

# European Journal of Psychology of Education

## Validation of the School Conflict Negotiation Effectiveness Questionnaire

--Manuscript Draft--

<b>Manuscript Number:</b>	
<b>Full Title:</b>	Validation of the School Conflict Negotiation Effectiveness Questionnaire
<b>Article Type:</b>	Original Research
<b>Keywords:</b>	conflict management; negotiation effectiveness; school conflicts.
<b>Corresponding Author:</b>	Abílio Afonso Lourenço, Ph.D Agrupamento de Escolas Alexandre Herculano PORTUGAL
<b>Corresponding Author Secondary Information:</b>	
<b>Corresponding Author's Institution:</b>	Agrupamento de Escolas Alexandre Herculano
<b>Corresponding Author's Secondary Institution:</b>	
<b>First Author:</b>	Pedro Cunha, Ph.D
<b>First Author Secondary Information:</b>	
<b>Order of Authors:</b>	Pedro Cunha, Ph.D Abílio Afonso Lourenço, Ph.D Maria Olímpia Paiva, Ph.D Ana Paula Monteiro, Ph.D
<b>Order of Authors Secondary Information:</b>	
<b>Abstract:</b>	<p>Abstract</p> <p>This research aimed to construct and validate the School Conflict Negotiation Effectiveness Questionnaire (QENCE). This objective is both based on the increasing relevance of the area of constructive conflict management in schools and also in the scarcity of instruments that try to measure these dimensions in the educational context. We used two samples of students from middle and high school in two urban public schools in Oporto, one with 622 students and another with 505, the last one to confirm validation.</p> <p>The results of the samples show values of Cronbach's alpha of .84 and .87, respectively. The data suggests the feasibility and validity of QENCE to assess the construct under study. We consider relevant to continue the psychometric studies of the scale, so future research should address this topic in depth.</p> <p>Concerning the findings, results of the present study reveal that affective groups statistically differ in their self-reported conflict management styles. Positive moods and feelings have been found to be related to the preference for more cooperative strategies.</p> <p>In terms of practical implications, according with what science nowadays indicates, we suggest that, in order to handle conflicts properly, individuals should take into account both their cognition and emotion.</p>

Pedro Cunha  
*Associate Professor with Tenure*  
*Faculty of Human and Social Sciences of Fernando Pessoa University*  
Praça 9 de Abril, 349 | 4249-004, Porto, Portugal

Abílio Afonso Lourenço  
*Titular Professor*  
*CIPE - Psychology and Education Investigation Centre of Alexandre Herculano Secondary School*  
Agrupamento de Escolas Alexandre Herculano  
Av. Camilo, 4300-096, Porto, Portugal

Maria Olímpia Paiva  
*Titular Professora*  
*CIPE - Psychology and Education Investigation Centre of Alexandre Herculano Secondary School*  
Agrupamento de Escolas Alexandre Herculano  
Av. Camilo, 4300-096, Porto, Portugal

Ana Paula Monteiro  
*Assistant Professor*  
*School of Humanities and Social Sciences of Trás-os-Montes e Alto Douro University*  
Complexo Pedagógico, Quinta de Prados  
5001- 801- Vila Real, Portugal

Corresponding author:

Pedro Cunha  
Fernando Pessoa University  
Faculty of Human and Social Sciences  
Praça 9 de Abril, 349  
4249-004 Porto- Portugal  
Email address: [pcunha@ufp.edu.pt](mailto:pcunha@ufp.edu.pt);  
Telephone +351926874366  
Fax number: +351 22 5508269

## Validation of the School Conflict Negotiation Effectiveness Questionnaire

### 1. Introduction: Educate for Peace at School

*Latus sensus*, we can refer that the construction of peace at school implies that one has mainly a non-unilateral theoretical referential, duly sustained, about the conflict in that specific social context and that there is also a reflection about the possible (constructive) intervention strategies in the school conflict in its various manifestations.

When speaking about school, the educative and formative role it has to develop must be raised even further nowadays, so it is able to generate well-being and safety to those who participate in it, aspects that are present in the negotiating skills of its different participants (teachers, students, functionaries, parents, amongst others). It is fundamental, here, to bear in mind that the idea of educating for peace is educating for the rights (individual and collective) of the other.

