questionnaires are made known.

Teacher evaluation is a social practice that involves political, theoretical, methodological and ethical aspects, with public and private implications and consequences for society, institutions and actors (RIIED, 2010). For this reason, it is important to carry it out through various methods and with the participation of the different actors involved in the educational institution, whether self-evaluation of the teacher himself, evaluation based on the opinion of students, or from the manager’s perspective.

The problem of internal evaluation in normal schools

Although there have been numerous studies on evaluation in higher education, very few have focused on Normal Schools since the work methods of their teachers are very different from those of teachers in higher education. Although, theories that help explain the phenomenon of teacher trainer evaluation can be revised, difficulties would arise due to the diverse characteristics displayed by the teaching staff of Normal Schools, like different profiles and income, for instance.

Most of the instrumentation in terms of evaluation is carried out as a standardization process. In most educational institutions, evaluations have low impact consequences (low stakes) (BARRERA, MYERS, 2011). Normal Schools have this type of low stakes teacher evaluation where the result of the evaluation affects the teacher minimally in an academic way. Recent studies in basic and higher education have shown that the evaluation by students is affected by affective and bureaucratic issues (MADUEÑO et al., 2009) and by the evaluation that the teacher assigns to the student (RUEDA, 2004).

Normal Schools lack valid and reliable mechanisms for evaluating educational processes, including professional teaching practice. This highlights the need for Normal Schools to have teacher evaluation instruments that allow a greater number of agents to take part in the evaluation process, always with the aim of improving the work of teachers.

The objective of this research is to propose a model of self-evaluation and hetero-evaluation of teaching practice in Normal Schools in the State of Sonora, Mexico, since a formal model for evaluating teachers within institutions is not currently applied.

Theoretical framework

For the purposes of this study, four models of teacher evaluation were taken as reference, which can be seen in Figure 1 and are described below.
Overall and Marsh (1977, 1980) proposed an instrument to assess the quality of education. The effective evaluation range of the instrument is divided into seven dimensions: Enthusiasm-concern for the teaching task, range of treatment of the topics presented, task organization, interaction with the students, learning assessment by the student, adaptation of class development evaluation, and work-difficulty presumed to achieve the objectives of the subject. The importance of retaking this input is it emphasizes the teacher’s practice in a traditional way, which is related to the teachers’ practice in Normal Schools, which are based on reproducing preset behaviors in the curriculum and little reflection and participation by part of the student.

Vera and other authors (Vera et al, 2012) took the model of Overall and Marsh (1977, 1980) as a basis to design and validate an assessment measure for teachers in higher education, with four factors: Didactics, Evaluation, Planning and Motivation. Teaching competences and knowledge related tasks and materials used are included; also, planning focuses on time distribution, homogenization tasks and curricular adjustment.

On the other hand, Díaz (2007) raises the idea that the teaching practice is a process which seeks the constant improvement of these professionals. The author breaks down seven ideal dimensions as a basis for teacher self-evaluation: 1) teaching programming; 2) methodology and use of resources; 3) motivation for learning that the teacher imparts to his students; 4) Evaluation: seeks to have the teacher use three evaluation methods, promote co-evaluation and self-evaluation, to grade, promote and inform parents of the results of teaching evaluation; 5) mentoring; 6) attention to diversity; 7) classroom climate, which involves teacher-student interaction, teamwork and the ability to resolve conflicts. The objectives of this model are to detect the strengths and weaknesses of the practice for the development of improvement strategies.

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6- Traditional teacher refers to teachers who use practices related to the rote, repetitive, intellectually mundane and puts students in a passive role Benavides (s/f).
to create a culture of evaluation among teachers for their constant improvement, to
determine the performance levels of the evaluated teachers, as well as to encourage
collaborative work.

