

## Students' Perception on Parental and Teachers' Influences on their Learning: A Gender Comparison

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This study aimed at discussing gender differences in contemporary undergraduate students' perceptions of the characteristics that distinguish good and bad teachers. Students' perceptions of parental conducts and attitudes that impact their learning process were also investigated. Semantic networks were used as data collection method. Participants were a group of undergraduate students (56 males and 329 females) who were exposed to a set of four stimuli related to teachers' and parents' behaviors. Participants were asked to define each stimulus with at least five words. Results showed gender similarities regarding the social representation of parenting and teaching. A consensus between genders was found on parental practices that contributed to learning, defined primarily as giving support. Gender differences were also identified. When compared to males, women perceived fairness as a more significant trait in teachers. Also, females perceived parental demands as one of the main factors that obstructed their learning. Implications are discussed.

*Keywords:* gender differences, parenting, teaching, learning, undergraduate students

Cet article traite des différences de genre chez les étudiants sur la définition d'un bon ou d'un mauvais enseignant, ainsi que sur les conduites et attitudes parentales qui améliorent ou entravent le processus d'apprentissage. Pour la collecte de données, des réseaux sémantiques ont été utilisés en exposant à un groupe d'étudiants universitaires (56 hommes et 329 femmes) quatre stimuli associés aux comportements des enseignants et des parents et l'impact sur l'apprentissage. Les participants ont ensuite écrit cinq mots décrivant chaque catégorie. Bien que les résultats démontrent une représentation sociale similaire entre les genres concernant la parentalité et l'enseignement, les femmes ont davantage mentionné la justice chez l'enseignant. De plus, elles ont perçu les demandes parentales comme un des obstacles principaux à leur apprentissage. Un consensus entre les genres a été observé quant aux pratiques parentales contribuant à l'apprentissage, défini avant tout par l'apport de soutien. Les implications sont examinées.

*Mots-clés :* différences de genre, parentalité, enseignement, apprentissage, étudiants de premier cycle

A gradual shift in the goals of higher education has been observed over the past few years. For example, greater globalization (Diez, 2009), technological innovations and an overabundance of information (Pozo, 2006) have required universities to employ educators that adjust to the rapid change in society whilst pursuing the promotion of scientific knowledge and social development.

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Higher education has become one of the cornerstones for the construction of a knowledge-based society (Gómez, 2009) and is considered a means for social improvement (Toledo, 2011). The role of education in promoting social well-being is evident through the various international programs that use educational intervention as a tool for social advancement. Programs such as the United Nations Development Programme (UNDP, 2013) and the International Education Indicators Project (INES) of the Organization for Economic Co-operation and Development (OECD, 2013), highlight that proper education can lead to social development. In this context, contemporary higher education teachers are required to contribute by enhancing their students' adaptability to new situations, improve their critical thinking and problem-solving strategies, and as well, to foster their creativity (Quiroga, 2008; Ruiz, 2008).

Educators are encouraged to promote the use of cognitive and metacognitive strategies (Tobón, 2008) and to empower undergraduate students with the ability to develop their own set of competencies according to their own professional and personal goals (Daniels, 2003). To succeed in developing these competencies in students, teachers would need to consider the elements that promote an adequate and active learning process in undergraduates. However, given the multidimensionality of variables involved in the learning process, teachers may not be the only ones accountable for responding to the multiple demands of these new educational responsibilities.

Current research findings show that parental involvement, expectations, and support may influence students' academic work (Espitia & Montes, 2009; Sánchez & Valdés, 2011; Shah & Gardner, 2008). Furthermore, teachers' practices such as the promotion of a high self-esteem, enthusiasm for academic tasks, and the positive perception of others may also influence students' academic work (Beltrán, 2005; Mares, Martínez, & Rojo, 2009). Therefore, it is important to properly assess the influences of parents and teachers on the learning process of undergraduate students in order to reach the educational goals that have been set by our current *Zeitgeist*.

To adequately study the influences of parents and teachers in the learning process of undergraduates, it is important to consider other intervening variables. Namely, researchers should take into account the social influences that impact the learning process of the new generation of undergraduate students, known as Generation Y or Millennials (Feixa, 2008). Generations were defined as groups of people born on a particular date that share cultural, economic, political, and historical influences (Boschman, 2008). Studies on generations have shown differences in the learning environment of the current and past generations of undergraduates.

Social interaction in a group fosters shared cognitions between its members that consolidate their social reality (Mora, 2002; Vaca, Chaparro, & Pérez, 2006). Consequently, perceptions of the elements that impact learning could be different between current and past generations. Such changes might differentiate the way in which undergraduates of the present generation perceive, understand, and define their reality, from previous cohorts of undergraduates. It is also important to consider the fact that behavioral responses are partially influenced by what the stimulus signifies or means

to the person (Osgood, Suci, & Tannenbaum, 1957). It is plausible that changes in current undergraduates' perceptions impact on their learning behavior (Cuesta, Ibáñez, Tagliabue, & Zangaro, 2008). Thus, it is evident that it is necessary to study the influences that known mediating learning variables, such as teaching and parenting, have on the learning process of the contemporary cohort of undergraduate students.