Facing the great challenges that characterise life today, school constitutes an essential organization in the learning of life experiences (amongst which we can emphasize, right from the start, the way interpersonal conflicts are managed) which enable to constructively face the difficulties the individuals, inevitably and in all domains of their existence, have to deal with.

In fact, it is at school that the individuals, frequently, acquire a more concise vision that the existence of a society without disagreement is a non-reality and that the individuals who have distinct needs, desires, interests, preferences and values, can find themselves involved in conflicts that demand effective responses in the way they are faced and managed (Cunha, 2008; Cunha and Leitão, 2012). Despite this, we have to remember that, as LaRusso and Selman (2011) says, the quality of the environments that adolescents come from is connected to their relationship and behaviour at school.

The role of interpersonal conflicts at school (organization based on a profound net of affective, social and professional interdependence relations) constitutes a stimulus to respond to the need of knowing the reality created by them, both on behalf of the investigators, as well as the teachers and the other professionals that move in the school sphere, namely aiming to preconize the basis to the development of a culture of peace in such a relevant social organization.

Traditional conflict research assumes that when individuals face conflicts they follow a rational process, thus denying the role of emotion-relevant variables (Montes, Rodríguez and Serrano, 2012). For example, Leung (2010) states that emotional intelligence is an important variable in conflict management,

since it leads the negotiator to a better understanding of the opponent's interests. Likewise, the ability of dealing with emotions increases the probability of reaching objectives in a negotiation encounter (Shapiro, 2004) and the ability of understanding the other side's emotions stimulates, in the negotiator, a positive way of facing the process (Mueller and Curhan, 2006).

Thus, developing skills of conflict and negotiation constructive management in the school universe is something always of immediate interest and there is a perspective of pertinence, wideness and some consensus (cf. Deutsch, 1990, 1991 and 1994), in addition to a plurality of approaches that the theme has scientifically raised. In fact, when talking about conflicts management, it is almost inevitable to talk about negotiation, as this represents a privileged form of relationship which enables the litigants to find solutions directly built by themselves and which prove to be capable of ending the contention which caused them.

We must bear in mind here that, for several reasons, there are conflict situations that do not enable direct negotiation and that demand other ways to manage conflicts (such as mediation, unilateral decision or concession, arbitration, among others), which do not deprive any of the primacy that negotiation has when thinking about managing a conflict.

Thus, in a pragmatic vision so as to stimulate the constructive and functional potential of conflicts, it is appropriated to build, develop and validate an instrument which evaluates the Conflict Negotiation Effectiveness within the school context, which is precisely the main objective that underlies the elaboration of the QENCE - School Conflict Negotiation Effectiveness Questionnaire.

## **2.Method**

### **2.1. Participants**

Two samples were used for the elaboration of the QENCE. The sample from study 1 is formed by 622 students and the one from study 2 by 505, from two public schools from the North of Portugal. The schools were selected for pragmatic reasons – namely geographical – and there is, thus, no intention to generalize the results obtained to the Portuguese population. In the first sample, 232 (37.3%) students are male and 390 (62.7%) female, with an average age of 15.8 (SD=1.58). Sample 2 is formed by 214 (42.4%) boys and 291 (57.6%) girls, with an age average of 15.9 (SD=1.60). In both samples, the ages are comprised between 12 and 22.

### **2.2. Instrument**

For reasons previously discussed, we have decided to build a questionnaire to evaluate negotiation effectiveness in school context. The QENCE can be applied a measuring instrument of the students' opinions and attitudes facing some aspects related to conflict negotiation effectiveness in educational context, so as to find their strengths, as well as the weaker aspects in the several dimensions under evaluation, namely in the Negotiating Influence (NI), the Negotiating Climate (NC), the Negotiating Rationality (NR), the Behavioural Firmness-Flexibility (BFF) and the Constructive Solutions (CS). After this screening stage, there can be the development of concrete actions to promote negotiation mechanisms, which have been gaining an effectively central importance in the management of the most varied conflicts which occur at the different levels of school reality.