Another revisited model is the evaluation of teaching from the perspective of the
teacher (AREBSÚ; RUEDA, 2003), which mentions that there must be other types of
teacher evaluation, apart from that made by the students, in search of a more versatile
tool and with a more critical sense that helps the teacher to improve his work through
a formative evaluation. The authors carried out a year-long ethnographic work with
the professors of Social Sciences and Humanities from the Universidad Autónoma
Metropolitana (Metropolitan Autonomous University), in which they devoted themselves
to observe the professors in their field of work, as well as their relations with students
and colleagues. The model distinguishes two activities that involve the dimension of
teaching practice: the first has to do with updating the teacher in terms of tutorials,
courses, research, attendance at conferences, etc; the second refers to the attention to
students and teacher-student relationship and vice versa.

On the other hand, the measurement of teacher performance required a view
from management that includes the following aspects: 1) Effective communication and
interpersonal skills: measures meetings with subjects who participate in the educational
context for the development of projects or academic activities; 2) Work conditions and
organizational climate: used to obtain information on evaluations made by the principal
on the teacher’s relationship with his work environment and his level of satisfaction; 3)
Management and directive planning: it allows to obtain information about the teacher’s
activities related to administrative and teaching management, planning and relationship
with parents; 4) Focus on the client: it is a measure of the teacher’s contribution to
improving the performance of students and their peers (VERA; FIERROS; PEÑA, 2014).

In a study, it was sought to measure the teaching practice through an input-
process-product model in Sonora teachers through a performance observation guide.
Indicators related to the contingential and didactic management of the teacher were
registered for the conduction and disciplinary control of the group through the
following terms: cleanliness and distribution of students in the classroom, resources
used by teachers and students, activities carried out during the class, management
of contingencies, monitoring and feedback of children’s behavior, mobility within
the classroom, participation in class (teacher/students) and teacher behavior towards
students. There was also an interview about the teaching practice that consisted of 35
items through which information on three important dimensions is collected: planning of
objectives and activities on time; didactic processes selected for learning and materials;
and resources used (VERA et al., 2012).

Methodology

The study is descriptive and factorial, because it recounts results found about
teachers evaluation from the perspective of the same actor and users or students and
managers. Likewise, it is considered factorial, because it tries to simplify the multiple
and complex relationships that may exist between a set of variables to find common
dimensions or factors that link the apparently unrelated variables (PÉREZ, 2014).

Participants

Participants were students (n=900), teachers and managers (n=22) from the degree
in Primary Education from Normal Schools that offer this program: Centro Regional de
Educación Normal (Regional Center for Normal Education), located in Navojoa, Normal
Rural del Estado (State Normal Rural), located in Etchojoa, Escuela Normal del Estado (State
Normal School), located in Hermosillo.

Instruments

Self-evaluation and hetero-evaluation were carried out through the application of
five instruments. These were designed so that their five dimensions are congruent with each
other and it is possible to perform association analyzes.

Instrument for evaluating teacher performance from the perspective of students. The
instrument is based on the study by Vera and other authors (2012), conducted to evaluate
basic education teachers. This instrument is based on the theory of Evaluation of the Quality
of Education by the Student of Overall and Marsh (1980). The survey to evaluate the teachers
has 53 Likert-type items, divided into five dimensions: dedication, planning, teaching
competencies, relationship with the student and evaluation.

Teacher performance and management evaluation instrument. The instrument is
aimed at managers and evaluates the dimensions of management, practice and teaching
competencies. The survey to evaluate teachers by managers has 36 items divided into five
dimensions: dedication, planning, teaching competencies, relationship with the student and
evaluation (VERA; FIERROS; PEÑA, 2014).

Teaching performance self-assessment instrument. For the creation of the self-assessment
questionnaire, previous works that diagnose and analyze the teaching practice were reviewed
with the aim of specifying the current situation of the evaluation practice in this matter. The
survey for self-evaluation of teachers has 49 items divided into five dimensions: dedication,
planning, teaching competencies, relationship with the student and evaluation.

Instrument of observation and interview with the teacher. The observation and
interview constitute the fourth and fifth instruments, but they are taken together based on
a study conducted by Vera and Rodríguez in 2007 on Teaching Practice in Urban Primary
Schools in Sonora. They work together to compare teacher perspectives revealed in interviews
with researcher’s observations on the practice. The instruments for evaluating teachers are
divided into five dimensions: dedication, planning, teaching competencies, relationship
with students and evaluation. The observation consists of fourteen questions about activities
that happen inside the class while the interview consists of eighteen questions about how
teachers perceive their teaching practice.
Procedure

The study was conducted in three phases, which are: 1) design and piloting of the instruments; 2) application of measurement instruments, and phase 3) data analysis. The piloting was done for reliability terms of the instruments to observe their functionality when being applied.