In addition, it is crucial to consider *gender* when assessing parents' and teachers' influences on the learning process of undergraduate students. Various gender differences have been identified in previous studies concerning: undergraduate students' learning process (Anzarín & Zeynali, 2012; Cheng, Liu, Chen, Shih, & Chang, 2012; Jacobsson, 2008), their selection of different types of academic programs (Wiseman, 2011), their perceptions regarding parental supervision (Fulton & Turner, 2008), and how they use digital tools to fulfill their learning tasks (Hilbert, 2011). Given these findings, it is possible that gender may influence students' perceptions of how their parents and teachers impact on their learning. Thus, the research question guiding this study was: Are there any gender differences in the perceptions of Generation Y undergraduates regarding the influences that parenting and teaching have on their learning process?

Furthermore, innovation in the approaches used to investigate educational topics could help lead educational change in the upcoming years. Thus, it is necessary to explore new research tools and methods in order to broaden and update our knowledge of education and learning. With this knowledge, educational experts will be able to gain insight on the guidelines for educational improvement (Fullan, 2011). Policy makers will have greater specificity and precision when identifying particular instructional strategies to approach current educational objectives, and allow for changes in modern practices. Given that undergraduate students from the same generation have shared perceptions, the influences that stimulate or hinder their learning process can be the subject of an innovative analysis that reconstructs their socially shared perceptions (Reyes-Lagunes, 1993).

### Parenting

Parental roles such as protection, providing opportunities for social interaction, and education are supplemented by educational institutions. Nonetheless, parental influences still impact students' learning attitudes towards their schoolwork (Sánchez & Valdés,

2011). Researchers have identified that parental influences have a greater impact on academic performance and learning when compared to demographic, economic, or communitarian variables (Atta & Jamil, 2012; Topor, Keane, Shelton, & Calkins, 2010).

Higher academic performance, better time management, and study habits (Espitia & Montes, 2009) have been associated to parents' participation (Valdés & Urías, 2010), the interest they convey to their offspring, the amenities available at home to complete academic work (Sánchez, Valdés, Reyes, & Carlos, 2010), and parental aspirations regarding education (Sphera, Wentzel, & Matto, 2009). Likewise, high parental expectations lead students to reach higher levels of education, achieve higher scores on standardized tests (Espitia & Montes, 2009; Sánchez & Valdés, 2011; Shah & Gardner, 2008), and also appear to dampen the negative influence that teachers' low expectations have on students' academic achievement (Yamamoto & Holloway, 2010).

According to Riso (2009), parenting styles are bidimensional. The acceptance/sensibility dimension is characterized by loving and tolerant parents that establish clear rules and foster high self-esteem and critical judgment. Research has found that such autonomy-oriented parenting style is positively correlated to students' levels of intrinsic motivation, abilities to handle pressure, and solve problems (Shah & Gardner, 2008), and higher academic engagement and self-efficacy (Weihua & Williams, 2010). On the contrary, the demand/control dimension of parenting represents a repressive style in which parents exert restrictions and excessive supervision that hinder personal autonomy, spontaneity and creativity. An excessively controlling parenting style and the use of punishments or threats inhibit students' intrinsic motivation to study and learn (Weihua & Williams, 2010).

### Teaching

Teachers have gradually abandoned traditional instructional frameworks that encourage them to simply present and explain the course content to students (Gutiérrez, 2003; Klingler & Vadillo, 2004). Such traditional approach reduces the students' role in their learning process to the passive reception of information. Teachers are now required to become learning mediators (Vygotsky, 1978) that promote reflection, discussion, and cognitive reorganization. In order to become learning mediators, it is recommended that

teachers select, organize and properly manage the course content (Gutiérrez, 2003).

In addition, teachers may have to use innovative strategies to meet the demands of a new generation of students. For instance, since this generation has grown up in a fully globalized world (Boschman, 2008; Keene & Handrich, 2011), and is educated, multicultural, and tech savvy, they prefer new technologies, such as mobiles and other electronic instruments (Cuesta et al., 2008; Duart, 2010), over traditional books. Teachers should take this into consideration to promote effective learning.

Moreover, teachers' performance could benefit from the development of their own professional competencies, such as judging what students should know about a subject or discipline (Irigoin, 2002; Senior, 2004), converting knowledge into action (Senior, 2004), motivating continuous improvement and ethical commitment (Tobón, 2008), and teaching their pupils to "learn how to learn", as well as working individually and collaboratively (Boschman, 2008; Cabre-ro, 2007; Robinson, 2008). Current students believe that education should be more practical than theoretical, and in general, have different demands than previous generations (Cuesta et al., 2008). Thus, teachers require new strategies and approaches to fulfill their responsibility as learning mediators.

### Gender Differences

Present-day students share traits and common practices (Dávila, 2006; Posnick-Goodwin, 2011; Tapscott, 2009). Although their shared social environment promotes strong social representations (Tsoukalas, 2006), the impact of gender on this group fosters differences between males and females in their learning processes. Research in countries such as Belgium, Holland, France, Spain and the United States has demonstrated the existence of a gender-related digital gap in relation to the use of digital information and communication technologies (ICTs) (Broos, 2005; Faurie, Almudever, & Hajjar, 2004; García, Gros, & Escofet, 2012; Meelissen & Drent, 2008; Sánchez-Franco, 2006; Vekiri & Chronaki, 2008). Female undergraduate students are more likely to use computers to pursue the resolution of academic tasks and to study, while male students make use of ICTs for these same objectives and also for recreational purposes (Hilbert, 2011; Imhof, Vollmeyer, & Beierlein, 2006).