The questionnaire was built having as basis the most quoted instruments and theoretical models in the literature of the area: the CEN (Negotiation Effectiveness Questionnaire), elaborated and validated by Serrano and Rodríguez (1993), whose subjacent theoretical rational is Mastenbroek's model (1987, 1989); Rahim and Bonoma's Bidimensional Model (1979); the ROCI-II questionnaire (Rahim Organizational Conflict Inventory) (Rahim, 1983a,b,c and 2001); and the CRQ (Conflict Resolution Questionnaire), proposed by McClellan (1997a,b,c).

The final questionnaire presents 21 items, distributed along five dimensions. The subjects respond indicating the extent to which the referred statement is valid to them. The conflicts negotiation effectiveness in school context can, therefore, be evaluated through the sum of the score in the respective subscales. Thus, the "Negotiating Influence" factor corresponds to the sum of the score of the items 4, 7, 14, 17 and 19, the "Negotiating Climate" is measured by the items 3, 6, 13, 18 and 20, the "Negotiating Rationality" factor is identified by the items 2, 9, 12 and 21, the "Behavioural Firmness-Flexibility" factor is obtained from the items 1, 5, 10 and 16 and the "Constructive Solutions" factor is formed by the sum of the score of the items 8, 11 and 15. As far as the classification of the answers is concerned, we used a 5 score *Likert* scale, from "strongly disagree" (1) to "strongly agree" (5).

For a better interpretation of the different dimensions of QENCE's subscales, see table 1.

Insert Table 1 about here

### **2.3. Procedure**

Aiming to acquire superior authorization to apply the questionnaire, the school principals were contacted and the goal of the study explained. The students were rather receptive, with their participation

being voluntary and confidential. The QENCE was applied in classroom context, in the school year of 2013/2014. The application time was, in average, of 20 to 30 minutes, taking into consideration the students' age level and the grade they attended. To attain the goals proposed, the inventory was applied in two moments throughout the school year, in both schools. At a first stage, data which enabled to validate the instrument were collected. At a second stage, the inventory was again applied to a different sample from the first. This second application aimed to build a new empirical matrix which enabled the confirmation and the validation of the first analyses carried out. With these two studies, we aimed to evaluate the psychometric qualities of the instrument.

### 3.Results

#### 3.1. Exploratory analysis

Due to the *Likert* form of the items, the internal consistency calculation, that aims to analyse the extent to which the items that compose the test form a homogeneous whole, was carried out having as basis the determination of *Cronbach's Alpha* index. From the analysis of table 2, we can verify that, in the first study, the factors "Negotiation Influence", "Negotiation Climate", "Negotiation Rationality", "Behavioural Firmness-Flexibility" and "Constructive Solutions" correspond to the *alphas* of .88, .82, .84, .80 and .88, respectively, and, in the second study, they correspond to the *alphas* .86, .87, .88, .90 and .90, fact that confirms their good internal consistency (Pestana and Gageiro, 2015). To sum up, as far as the QENCE is concerned, we can conclude that it has a robust *alpha* coefficient, being of .84 in study 1 and of .87 in study 2.

Insert Table 2 about here

In the analysis of the factor structure of the results (cf. Table 3), we have chosen the analysis of the QENCE in main components with *varimax* rotation. All isolated factors which showed an *eigen value* equal or superior to the unit were taken into account. The data of study 1 (N=622) point to the existence of five factors with an explained variance of 66.9%. The "Negotiation Influence" factor explains 16.5% of the variance and alludes to the "Negotiating Rationality" dimension, the fourth factor, "Behavioural Firmness-Flexibility" explains 12.1% and the "Constructive Solutions" factor has an explained variance

of 11.1%. In the second study (N=505), the results point again to five factors with an explained variance of 71.9%. The variances of each factor are the indicated in table 3.

Insert Table 3 about here

The statistical analyses carried out to the QENCE scales reveal adaptive values to the Keiser-Meyer-Olkin (KMO) index of .84 in study 1 and of .86 in study 2. Bartlett's test of sphericity presents adequate values in study 1 ( $\chi^2_{(210)}=6033.931$ ;  $p<.001$ ) and in study 2 ( $\chi^2_{(210)}=5870.157$ ;  $p<.001$ ).