The procedure for the application of the study was given in three sessions. The first session was in a teacher refresher workshop taught in the participating schools, where the teaching self-assessment instruments were applied and the interviews were conducted with the primary school teachers who attended to the workshop. The second session took place inside the classrooms of the institutions where the classes of the teachers were observed and the practices that were carried inside the classroom were followed up. The third session involved the evaluation from the manager’s perspective, where managers and heads of the academy evaluated the performance of teachers through views related to practice, but also with administrative and school management. Likewise, at this stage, a first survey of student evaluations of teachers was conducted. The data was then analyzed with the SPSS Software, version 21.

Results

As described earlier, the instruments for self, students and managers assessments are divided into a scale of 7 satisfaction points (1 being the lowest value and 7 the highest). Although the instruments may present a large variation due to the number of possible options, something shown in these analysis is how within the scale a new measurement range is created. The reason for this is the results tend to be grouped on the positive side of the evaluation, so the average score, which is four, becomes the minimum value. From this point upwards, the weighting scale begins to be developed, which at first glance shows that teachers with unacceptable performance are not located in Normal Schools (at least those that participated in the evaluation process).

Due to the weighting of the items, managers, students and self-evaluation will be described in order to later present observation and interview. The values described are mean and standard deviation (SD), minimum and maximum values recorded in the scores, interquartile ranges (RQ), which serve to represent the variability of the variables and compare their distributions, and finally the intervals of confidence which estimate the upper and lower limit in which the resulting values are found.
Table 1- Description of dimensions in self, students and managers assessment instruments

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Dimensions</th>
<th>x</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>IQR</th>
<th>Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Superior</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>inferior</td>
</tr>
<tr>
<td>Autoevaluación</td>
<td>Dedicación</td>
<td>6.35</td>
<td>.24</td>
<td>5.8</td>
<td>6.7</td>
<td>.31</td>
<td>6.24 - 6.46</td>
</tr>
<tr>
<td></td>
<td>Planeación</td>
<td>6.37</td>
<td>.42</td>
<td>5.5</td>
<td>7</td>
<td>.60</td>
<td>6.18 - 6.56</td>
</tr>
<tr>
<td></td>
<td>Competencias Docentes</td>
<td>5.89</td>
<td>.42</td>
<td>5</td>
<td>6.6</td>
<td>.60</td>
<td>5.70 - 6.08</td>
</tr>
<tr>
<td></td>
<td>Atención al estudiante</td>
<td>5.94</td>
<td>.31</td>
<td>5.3</td>
<td>6.4</td>
<td>.45</td>
<td>5.80 - 6.07</td>
</tr>
<tr>
<td></td>
<td>Evaluación</td>
<td>5.63</td>
<td>.58</td>
<td>4.6</td>
<td>6.3</td>
<td>.94</td>
<td>5.37 - 5.89</td>
</tr>
<tr>
<td>Alumnos</td>
<td>Dedicación</td>
<td>6.24</td>
<td>.58</td>
<td>3.57</td>
<td>7</td>
<td>3.43</td>
<td>6.20 - 6.29</td>
</tr>
<tr>
<td></td>
<td>Planeación</td>
<td>6.44</td>
<td>.56</td>
<td>3.25</td>
<td>7</td>
<td>3.75</td>
<td>6.39 - 6.48</td>
</tr>
<tr>
<td></td>
<td>Competencias docentes</td>
<td>6.09</td>
<td>.70</td>
<td>2.71</td>
<td>7</td>
<td>4.29</td>
<td>6.04 - 6.14</td>
</tr>
<tr>
<td></td>
<td>Atención estudiantes</td>
<td>6.02</td>
<td>.62</td>
<td>4.15</td>
<td>7</td>
<td>2.85</td>
<td>6.15 - 6.24</td>
</tr>
<tr>
<td></td>
<td>Evaluación</td>
<td>6.38</td>
<td>.64</td>
<td>3</td>
<td>7</td>
<td>4</td>
<td>6.33 - 6.43</td>
</tr>
<tr>
<td>Directivos</td>
<td>Dedicación</td>
<td>6.04</td>
<td>.71</td>
<td>4.33</td>
<td>7</td>
<td>2.67</td>
<td>5.37 - 6.36</td>
</tr>
<tr>
<td></td>
<td>Planeación</td>
<td>6.19</td>
<td>.79</td>
<td>3.83</td>
<td>7</td>
<td>3.17</td>
<td>5.84 - 6.54</td>
</tr>
<tr>
<td></td>
<td>Competencias</td>
<td>6.15</td>
<td>.42</td>
<td>5.44</td>
<td>7</td>
<td>1.56</td>
<td>5.96 - 6.33</td>
</tr>
<tr>
<td></td>
<td>Atención</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evaluación</td>
<td>5.64</td>
<td>.74</td>
<td>3.14</td>
<td>7</td>
<td>3.86</td>
<td>5.31 - 5.98</td>
</tr>
</tbody>
</table>