Gender differences in the learning process are not limited to the digital gap. A study conducted in the United States by Fulton and Turner (2008) with college students showed that parents' degree of involvement in school related tasks predicts academic achievement for both males and females, but parental supervision was found to predict perceptions of control only for females. Moreover, a study on Hong Kong students' reported that female students perceive their universities as more supportive in regards of their academic adjustment, while male students perceive more support in their social and psychological adjustment (Yau & Cheng, 2012).

Additionally, as postmodernist women started attending college, marked gender differences in educational settings arose. While college men mainly opt for technology-related programs, women tend to select programs that lead to employment in schools, health sciences, and care services (García et al., 2012; Jacobsson, 2008). Geist and King (2008) suggest that this may be explained by gender differences on reasoning, thinking, and learning.

Also, results from a US survey reported that women consistently outperform men in higher education enrollment and completion, and tend to value college more than men because of its intrinsic benefits (success, intellectual growth, and emotional development; Wiseman, 2011). Nonetheless, women also leave academia in greater numbers than men (from 72% to 37% during their studies), due to unappealing academic careers, disproportionate impediments, great sacrifices, and the belief that gender will work against them (Rice, 2012). Thus, given the existence of these educational gender differences, it is possible that there are also gender dissimilarities in undergraduates' conceptions on parenting, teaching, and learning.

### Semantic Networks

Semantic networks were initially developed by M. Ross Quillian in the early 1960s as a method for modeling the structure and storing process of human knowledge. Semantic networks were further featured in the spreading-activation theory of semantic processing (Collins & Loftus, 1975). This theory proposed that long-term memory contains interconnected units of information, and particularly, the semantic memory is organized as a network in which single units are aligned by semantic similarity. Thus, the more properties two concepts share, the closer they are within the network. Knowledge derived from the un-

derstanding of the relationships between different elements (Griffiths, Steyvers, & Tenenbaum, 2007) and their meaning (Vivas, 2010) may be accessed through the collection of concepts associated with a word or phenomenon of interest (Salas-Menotti, 2008; Vivas, Comesaña, & Vivas, 2007).

The semantic network of a concept is a product of the reconstructive process in which a set of words is chosen from cognitive structures in the memory by a subjective assessment of objects and events (Reyes-Lagunes, 1993; Rigault, 2004). An interpretation of the semantic networks of a group may reconstruct their shared social reality of a particular topic (Aguilera, 2010; Hardy, 1998) since the information organized in memory is dynamic, changing, and particularly susceptible to social influences (Batista, Pimentel, & Vera, 2005; Cabalín & Navarro, 2008; Salas-Menotti, 2008). Therefore, social representations can be studied by analyzing their semantic networks (Di Giacomo in Mora, 2002). Tsoukalas (2006) ascertains that the analysis of semantic networks allows for the identification of a representation's internal organization and nucleus.

### Method

The present study adopted a qualitative focus and the purpose was to understand the impact that gender has on Generation Y students' shared perceptions of the influences that teachers and parents have on their learning. By achieving this, it was possible to identify elements that could help higher education institutions foster effective learning among their alumni through proper parental and teaching practices, thus reaching the new educational goals for this century (Fullan, 2011).

### Participants

Participants were selected from all the undergraduate students enrolled in the spring 2012 semester at a private university in northern Mexico. A total of 485 participants were selected through convenience sampling (56 males and 329 females, whose ages ranged from 17 to 31 years, with a median and mode of 21 years).

One participant was 31 years old at the time that the study was conducted. Although an age of 31 years might appear to be an extreme value, the date of birth for this particular participant was close to the

definition of Generation Y given by Hewitt, Pijanowski, Tavano and Denny (2012), which conceptualizes the generation as people who were born after 1982. Furthermore, this participant formed part of this predetermined group and shared a common background with the rest of participants.

The sample size was determined by the availability of large groups of students with similar backgrounds, instructors, and courses. The inclusion criteria were: being an undergraduate student at the sampled university, being over 17 years old, and being actively enrolled in undergraduate level courses.

The different subsample size between males and females did not affect the semantic networks comparisons, as a minimum of 50 participants are required to correctly apply this technique. Given this consideration, the exploratory nature of this study, and the fact that the participants belonged to the same university, classes, and social background, it was possible to compare the two subsamples in this study with sufficient validity (Reyes-Lagunes, 1993).

### Research Approach

This was a qualitative study that explored the mental representations of undergraduate students and their psychological significance. Psychological significance is an essential element of cognitive organization that integrates affectivity and knowledge. It creates a subjective code of reaction that reflects the way in which a person perceives the world (Szalay & Bryson, 1973) and behaves (Szalay & Bryson, 1974). Mental representations can be stored verbally (linguistically) and analogically (pictorially) (López & Minervino, 2007; Schunk, 2008), and represent data richer in its qualitative characteristics (connotations, semantic categories, and emotional components, among others) than in its quantitative aspects.

The natural semantic networks technique was used in this study based on the reconstructive process in which a set of words are selected by the memory from an individual's cognitive structure (Batista et al., 2005; Cabalín & Navarro, 2008; Figueroa, González, & Solís, 1981). Information is organized in the semantic memory (Valdez, 1998) as a result of a subjective evaluation of objects, events, and concepts (Reyes-Lagunes, 1993; Rigault, 2004). Therefore, this technique allows the examination of the definition that a person gives to a certain word-stimulus (e.g., apple, which is a common example of word-stimulus used to

explain the process to participants when applying this technique). This technique is performed by asking a person to list several defining words that allude to a stimulus, and then rank them into an ordinal set that indicates the level of importance that each word has regarding the definition of that stimulus (e.g., participants might list the defining words red, delicious, juicy, fruit, temptation, Adam, Eve, to define the word-stimulus apple, and rank juicy as the first word, Eve as the second word, etc.).