### 3.2 Confirmatory analysis

The statistic treatment of the data was done having as basis the PASW Statistics/AMOS20 programme (Arbuckle, 2009; Lowe, Winzar and Ward, 2007). After the analysis of the results, all cases with *missing values* were removed, to facilitate the parameter estimation, using the *maximum likelihood* (ML) estimation method in the AMOS programme. We have also chosen to maintain the *outliers*, as the descriptive statistic of each sample still showed to be adequate. The adjustment of the model was evaluated based on the most commonly used statistical indexes: Chi-square ( $\chi^2$ );  $\chi^2$ /freedom degrees; *Goodness-of-Fit Index* (GFI), *Adjusted Goodness-of-Fit Index* (AGFI), *Comparative Fit Index* (CFI), *Tucker-Lewis Index* (TLI) and *Root Mean Square Error of Approximation* (RMSEA). In a stricter sense, the hypothesised method is not significantly different from the one contained in the empirical data matrix when the  $\chi^2$  value has an associated probability minor than .05. Thus, the investigators in this area have developed complementary adjustment indexes with which they evaluate the plausibility of a certain model, such as the GFI, the AGFI, the CFI, the TLI and the RMSEA. The first two express the amount of variance/covariance explained in the model, estimating that values equal or superior to .90 are usually evaluated as indicators of the adjustment of the model and indicate an acceptable adjustment, whilst the ones superior to .95 refer a good adjustment. The CFI is an index that informs us about the adjustment of our model comparing it to an independent model, considering values equal or superior to .95 to be indicative of a good adjustment of the hypothesised model (Hu and Bentler, 1999). The TLI makes it possible to compare the estimated model with a null theoretical model, that is to say, aims to determine whether all indicators are associated to a latent unique factor (Hair, Anderson, Tatham and Black, 2005). Values equal or superior to .95 indicate a robust adjustment. In its turn, the RMSEA index, introduced by

Browne and Cudeck (1993), is an indicator that points the error of approximation to the population. This discrepancy is expressed in freedom degrees, which makes this index sensitive to the number of estimated parameters (complexity of the model). The values which oscillate between .08 and .05 indicate a reasonable adjustment and, when inferior to .05, reveal a good adjustment (Byrne, 2001).

We have analysed the dimensionality and the structure of the QENCE testing different models in consonance to the data in the literature, aiming to identify which better respects the structure of the construct. The measuring model 1 is based on the following assumptions: (i) The answers given by the students can be explained by five factors (Negotiation Influence, Negotiation Climate, Negotiating Rationality, Behavioural Firmness-Flexibility and Constructive Solutions); (ii) the loading factor shown by each of the items is associated only to the factor which is supposed to be measured (target loading factor) and the zero loading factor in the other factors; (iii) there is no correlation between the estimation errors associated to each of the items; and (iv) according to the theoretical rational in which the questionnaire is based, the five factors are correlated. Model 1 presents the following adjustment indexes: study 1 (N=622) -  $\chi^2_{(179)}=360.954$ ;  $p<.001$ ;  $\chi^2/gl=2.017$ ; GFI=.948; AGFI=.933; CFI=.969; TLI=.964; RMSEA=.040 (.034 - .046); study 2 (N=505) -  $\chi^2_{(179)}=313.867$ ;  $p<.001$ ;  $\chi^2/gl=1.753$ ; GFI=.946; AGFI=.930; CFI=.976; TLI=.972; RMSEA=.039 (.031 - .046). The values obtained in the goodness indexes suggest that the global adjustment of model 1 is robust. Model 2 (cf. Figure 1 and Table 4) is based on the following assumptions: (i) the answers given by the students from the sample can be explained by five first-order factors (Negotiation Influence, Negotiation Climate, Negotiating Rationality, Behavioural Firmness-Flexibility and Constructive Solutions) and a second-order factor (Negotiation Effectiveness); (ii) the loading factor is demonstrated by each of the items is related only to the first order factor which is supposed to measure and the zero loading factor in the remaining factors; (iii) there is no correlation between the estimation errors related to each of the items; and (iv) the covariance between the five-first-order factors can be totally explained by the regression in the second-order factor. This model presents the following adjustment indexes: study 1 (N=622) -  $\chi^2_{(184)}=374.730$ ;  $p<.001$ ;  $\chi^2/gl=2.037$ ; GFI=.946; AGFI=.932; CFI=.968; TLI= .963; RMSEA=.041 (.035 - .047); study 2 (N=505) -  $\chi^2_{(184)}=318.921$ ;  $p<.001$ ;  $\chi^2/gl=1.733$ ; GFI=.945; AGFI=.931; CFI=.977; TLI= .973; RMSEA=.038 (.031 - .045).