Source: Own elaboration.
X: mean; SD: standard deviation; Min.: minimum values; Max.: maximum values; IQR: interquartile range.

In the case of this first group of measurements, planning is the dimension with the highest average, both in self-assessment and for students and managers. Curiously, the students consider that their teachers perform better in this area, even more so than the teachers themselves in their self-evaluation. On the contrary, the lowest average for self-assessment is evaluation with an average of 5.63. However, both students and managers agree that the dimension in which teachers obtain a low level of performance is in attention to students, since the average is presented in 6.02 and the IQR of 2.85 by students, 5.64 by part of managers and the IQR in 3.85.

Regarding the perception of the students, the dimension in which their teachers performed best was in planning, with an average of 6.49 and SD of .348, while teaching competencies and attention to the students, show the lowest averages with 6.33 and 6.34 respectively, although their confidence intervals are quite wide (Table 1). Something significant in the table are the values of the mean that, even the lowest, show a tendency to the maximum level which is seven, meaning that teachers perform outstandingly in their teaching practice according to students.

It is not surprising that planning is an aspect in which teachers are evaluated favorably. Just as in basic education, in normal education teachers also carry out global strategies for school improvement. This is a space in which teachers and managers make decisions based on an initial diagnosis in the following areas: classroom, school, parents,
teachers, as well as technical advice and didactic materials; strategies are developed and their results are measured (MEXICO, 2015).

On the contrary, care must be taken when finding unfavorable results in the dimension of attention to students, because it includes indicators such as respect, tolerance, participation, motivation. Normal Schools are institutions that stand out for the student-teacher coexistence that involves affective issues thanks to the exchange of experiences in the teaching practice. It may be that some factor is preventing students from feeling that attention from their teachers, which is already so notorious and causes managers to also take account of what is happening.

Of all the subjects belonging to the institution and who participated in the study, it is in the evaluation by the managers where the lowest averages are found, which range from 5.71 in the dimension of attention to the student to 5.27 in the dimension of evaluation with deviations ranging from .85 to 1.93, respectively, and show considerable amplitude in their confidence intervals. Although they do have scores that reach the average of six, planning, which is the highest, comes to just 6.19.

Next, two other perspectives of the evaluation of the teaching practice, interview and observation are described, which had to be considered separately, because the weighting is handled differently from the previous instruments (Table 2).