The defining words that appear as a response to the word-stimulus represent both the knowledge and understanding of a concept (Batista et al., 2005; Cabalín & Navarro, 2008; Cervantes, 2007). It also represents a cognitive map based on logical and analogical associations about such concept (Vivas et al., 2007). Moreover, these defining words, as well as the position that each word occupies in the rank, allow for a glimpse into the individual's scale of values and perceptions of the stimulus (Griffiths et al., 2007; Vivas et al., 2007; Zermeño, Arellano, & Ramírez, 2005). When all the defining words used by a group to define a particular word are joined and weighted based on their ordinal position, the information that results permits an evaluation of the social definition of a particular concept, object, or event (Reyes-Lagunes, 1993).

### Procedure

For this study, four word-stimuli were designed and randomly presented to the subjects. Although single words are commonly used, short phrases can also be valid stimuli (Reyes-Lagunes, 1993). These stimuli were designed to trigger responses related to the positive and negative impact that parenting and teaching have on students' learning outcomes. The stimuli were: *characteristics of best teachers*, *characteristics of worst teachers*, *conducts and attitudes of your parents that have contributed to your learning*, and *conducts and attitudes of your parents that have obstructed your learning*.

Participants were asked to define each stimulus with clarity and precision, by writing down at least five simple words that they thought conveyed each stimulus' meaning. After doing this, participants were asked to establish a hierarchy for all of the defining words based on their relevance to the stimulus (Reyes-Lagunes, 1993). They started by assigning number 1 to the most relevant word, and so on, until reaching the least relevant word.

## Analysis

The data consisted of the defining words, their frequencies (the number of times that a defining word was written by different subjects), and hierarchies for each stimulus. Similar words and concepts were merged, as long as their differences were circumscribed to variations in grammar and spelling mistakes. By doing this, we determined the network size (NS), which was the total different words captured for each single stimulus.

Word frequencies were weighted according to their hierarchical (1-10) position so that higher numbers represented stimuli that were more closely related to the stimulus. This change was done by multiplying by ten the word frequencies assigned with number one in the hierarchy. For the second position, frequencies were multiplied by nine, and so on, until reaching the tenth position, which was multiplied by one. These weighted frequencies were added up to obtain the semantic weight for each defining word.

All defining words and their weighted frequencies were arranged into a bar graph for each stimulus. A cutting point was assigned to the last defining word where a considerable decrease occurred, demonstrated in a bar graph by an asymptotic curve of weighted frequencies after this point (Reyes-Lagunes, 1993). This cutting point represents the semantic network core (SNC), which is considered the main meaning that the stimulus has among the assessed participants (Cabalin & Navarro, 2008; Reyes-Lagunes, 1993). This set of concepts represents the shared social meaning that the word-stimulus has for the subjects.

The quantitative semantic distance (QSD) of each SNC was obtained after assigning the defining word with the highest semantic weight a value of 100%, and defining the rest of these values on the basis of the first one (using the rule of three). The defining word with the highest QSD value is considered the central to the semantic network's core of a word-stimulus. The rest of the defining words were analyzed in relation to this central defining word. Thus, QSD gives information on the ordinal distance between defining words, and therefore, the importance or position that each concept has in the social definition of the word-stimulus. It is important to highlight that the central definition of any construct is reflected within the first defining words that comprise the highest QSD for the total SNC, which were usually the first five to six words in the SNC's ordinal list. The rest of the SNC's

words are considered to reflect the assessed group's particularities.

The interpretation of the relationship among the defining words and the word-stimulus were compared to the existing literature. These findings were proposed as subjects of further research, recommending their consideration as hypotheses for quantitative approaches. According to Hernández-Sampieri, Fernández and Baptista (2010), hypotheses are plausible outcomes in qualitative research. This analysis was ran with the general defining words for each stimulus for all participants in the sample, and separated by gender for comparison reasons.

Although subsamples by gender were different in size, their comparison was viable. Considering that this technique is used to identify the semantic structure of social representations among individuals in a specific group (i.e., undergraduates of the sampled university), it is expected that the members of a particular group share most of the defining words that form the semantic network's core (approximately the most common 15-20 defining words). Since uncommon defining words and outliers are disregarded during the analysis, the addition of participants to a sample of at least 50 subjects is expected to have a subtle impact on the semantic network's core (as long as the participant is a member of a cohesive, well conformed, and delimited group). Thus, given the exploratory nature of this study and the fact that participants have similar background, it was possible to compare the two subsamples in this study with sufficient validity to draw hypotheses for future research (Reyes-Lagunes, 1993).

In the results section, the defining words that represented the SNC for each word-stimulus were arranged into charts, allowing for the visualization of their QSDs and the differences between the total sample and the subsamples by gender.

## Results

The defining words used by participants to describe parental practices and teachers' characteristics reflect a strong social consensus in the definition of these constructs. The main differences between males and females are related to how words are ranked for each construct.