Insert figure 1 about here



In both studies, the values obtained in the goodness indexes indicate that the global adjustment of model 2 is robust. We have chosen this model as it is in conformity with the theoretical assumptions upon which the questionnaire is based (Cunha, 2000, 2008; Mastenbroek, 1987, 1989, 1991).

Insert Table 4 about here

The estimated parameters for model 2 present adequate and statistically significant values (cf. Table 5). We can verify that there are no parameters that show inadequate estimations as negative variances or estimation errors superior to one (Byrne, 2001).

Insert Table 5 about here

#### **4. Conclusion**

Though the construct of the negotiation effectiveness within the school context is somewhat recent, the results of the investigations in its scope reveal the importance of its impact in the understanding of our students' behaviour. If teachers possess the subjacent knowledge in this area and practise it in their educational practice, that will, surely, revert in favour of the improvement of conflict resolution at school, enabling them to properly and at the right time intervene in the dysfunctions that may occur. For this reason, the QENCE, evaluating the opinions and the attitudes shown by the students, represents a major contribution. This importance is even more significative if we bear in mind that there is no instrument, in the Portuguese context, designed to evaluate the construct under study in any of the levels of teaching. The data enable us to conclude that the QENCE shows a psychometric characteristic which configures it as a feasible instrument to evaluate the respective construct, thus enabling it to be used in future studies, as a powerful tool in educational intervention.

The first obstacle we faced was that there are, in the literature of the area, no other instruments directed to the age range target of the QENCE with which to compare the data related to conflicts negotiation effectiveness. It will be important, however, to consider the suggestion of the data

triangulation based on different evaluation procedures (Tashakkori and Teddlie, 1998). It would be interesting to build negotiation effectiveness measures from items of questionnaires which measure the construct as an attitude, but also through behaviour indicators evaluated as an event. The recourse to a confirmatory factor analysis of these data would enable one to identify the communalities of the construct measured from different sources of information. As the sample used was circumscribed to the northern region of the country, there need to enlarge it both in number and in geographical terms. The progressive use of the QENCE by investigators, but also by teachers, will allow for a wider and diversified gathering of data which facilitates the understanding, not only of this instrument in diversified populations, as well as of the processes which contribute to conflict negotiation effectiveness in school context.