Table 2 - Descriptions of dimensions in interview, observation instruments

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Dimensions</th>
<th>x</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>IQR</th>
<th>Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrevista</td>
<td>Dedicación</td>
<td>5.63</td>
<td>.95</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>4.76</td>
</tr>
<tr>
<td></td>
<td>Planeación</td>
<td>6.77</td>
<td>.53</td>
<td>2.7</td>
<td>5</td>
<td>.75</td>
<td>7.29</td>
</tr>
<tr>
<td></td>
<td>Competencias/</td>
<td>6.59</td>
<td>.72</td>
<td>2.5</td>
<td>5</td>
<td>1</td>
<td>6.94</td>
</tr>
<tr>
<td></td>
<td>Atención al estudiante</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evaluación</td>
<td>4.54</td>
<td>.41</td>
<td>3.7</td>
<td>5.2</td>
<td>.56</td>
<td>4.36</td>
</tr>
<tr>
<td>Observación</td>
<td>Dedicación/</td>
<td>6.27</td>
<td>1.8</td>
<td>1.8</td>
<td>7</td>
<td>3.42</td>
<td>5.43</td>
</tr>
<tr>
<td></td>
<td>Planeación</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.10</td>
</tr>
<tr>
<td></td>
<td>Competencias docentes/Evaluación</td>
<td>4.52</td>
<td>.60</td>
<td>1.6</td>
<td>2.8</td>
<td>.50</td>
<td>4.25</td>
</tr>
<tr>
<td></td>
<td>Atención al estudiante</td>
<td>6.26</td>
<td>1.44</td>
<td>1.8</td>
<td>4</td>
<td>2</td>
<td>5.62</td>
</tr>
</tbody>
</table>

Source: Own elaboration.

X: mean; SD: standard deviation; Min.: minimum values; Max.: maximum values; IQR: interquartile range.

In the case of observation and interview, the score was developed differently, since the scale used values diversity, so each item focuses on a certain number of objectives to be achieved. A number of possible items were presented and to each of them a weight was given. The assessment that each question will have depends on the number of possible items. Although the number of responses varies from one instrument to another, in the end the scores managed to be placed on a uniform scale, both for observation and for the
interview, where the items of each dimension were qualified in the same way for the sake of comparison (Table 3).

**Table 3 - Scale of scores to be obtained for each dimension in observation and interview instruments**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Observation and Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedication</td>
<td>1 to 5 points</td>
</tr>
<tr>
<td>Planning</td>
<td>0 to 10 points</td>
</tr>
<tr>
<td>Teaching competencies</td>
<td>0 to 5 points</td>
</tr>
<tr>
<td>Attention to students</td>
<td>0 to 8 points</td>
</tr>
<tr>
<td>Evaluation</td>
<td>0 to 6 points</td>
</tr>
</tbody>
</table>

Source: Own elaboration.

In the case of the interview, the smallest IQR is found in the *attention to students* dimension with .56 with a confidence interval of only .36 and a mean of 4.54, the lowest of this instrument. On the other hand, observation shows the lowest IQR is in *teaching competencies* with .50 and interval of .54 with a mean of 4.52, the lowest of this instrument. The highest IQR is marked by the evaluation dimension with 2 and the lowest in evaluation with an IQR of .56 and a deviation of .41. When the IQR is smaller, the deviation decreases, so there is agreement between the dimensions. The confidence intervals for the mean are also shown, which estimate the upper and lower limits with a probability of 95% for the population. In the cases of teaching competencies and attention to students in the self-evaluation, the intervals tend to one.

What is observed in the results is that once again *planning* is a dimension that continues to score as outstanding performance in teachers. On the other hand, *attention to students* continues with low scores in the interview and for the case of observation other two variables are low, the first one is *teaching competencies*, which evaluates teachers in terms of mastery, articulation, didactics, use of ICTs, which are conditions that they mention to comply with in the self-assessment, however, the opposite can be seen in the observation.

**Factorial analysis**

This analysis is a technique used to reduce data and find homogeneous groups of variables from a large set of variants. These groups are formed by ensuring that some groups are independent of others and with categories that correlate closely with each other (DE LA FUENTE, 2011). The purpose of using it in this study was precisely to be able to contrast the dimensions of the instruments applied and to observe both differences and similarities between the perspectives of all the evaluating subjects. An extraction of main components was carried out to reduce the variability of the data and order them to lose as little information as possible, with the Varimix rotation method to ensure that the variables, which are small, achieve a high number of correlations.
In the case of the self-assessment variables and students, four factors managed to explain 88% of the total variance. There is concordance between the total of the eigenvalues and the total of the saturations, for which the ideal number of factors is four. However, given that the saturation graph did not allow an appreciation of the distance between the elements, it was decided to reduce only two factors (Table 4).