Table 1

*Conducts and Attitudes of Your Parents That Have Contributed to Your Learning*

Defining word	General (NS = 409) QSD	Male (NS = 259) QSD	Female (NS = 321) QSD
Support	100.00	100.00	100.00
Responsibility	53.46	50.72	51.82
Comprehension	47.68	48.19	48.56
Loving	44.98	48.74	41.60
Respect	38.93	31.05	37.97
Patience	34.56	24.55	38.05
Trust	28.94	-	30.48
Motivation	27.81	27.08	32.83
Honesty	27.70	46.03	20.05
Interest	20.63	-	-
Help	19.92	-	21.79
Attention	18.14	-	-
Dedication	16.31	-	-
Discipline	14.85	-	-
Freedom	-	19.86	-

*Note.* NS = network size; QSD = quantitative semantic distance. SNC for the general sample includes 14 defining words; SNC for male subsample includes 9 defining words; SNC for female subsample includes 10 defining words.

**Parental Practices that Contribute to Learning**

Regarding the conducts and attitudes of parents that have contributed to the students' learning, the SNC in Table 1 shows the definition given by both genders. The main differences between males' and females' defining words are the inclusion of the defining word *freedom* by males, and the defining words *trust* and *help* by females. Also, females appear to give less relevance to honesty while males placed this word near the middle point of their SNC.

Concerning the similarities found in the definition of positive parental practices, Table 1 shows that undergraduate students believe that *support* is the parenting practice that best promotes learning. Responsibility, comprehension, love, respect, and patience appear to be far away from the central definition. The strong consensus concerning parental support by both genders indicate that this parental practice may be the primary conduct that promotes learning.

**Parental Practices that Obstruct Learning**

The social definitions for parental practices that hinder learning are shown in Table 2. These definitions include a larger network size (597 words) re-

flecting greater semantic richness in the negative parental practices than in the positive practices. The defining words with the highest QSD for this stimulus include overprotection, demanding, and pressure. Other parental conducts with high QSD include attitudes such as being strict, incomprehensive, and showing anger, impatience, and disinterest. One of the gender differences was that males put higher importance on *overprotection* while women emphasize parental *demands*. Also, *scold* is closer to males' central definition than in females' SNC. On the other hand, females' notion of *pressure*, which occupies the 3rd position in their SNC, is less relevant to males' central definition. Another difference between genders is that females appear to consider *impatience* as more relevant than males. In females' SNC *impatience* is close to the network's core, yet occupies the last positions in males' SNC.

Moreover, there were words that were exclusive to only one gender. Males included the defining word *negativity* while females did not, and females included *denying*, *comparing*, *time*, *unpunctuality* and *desperate* while males did not. Although these words stand at the end of both SNCs, they show moderate differences in the conception of parental malpractices between

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Table 2  
*Conducts and Attitudes of Your Parents That Have Hindered Your Learning*

Defining word	General (NS = 597) QSD	Male (NS = 311) QSD	Female (NS = 441) QSD
Overprotection	100.00	100.00	96.55
Demanding	94.84	82.46	100.00
Pressure	93.59	77.73	91.57
Strict	83.44	66.35	66.86
Incomprehensive	76.25	64.45	60.34
Anger	70.31	68.25	52.49
Impatience	65.94	49.76	74.71
Scold	56.72	86.26	61.88
Disinterest	56.09	50.71	57.09
Narrowness	53.59	43.60	45.98
Punisher	52.34	60.19	55.17
Intolerant	42.03	43.13	32.95
Distrust	35.78	56.87	41.00
Time	34.22	-	30.08
Comparing	31.41	-	31.99
Unpunctuality	29.06	-	28.74
Authority	28.13	-	-
Negativity	-	47.87	-
Denying	-	-	32.18
Desperate	-	-	25.48

*Note.* NS = network size; QSD = quantitative semantic distance. SNC for the general sample includes 17 defining words; SNC for male subsample includes 14 defining words; SNC for female subsample includes 18 defining words.

females and males. Lastly, the main similarity between genders is, particularly, the defining word *overprotection*, which is shown as the most central negative parental conduct for both genders, occupying the first positions in both SNCs.

### Characteristics of Good Teachers

The social definitions of good teachers are shown in Table 3. The word *responsibility* appeared as the central definition of a teaching practice that fosters learning for both genders. Other defined words included *intelligence* and *respect*. The only gender difference is the ordinal position given to the word *fairness*, which is located among the first defining words on both females' and males' SNCs. While females put fairness in the 3rd place, followed by respect, men put in the 5th position. This is especially relevant because the first defining words in both males' and females'

SNCs occupy similar positions in the ordinal scale, and fairness' position appears to be the central difference between genders' main definition of the construct.

### Characteristics of Worst Teachers

The social definition of the characteristics of worst teachers that emerges from SNCs, shown in Table 4, showed the counterpart of behaviors and attitudes of good teachers, which are irresponsibility, unfairness, disrespect, and unpunctuality. *Unpunctuality* is considered a central bad feature by both genders, but is more relevant to females than males. *Unfair* appears also as more central to females' definition in comparison to that of males'.

Finally, the sizes of the semantic networks that defined parents' and teachers' negative features were the

Table 3  
*Characteristics of Good Teachers*

Defining word	General (NS = 364) QSD	Male (NS = 245) QSD	Female (NS = 267) QSD
Responsible	100.00	100.00	100.00
Intelligence	80.25	84.27	78.28
Comprehensive	80.18	59.27	41.31
Respect	60.63	62.36	61.58
Fairness	57.75	60.67	61.68
Patience	48.90	61.24	56.08
Punctual	45.54	54.49	45.08
Dynamic	41.43	50.56	37.45
Honesty	39.09	54.49	29.25
Kindness	32.78	34.83	29.54
Prepared	31.55	40.45	29.25
Organized	28.74	29.21	29.73
Experience	27.43	32.58	38.22
Knowledge	24.01	27.53	39.38
Flexibility	-	31.18	-
Strict	-	26.69	-
Dedicated	-	25.56	-
Well-informed	-	25.00	-
Wise	-	23.60	-
Creative	-	23.31	-
Knowledgeable	-	23.03	-
Tolerant	-	22.47	-
Helpful	-	21.35	-
Charismatic	-	19.38	-
Demanding	-	19.10	22.97

*Note.* NS = network size; QSD = quantitative semantic distance. SNC for the general sample includes 14 defining words; SNC for male subsample includes 25 defining words; SNC for female subsample includes 15 defining words.

largest compared to the semantic networks that emerged from the stimulus for positive parental and teaching practices.