Table 1. Dimensions and items of QENCE

Scale/Dimension/Factor	Items (total =35)
<p><b>Behavioural Firmness-Flexibility (FFC)</b></p> <p>Refers mainly to a procedural flexibility, in order to elect a flexible dynamic between the negotiators, that is, while the negotiator present a posture of properly grounded interests, the idea is, especially, to make an effort to achieve an agreement through compromise and mutual exchanges, never forgetting the interests and objectives of both parties.</p>	<ul style="list-style-type: none"> <li>- When I deal with a conflict I have a predetermined solution to address them.</li> <li>- My way of negotiating is based primarily on common sense and my ability to discuss the issues.</li> <li>- I usually participate actively in negotiation situations.</li> <li>- To succeed I present, as much as possible, several alternatives to solve the problem.</li> <li>- I try to resolve the conflict in a definitive manner instead of reaching a temporary agreement.</li> <li>- Whenever possible I give the impression that I am a reliable negotiator.</li> <li>- I try to be a flexible person, not forgetting, however, my main objectives of the negotiation.</li> </ul>
<p><b>Negotiating Climate(CN)</b></p> <p>Aims at developing a constructive environment, i.e., it is based on the development of a more favourable setting for the negotiation act, in which the negotiators ensure that alternative solutions which allow flexibility and exploitation of proposals from the communication are pointed at, considering the objectives and interests of the other, preventing, thus, adverse and intimidating behaviour against the opponent.</p>	<ul style="list-style-type: none"> <li>- To achieve an agreement it is important reveal common tastes and enhance affinities with the opponent.</li> <li>- I appreciate the ideas, behaviour and the positive aspects of my opponent.</li> <li>- In the early resolution of the conflict I take care to create realistic expectations.</li> <li>- When you cannot advance in the negotiation, it is fundamental to take a break and address the issues in a more relaxed atmosphere.</li> <li>- I try to make my opponent feel at ease during the resolution of a conflict.</li> <li>- It is important to create security in the other when trying to reach satisfactory and lasting agreement.</li> <li>- I am patient so as not to put pressure on my opponent to give me what I want.</li> </ul>
<p><b>Negotiating Influence (IN)</b></p> <p>Describes a dimension of looking for influence on the balance of power, that is, highlights that it is fundamental to obtain a certain stability between the parties, with an adjusted and higher capacity and manoeuvrable space for the negotiator to obtain the effective agreement.</p>	<ul style="list-style-type: none"> <li>- To achieve good results, I should instil excitement and anxiety in the other part *.</li> <li>- To get more of my opponent, I show that sometimes I lose my temper *.</li> <li>- I make my opponent feel that only my interests and needs are important *.</li> <li>- For a good negotiation I must consider that the other party is wrong *.</li> <li>- I am not sincere when I am in a conflict resolution situation *.</li> <li>- Defeating the opponent must be the aim of a good negotiator *.</li> <li>- Usually, when the opponent does not accept my proposal, I threaten to break the negotiation *.</li> </ul>
<p><b>Constructive Solutions (SC)</b></p> <p>Obtaining substantial results is identified as the main objective of the negotiation, that is, the main purpose is to achieve good results, and that will guide all other actions.</p>	<ul style="list-style-type: none"> <li>- At the end of the conflict it is important that there is a mutual agreement.</li> <li>- When there is a need to censor my opponents on some aspect, I try to do it in a friendly manner and without irony.</li> <li>- In a negotiation it is essential to work together to find common interests to both parties.</li> <li>- To achieve a good result it is important that none of the parties feels superior to the other.</li> <li>- For a good negotiation it is necessary to establish priorities in the agenda.</li> <li>- To achieve an agreement it is crucial to analyse the interests of each party.</li> <li>- I encourage dialogue, providing my opponent essential information for an agreement.</li> </ul>
<p><b>Negotiating Rationality (RN)</b></p> <p>Aims at establishing a rational perspective of negotiating. A higher rationality by the negotiator should be implemented to avoid, thus, the decisional rationality based on propensities biased against the opposition, which would hinder the achievement of agreements with greater efficiency.</p>	<ul style="list-style-type: none"> <li>- I can accept criticism from my opponent.</li> <li>- I accept my opponent's alternatives with an open mind.</li> <li>- In conflict, there may be situations of agreement and disagreement between the parties.</li> <li>- I show interest in my opponent's ideas to achieve mutual agreement and consistent.</li> <li>- In order to reach agreement, I never give up trying to find a positive outcome to the problem.</li> <li>- I hear my opponent, carefully, to see if there are common interests.</li> <li>- When I present solutions to the other party, I am concerned about their consequences.</li> </ul>

\*Item scores in reverse to the scale

Table 2. Internal consistence of the QENCE dimensions (N=622 and N=505)