Table 4 - Linear adjustment of variables of Self-assessment and Students assessment variables and factor loadings in the rotated version of the analysis of the exploratory factor

<table>
<thead>
<tr>
<th>Variable</th>
<th>Rotated Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Component 1</td>
</tr>
<tr>
<td>Self-assessment: Dedication dimension</td>
<td>.093</td>
</tr>
<tr>
<td>Self-assessment: Planning dimension</td>
<td>.024</td>
</tr>
<tr>
<td>Self-assessment: Teaching competencies dimension</td>
<td>-.014</td>
</tr>
<tr>
<td>Self-assessment: Attention to students dimension</td>
<td>-.104</td>
</tr>
<tr>
<td>Self-assessment: Evaluation dimension</td>
<td>.395</td>
</tr>
<tr>
<td>Students: Dedication</td>
<td>.965</td>
</tr>
<tr>
<td>Students: Planning</td>
<td>.952</td>
</tr>
<tr>
<td>Students: Teaching competencies</td>
<td>.920</td>
</tr>
<tr>
<td>Students: Attention to students</td>
<td>.981</td>
</tr>
<tr>
<td>Students: Evaluation</td>
<td>.961</td>
</tr>
</tbody>
</table>

Source: Own elaboration.

Two components are observed in Table 4: the one associated with component one is for the student’s instrument and two is for self-assessment. Also, component two, which corresponds to self-assessment, is grouped on its positive side, two with the exception of dedication, does not meet the adjustment criteria with factorial values below .35.

Something curious to note is that the dimension with the best fit to component one is attention to students, which is the one that shows the highest factorial weight in component 1 with .98 and the one that least fits the group was teaching competencies. For the value of the factorial weights of the student dimensions we speak of homogeneity between the dimensions of the students compared to the self-assessment that present lower factorial values in dimension 2. This is due to the number of subjects, which differs considerably between one evaluation and another; to the dimensions of the most extensive group, which are the students and show less inertia than the twenty-two teachers manage to form in the self-assessment.

The same procedure was carried out with the managers. It was found that the first two components of the eigenvalue are greater than 1 and manage to explain 80.29% of the variance, however they do not correspond to the total of the sum of the rotation’s saturations, for this reason we can not speak of an ideal number of elements. Therefore, it was decided to extract two factors through principal component
analysis and Varimax rotation with Kaiser normalization, which was converged in three iterations (Table 5).

**Table 5 - Linear adjustment of Self-evaluation and Managers variables, variables and factor loadings in the rotated version of the analysis of the exploratory factor**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Rotated Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Component</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Managers: Dedication</td>
<td>.904</td>
</tr>
<tr>
<td>Managers: Planning</td>
<td>.860</td>
</tr>
<tr>
<td>Managers: Teaching competencies</td>
<td>.593</td>
</tr>
<tr>
<td>Managers: Attention to students</td>
<td>.699</td>
</tr>
<tr>
<td>Managers: Evaluation</td>
<td>-.083</td>
</tr>
<tr>
<td>Self-assessment: Dedication</td>
<td>-.460</td>
</tr>
<tr>
<td>Self-assessment: Planning</td>
<td>-.120</td>
</tr>
<tr>
<td>Self-assessment: Teaching competencies</td>
<td>.041</td>
</tr>
<tr>
<td>Self-assessment: Students relation</td>
<td>-.594</td>
</tr>
<tr>
<td>Self-assessment: Evaluation</td>
<td>-.502</td>
</tr>
</tbody>
</table>

Source: Own elaboration.

The factor loadings table (Table 5) shows how the variables of component one, which corresponds to the evaluation of managers, are adjusted uniformly, showing values above .35, with the exception of teacher evaluation processes seen from the managers, which shows negative values -.083. On the other hand, component 2, referring to self-assessment, also achieves the adjustment criteria in its dimensions, with the exception of the dedication variable that shows negative values at -530. It is observed then, that the variables of both components are well grouped, however, both cases present exceptions.