### Discussion

In general, the results obtained during the analysis of males' and females' semantic networks support the main hypothesis of this study about gender differences in the perceptions of generation Y undergraduates regarding the parenting and teaching influences on their learning process. The first main finding is that students used a larger number of words to define negative features of parenting and teaching, compared to the

number of words used to describe positive parent and teaching practices. This might indicate either a strong consensus among students in the selection of parents' and teachers' practices that contribute to their learning showed the counterpart of behaviors and attitudes of good teachers, which are irresponsibility, unfairness, or an increased number of previous negative learning experiences that led students to utilize more words when defining negative parenting and teaching traits. These results are discussed in three main sections: parenting, teaching and gender differences.

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Table 4  
*Characteristics of Bad Teachers*

Defining word	General (NS = 432) QSD	Male (NS = 272) QSD	Female (NS = 365) QSD
Irresponsible	100.00	100.00	100.00
Unpunctuality	87.56	73.68	86.35
Unfair	75.86	60.82	75.83
Disrespectful	62.62	71.35	65.31
Lazy	56.29	78.95	43.54
Rude	44.81	38.60	51.77
Boring	43.86	75.44	41.88
Disorganized	41.13	21.64	52.40
Impatient	40.10	47.37	34.27
Disinterest	38.19	38.60	38.75
Permissive	31.71	23.10	32.50
Prepotency	29.95	37.13	22.71
Narrowness	25.53	31.87	21.56
Ignorant	25.53	33.63	23.44
Dishonest	25.46	25.44	23.33
Intolerant	20.97	31.58	-
Strict	-	28.07	-
Inexperienced	-	27.49	-
Apathetic	-	25.73	-
Monotonous	-	22.81	-
Irascible	-	20.47	-

*Note.* NS = network size; QSD = quantitative semantic distance. SNC for the general sample includes 16 defining words; SNC for male subsample includes 21 defining words; SNC for female subsample includes 15 defining words.

**Impressions on Parenting**

The defining words included in the SNC of positive parenting represented an active involvement and recognition of the student’s effort. The word *support* shows the highest QSD and there is also a significant gap between this word and the second defining word.

This gap might indicate that the educational support that parents give to their offspring is the most important parenting practice for undergraduate students. In addition, other conducts and attitudes appear to be contingent to the existence of this primary element, as most following words are semantically related to “giving support”. The importance placed on parental support could be related to Riso’s acceptance/sensibility dimension (2009). It could also be related to what Fulton and Turner (2008) found about the impact of authoritative parenting - warmth, autonomy

granting, and behavioral supervision - which assures children possibility of turning to their parents for unconditional understanding and positive advice. The SNC for this stimulus is the only case in which the central defining word, which is the one that holds a QSD of 100, is separated from the second word by approximately 50 QSD points, showing a strong consensus in its socially shared definition. Thus, to north-eastern Mexican undergraduate students, parental support could be the parenting practice that has the most positive impact on their learning.

Nonetheless, an excessive amount of involvement in their learning process might paradoxically hinder their outcomes. This is shown in the SNC for the stimulus that represents negative parental conducts, where *overprotection* appears with the highest QSD,

followed by *exigency* and *pressure*. Thus, it is important to understand the different elements involved in students' conception of parental support to determine the limits in which it stops fostering effective learning. Presumably, students expect their parents to be actively involved in their learning process by supporting them through attention, love, patience, motivation, and trust, among other things (Espitia & Montes, 2009; Sánchez & Valdés, 2011; Shah & Gardner, 2008; Weihua & Williams, 2010), but reject the obligation of fulfilling exigent expectations that put them under pressure (Weihua & Williams, 2010).

According to Cuesta et al. (2008), formal education must increase students' ability to solve problems and manage stress. However, it might be possible that increased parental expectations and demands would hinder the development of these strategies, both at home and at school. Consequently, parents must model effective strategies to handle pressure and to solve problems before setting high expectations and demands.

It is also relevant that the word *intelligent* is not included as a positive parental trait. It seems that the attributes valued at home have more to do with those that forge character (responsibility, respect, patience, and discipline) and those that entail a support system and a confidence network (support, comprehension, love, trust, attention, dedication), rather than traits that imply knowledge or wisdom (intelligence). It is possible that at higher levels of education, parents are not expected to be portrayers of the specialized knowledge that a student seeks to acquire, but are required to support him/her in the process of forging their own intellectual identity (Fulton & Turner, 2008; Riso, 2009).

### **Impressions on Teaching**

Two attributes presented as most relevant with regards to how students conceive the best teachers were *responsible* and *intelligent*. Teachers' intelligence could be related to their knowledge of the discipline (Irigoin, 2002; Senior, 2004), to the know-how required in the field of work, to transferring knowledge into action, to their ability to enhance their student's capabilities (Quiroga, 2008; Ruiz, 2008), and/or ethical commitment (Tobón, 2008).