Thus we can see that each of the measures is grouped homogeneously in each component, however the dedication variable in self-assessment again shows negative values in both sectors. On the part of managers, evaluation finds very low values in the first component, but very high in the second. In both cases, the factorial value is acceptable, but they do not seem to belong to the dimension to which they are supposed to belong.

Finally, the final contrast was made between managers and students, with whom the main components analysis and Varimax rotation were also performed. Two components are greater than 1, which correspond to the self-assessment instrument and explain 81.2% of the total variance. However, the total sum of extraction saturations do not correspond to the total saturation of the rotation, so the number of factors to be extracted is not ideal.
When analyzing the main components matrix, two factors were extracted in order to systematize the rotation. Once the extraction was done, a Varimax rotation was performed with Kaiser normalization and the rotation was converged in 3 iterations. (Table 6).

### Table 6 - Linear adjustment of Managers and Students variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Rotated Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Component</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Directivos: Dedicación</td>
<td>-.380</td>
</tr>
<tr>
<td>Directivos: Planeación</td>
<td>-.459</td>
</tr>
<tr>
<td>Directivos: Competencias</td>
<td>.053</td>
</tr>
<tr>
<td>Directivos: Atención estudiantes</td>
<td>.080</td>
</tr>
<tr>
<td>Directivos: Evaluación</td>
<td>-.016</td>
</tr>
<tr>
<td>Alumnos: Dedicación</td>
<td>.960</td>
</tr>
<tr>
<td>Alumnos: Planeación</td>
<td>.946</td>
</tr>
<tr>
<td>Alumnos: Competencias docentes</td>
<td>.919</td>
</tr>
<tr>
<td>Alumnos: Atención a estudiantes</td>
<td>.981</td>
</tr>
<tr>
<td>Alumnos: Evaluación</td>
<td>.067</td>
</tr>
</tbody>
</table>

Source: Own elaboration.

A significant difference is that the students manage to behave in a more homogeneous way than the managers, since the latter do not have the same inertia that they showed with self-assessment and so their variables started to show negative factorial weights. For component 1, which corresponds to the students, four of the five variables manage to adjust uniformly by showing a factorial weight above .35, the fifth dimension that is evaluation failed to enter the adjustment by showing a factorial weight of .067 Similarly, four of the variables of component two, which corresponds to managers, managed to adjust with factorial weights above .35. The variable that did not achieve the adjustment was once again evaluation by showing negative values of -.107.

What the results show is that both the variables of the students and of the teachers in the self-assessment have the tendency to behave in a homogeneous manner when contrasted with the managers. Due to the above, there is no doubt that the students and professors have very similar perspectives regarding the teaching practice, while the managers are at the opposite end of the evaluation. In spite of the previous issues, what the theory says is that the evaluations on the part of the students happened to be instrumentation of low reliability, because the students usually mix the objectivity of the evaluations with empathetic and reciprocal issues to the work of the teacher (RUEDA; DÍAZ BARRIGA, 2004), Therefore, it is important to consider the perspective of the manager as...
a tool to strengthen the weaknesses presented by the teacher evaluation and focus it effectively towards continuous improvement.

**Discussion and conclusions**

The differences between the view of the teacher and that of the students, the external and the director are evident in the results, especially when analyzing the correlations between the perspectives. The high results of the teacher in the measure of self-assessment make clear that they need to objectively carry out self-criticism for their practice and stop fearing the evaluation policies that are being generated by the new reforms in education. If they evaluate to approve instead of evaluating to improve, effective improvement will never be achieved.

The tendency of students to positively evaluate teachers by placing the majority of teachers among the groups of overvalued and highly evaluated was also observed, which is why they should insist on the importance of evaluating teachers objectively, for the improvement not only of the teacher but also of the training of the students as teachers. It is difficult to get students to stop developing affective relationships with their teachers, especially in Normal Schools due to the tradition and practices that institutions show (MUNGARRO, 2009), but something can be done for students to evaluate objectively.

Third, the principal’s vision is something that is rarely used in a process of evaluation in normal institutions, however it was demonstrated in the results that it is of the utmost importance, since they provide a different vision than the one of teachers and about the practice and greatly enrich the evaluation process.