Responsibility was a term that was also used to define positive parenting. It is possible that what students value and observe in their parents at home is related to what they expect and value at school, with an added expectation about the teacher's abilities

(*intelligence*). This could be a data-structure for representing a stereotyped situation (Minsky, 1975). It is expected that responsibility comes with being a good teacher and being a good father/mother. Also, it is important to assess what students mean by intelligent. Intelligence could either represent a high level of expertise in instructional and educational strategies (Arancibia, 2008; Posner, 2004), or being cultured and knowledgeable about general topics.

Furthermore, the importance that students put on teachers' responsibility appears to be associated to findings by Cabalín and Navarro (2008). These authors found that university students attributed greater value to the development of competencies related to the "ought to be" (in Spanish, "deber ser", which relates to a person's fulfillment of his or her responsibilities and compliance with norms), rather than being instructed by an organized and prepared teacher. Thus, responsibility arises as a highly valued feature in teachers, and its antonym (irresponsibility) appears as the main defining word for the characteristics of bad teachers. It is also probable that students highly value conducts and attitudes such as comprehension, respect, patience and responsibility because these practices improve student-teacher relationships (Beltrán, 2005; Mares et al., 2009).

Finally, regarding the relevance that the word boring has for both genders, it is possible that undergraduate students seek high levels of stimulation in order to engage in learning activities inside the classroom. This could be related to the characteristics of generation Y or Millennials (Feixa, 2008), whose members are accustomed to constant stimulation due to technological advances and a surfeit of information. This characteristic of generation Y may imply that teachers should incorporate teaching elements that students consider stimulating. For example, the inclusion of digital tools (Cuesta et al., 2008; Duart, 2010) can empower teachers to become learning mediators (Vygotsky, 1978) and avoid the passive reception of data among their students.

### **Impressions on Gender Differences**

Regarding the social representation of best teachers, a difference on the concept of *fairness* was observed between males and females. Overall, males place fairness as the 5<sup>th</sup> defining word for best teachers, while females rank it in 3<sup>rd</sup> place. The difference is more notorious in the negative teaching practice stimulus' SNC, since both genders use its antonym

(unfair) in different positions. Males present unfair in 6<sup>th</sup> position and females in 3<sup>rd</sup>. The relevance that females give to the fairness construct could indicate a perceived difference on how they are treated in school. This is consistent with Rice's (2012) findings on females' perception that their gender is an obstacle in their path towards thriving in academic endeavors.

Perhaps the value given to fairness by females is related to the conducts and behaviors from their parents that they have identified as interfering with their learning. Since they use *demanding* as the first defining word, there might be a relation between the pressure that females feel to meet parental demands, and the sense of fairness that they seek in their classrooms. It's also possible that they expect their authority figure, their teacher, to act fairly and allow them to fulfill these parental demands. Therefore, equity and equal opportunities for all students seem to be a priority in terms of improving learning effectiveness (Braslavsky, 2006; Mizala, Romaguera, & Ostoic, 2005; Musset, 2012).

Additionally, females use *unpunctual* as the second defining word for negative teaching practices, meaning that they expect teachers to comply with the norms. This possibly reflects how females feel less confident due to an increased demand experienced with their parents at home (Fulton & Turner, 2008). Most compelling evidence is that by using *demanding*, *overprotecting* and *pressure* as their 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> defining words, females convey feeling monitored. This perception of being assessed could perhaps explain why it is relevant for females to replicate this conduct by monitoring their teachers and this tension is transferred as an exigency to their teachers (Geist & King, 2008).

Males and females define bad teaching practices with the word *irresponsibility*. Males differ from females by using *lazy* and *boring* as the 2<sup>nd</sup> and 3<sup>rd</sup> defining words, while females use it as the 7<sup>th</sup> and 8<sup>th</sup>. Since both genders highly appreciate intelligence in their teachers, this difference could exemplify how males conceive learning in particular. It is possible that males perceive learning as a dynamic process where the teacher plays the role of a figure of knowledge, a figure that has the intelligence to promote learning through engagement. This is different from how females seem to perceive teachers, as a figure aligned with norms. Kohlberg's post conventional moral reasoning would best fit to explain why males appear to disregard norming behavior to concentrate in

learning from their teachers (Evans, Forney, Guido, Patton, & Renn, 2010; Woolfolk, 2006).

Gender differences were observed concerning the cutting point of positive parental practices. Males use *freedom* indicating a need for "letting them be" and females use *help* emphasizing their first defining word (*support*). This gender difference could indicate the effect of conservatism and different expectations that society has for males and females in Mexico (Wiseman, 2011). Male's need for freedom could also be related with the value given to *scold* when defining the parental conducts and behaviors that have blocked their learning. This could mean that the continuous exposure to parents' scolding is more noticeable for males, and could lead to a bigger urge for freedom.

It is important to consider the use of the word *demanding* to define the stimulus related to negative parenting behaviors in order to understand how females perceive a distinctive treat from their parents compared to males. The use of this word seems to be quite a paradox: It appears that females require encouragement to learn, but not in a coercive way since it would then transform into a negatively perceived action. This could be related to how females perceive the expectations that their teachers and parents have about them, as described by Geist and King (2008). According to these researchers, both teachers and parents expect males to outperform females in their mathematical abilities. Knowing that parental expectations have an impact on students' learning (Sphera et al., 2009), it is plausible that parents have different expectations for males and females that might influence students in different ways.

### Limitations and Future Directions

The present study is limited by the type of sample used, as results are circumscribed to the group of undergraduate students that was assessed. Factors that might hinder the possibility of generalizing this study's results relate to cultural and sociodemographic variables. Participants in this study represent only a specific sector of the population, as private education attendance in Mexico rose to nearly 30% of matriculated students in 2005 (Gil-Antón, 2005), increasing over the past few years. Therefore, it is plausible that slight differences in perceptions may arise in groups that pursued another type of education, even though they are from the same generation.

Moreover, the characteristics of the northern Mexican community might alter the perception of its students regarding the factors that impact their learning. Not only could the *generation* variable have an impact on students' perception, but cultural differences might also play an important role on the way in which learning factors are perceived. For example, although the *responsibility* trait was central to the definition of good teachers in both males and females, it is recommended that cultural differences are assessed prior to making any generalization about these results.

Additionally, since the sample used for the present study lacks statistical representativeness, caution should be exerted in attempting to generalize the results to the undergraduate population. Nonetheless, given the exploratory and qualitative nature of this study, its results could further enrich investigations and bring innovation to the field (Fullan, 2011) by proposing hypotheses for future studies.

This study points out the differences and similarities between males' and females' perceptions on the learning process. This could help in understanding their learning reality and improve parental and teaching strategies to approach students learning. It is especially important to understand the external factors that influence the individual process of learning of undergraduate students. If these elements prove to have an important impact on learning, identifying them both in the classroom and at home would help teachers and parents to address them properly in order to grant an effective learning environment. For instance, the trait of fairness in teachers could be taken into consideration in the academic preparation of future education professionals, as a means of fostering an inclusive and equitable learning context.

This study supports the notion about the relevance that students put on the image that teachers portray, specifically the importance they give to their teachers' personal traits (like responsibility and intelligence), emphasizing these over teachers' educational strategies or expertise. This is important because these traits represent the social representation of a contemporary group of undergraduate students that requires new interventions and strategies to reach the new objectives of higher education institutions (Fullan, 2011). These results may indicate that teachers should not only stay up to date with their discipline, but also develop additional skills or values. These may include innovation, openness to change, dealing with ambiguity, adaptability, and responsibility towards their profession.

Further, the results convey an emphasis in the utilization of semantic networks as a qualitative assessment technique to integrate theory and practice in Educational Psychology. Given that most quantitative approaches in research use instruments that are bounded to theoretical constructs, it would be useful to compare these constructs to their social definitions, which could be obtained by assessing groups of students at different levels and diverse environments. Considering that students' generation can impact on their behavior (Cuesta et al., 2008) the use of semantic networks to support current quantitative assessments may shed new light on their construct and content validity. Moreover, these exploratory qualitative studies might provide insights into the applicability of previous research findings on current students, and update the knowledge in the field with constant innovation (Fullan, 2011).

Also, it is important to consider that one of the applications of semantic networks relates to increasing the validity of psychometric instruments by using the same language that the target population in the creation of items for inventories and scales (Reyes-Lagunes, 1993). The richness of the semantic networks' cores found in this study could be utilized to create quantitative instruments to measure the impact that teachers and parents have on the learning process of contemporary undergraduate students.

It is relevant to consider that the results of semantic networks suggest that, although students share social definitions regarding the elements surrounding their learning, they also account for particular perceptions that differ from group to group (Griffiths et al., 2007; Vivas et al., 2007; Zermeño et al., 2005). The comparative analysis between groups indicates that while social representations comprise an inter-subjectively accepted reality (Mora, 2002) it is bounded to each group. This implies that when working with students enrolled in every course, teachers have to take into consideration their particularities along with recent research findings.

Nonetheless, it is necessary to continue researching parental and teachers' influences on the learning process of undergraduates. Future research should use representative samples of a larger population, and include quantitative measures that would help gauge how generalized the results may be to the rest of the student community. In this case, doing an analogous study with quantitative methodology could contribute to the literature by delivering results that can be

supported by statistical analysis, and at the same time, that would be supported by qualitative data.

Other possibilities might include utilizing the key findings from this study as hypotheses for future research. For example, a comparative design in which undergraduates are quantitatively assessed in their perceptions on their teacher's responsibility and fairness, their attitudes towards learning, and academic achievement could be designed. Such study could identify positive correlations between appraisals of teachers' positive attitudes towards learning and better academic outcomes. In addition, it can identify gender influences on these variables. This could also be done by operationalizing and quantitatively measuring the variable of parental control/supervision with a larger, representative sample, and then relating this variable to other learning variables.

Additionally, the variable *parental support* could be analyzed within the learning context, and operationalized in order to measure its impact on undergraduates' learning process. Given the possibility that this variable is multidimensional, since support can be given in different ways, its study would allow a broader comprehension of how it could be properly managed to foster students' learning.

Finally, the relevance of qualitative research in educational contexts relies on the quality of the information it obtains, and the synergy created by the inclusion of quantitative methods in the analysis of a same phenomenon. Mixed research methodologies appear to be acquiring more importance in academic practices (Hernández-Sampieri et al., 2010), and its positive applications should be incorporated in research related to education and learning. Only then could previously identified factors implied in the process of learning in pupils gain support from the qualitative data collected from the same population. As we find similarities and disparities between quantitative and qualitative data, we can proceed to understand the different theoretical applications for diverse groups of students, and refine our approaches to the study of this phenomenon.

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