What was demonstrated not only in the results of the evaluation measures, but also in the observation in the classroom, is the execution of the teaching practice itself, since there were problems in the development, structure, presentation, discussion, explanation of the class and this not only of the moderately evaluated teachers, but also of the overvalued ones, which shows that the teachers need constant updating regarding their work.

There are authors who propose reinforcement models for teachers such as Porlán and Rivero (1998), who place teachers at a starting point that assumes the traditional didactic model, so that they overcome the obstacles of the model to later attain an intermediate level (didactic model of transition) and finally achieve, through updates, a level of desirable professional knowledge (alternative didactic models).

Other authors such as Valcárcel and Sánchez (2000) propose progressive levels: a first level in which motivation, dynamization, questioning and modeling are influenced by means of case studies; a second level with a greater involvement in curricular development and educational research; and a third level of consolidation with participation in collaborative research and innovation projects. The purpose of the model is to help the teacher to reflect on his own knowledge and his own practice.
Recommendations

In conclusion, it is advisable to take the results of the evaluations of the teachers and to initiate with them the improvement and update proposals, since they are fundamental to begin with the process of continuous improvement. It is necessary to pose to the teachers that the self-evaluation processes are more than a process of approval of the teaching work, so they should be done objectively and critically. In addition, emphasis should be given on evaluation from a formative point of view and not as a punitive and summative process (INEE, 2014). It is also of utmost importance the vision of managers within the evaluation processes of teachers, as they manifest great interest in the development of their teaching staff to achieve institutional excellence (GONZÁLEZ, 2008).

The evaluation from managers is a reliable and objective source of evaluation as they are actors who are more concerned with formative issues than summary ones. The evaluated teachers may feel the opposite, therefore, it is advisable to include it in the evaluation processes of Normal Schools. Similarly, it is advisable to rely on quantitative as well as qualitative instruments, as they provide much more complete and detailed information of what is required to assess. Furthermore, qualitative data involve issues that are not possible to express numerically, and are also useful to learn more about the teaching practice in Normal Schools. As mentioned earlier in this paper, Normal Schools have different characteristics than the rest of the higher education institutions in the country.

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José Ángel Vera Noriega; Gissel Bueno Castro; Nohemí Guadalupe Calderón González; Francisca Leticia Medina Figueroa


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José Ángel Vera Noriega has a PhD in Social Psychology. Member of the Sistema Nacional de Investigadores [National System of Researchers] (level II) since 1993, level C professor of the Doctorate in Education of the Universidad de Sonora (University of Sonora). Full member of the Academia Mexicana de la Ciencia (Mexican Academy of Science). He is dedicated to research on three themes related to social development: teacher training, management and educational evaluation processes.

Gissel Bueno Castro has a Bachelor of Arts degree in Secondary Education from the Escuela Normal Superior de Hermosillo (Higher Teacher Training College of Hermosillo) and Master of Arts degree in Educational Innovation at the Universidad de Sonora (University of Sonora). Currently working as a teacher of secondary education and basic education and in the Universidad Estatal de Sonora (State University of Sonora).

Nohemí Guadalupe Calderón González has a Bachelor of Arts degree in Psychology, with a specialty in Education, by the Universidad de Sonora (University of Sonora), has a Master of Science degree in Educational Sciences by the Universidad Autónoma de Baja California Sur (Autonomous University of Baja California Sur); She is currently a doctoral student in Regional development at the Centro de Investigación en Alimentación y Desarrollo A. C. (Center for Food and Development Research, A.C.). Has articles in indexed journals and book chapters on topics of school violence and coexistence and evaluation of teaching in higher education.

Claudia Karina Rodríguez Carvajal has a Bachelor of Arts degree in Psychology, with postgraduate studies in Regional Development. Managing Director of TECNOESTATA SC consultant and adviser in educational technology. She works in the design and operation of research projects in education, human development and social psychology. She is part of a multidisciplinary group in social sciences, her interests are focused on research on initial education, social research and evaluation in basic, upper and higher education.