	<b>Sample 622</b>	<b>Sample 505</b>
<b>Items of Negotiation Influence</b>	<b>n=5 items; <math>\alpha=.88</math></b>	<b>n=5 items; <math>\alpha=.86</math></b>
04	.90	.84
07	.84	.84
14	.84	.84
17	.86	.82
19	.84	.83
<b>Items of Negotiation Climate</b>	<b>n=5 items; <math>\alpha=.82</math></b>	<b>n=5 items; <math>\alpha=.87</math></b>
03	.78	.85
06	.77	.84
13	.76	.85
18	.78	.83
20	.79	.82
<b>Items of Negotiation Rationality</b>	<b>n=4 items; <math>\alpha=.84</math></b>	<b>n=4 items; <math>\alpha=.88</math></b>
02	.75	.85
09	.78	.81
12	.79	.84
21	.88	.85
<b>Items of Behavioural Firmness-Flexibility</b>	<b>n=4 items; <math>\alpha=.80</math></b>	<b>n=4 items; <math>\alpha=.90</math></b>
01	.75	.87
05	.75	.89
10	.73	.88
16	.76	.87
<b>Items of Constructive Solutions</b>	<b>n=3 items; <math>\alpha=.88</math></b>	<b>n=3 items; <math>\alpha=.90</math></b>
08	.83	.86
11	.84	.87
15	.80	.84

Table 3. Factor structure of the QENCE (N=622 and N=505)

Dimensions	Items	Study 1 (N=622)					Study 2 (N=505)				
		1	2	3	4	5	1	2	3	4	5
Negotiation Influence (NI)	04	.69					.79				
	07	.86					.78				
	14	.86					.77				
	17	.83					.81				
	19	.86					.80				
Negotiation Climate (NC)	03		.73					.77			
	06		.77					.79			
	13		.78					.77			
	18		.74					.81			
	20		.72					.83			
Negotiating Rationality (NR)	02			.89					.80		
	09			.85					.86		
	12			.85					.83		
	21			.69					.80		
Behavioural Firmness-Flexibility (BFF)	01				.75					.88	
	05				.78					.85	
	10				.81					.85	
	16				.75					.86	
Constructive Solutions (CS)	08					.85					.88
	11					.84					.89
	15					.86					.90
% Eigen value		3.5	2.9	2.8	2.6	2.3	3.3	3.3	2.9	3.1	2.5
% of Variance		16.5	13.9	13.2	12.1	11.1	15.6	15.7	13.9	14.9	11.9

Table 4. Correlations between the QENCE factors (Pearson's correlation coefficients) and descriptive statistics (median, standard deviation, asymmetry and kurtosis)

	Study 1 (N=622)					Study 2 (N=505)				
	1	2	3	4	5	1	2	3	4	5
1.BFF	-					-				
2.NC	.203**	-				.196**	-			
3.NI	.126**	.177**	-			.205**	.186**	-		
4.CS	.409**	.304**	.218**	-		.249**	.198**	.207**	-	
5.NR	.123**	.183**	.158	.164**	-	.316**	.263**	.271**	.309**	-
<i>M</i>	15.82	19.24	17.22	12.16	16.62	15.92	18.92	16.54	13.11	15.81
<i>SD</i>	2.73	3.22	5.25	1.83	2.79	4.18	4.72	5.51	2.76	3.74
Asymmetry	-.578	-.087	-.789	-.416	-1.992	-1.494	-1.301	-.455	-2.094	-1.381
Kurtosis	.858	-.064	.253	1.035	6.393	2.225	2.205	-.390	4.836	2.381
	N= 622; **p<.001					N= 505; **p<.001				

Caption: BFF – Behavioural Firmness-Flexibility; NC – Negotiating Climate; NI – Negotiating Influence; CS – Constructive Solutions; NR – Negotiating Rationality.

Table 5. Results of the comparison of the models (N=622 and N=505)

	Study 1 (N=622)				Study 2 (N=505)			
	Coefficients	S.E. <sup>1</sup>	C.R. <sup>2</sup>	P< <sup>3</sup>	Coefficients	S.E. <sup>1</sup>	C.R. <sup>2</sup>	P< <sup>3</sup>
Negotiation Effectiveness → BFF	.599	-	-	-	.531	-	-	-
Negotiation Effectiveness → NC	.485	.106	6.591	.000	.451	.126	5.777	.000
Negotiation Effectiveness → NI	.335	.135	5.337	.000	.473	.149	5.952	.000
Negotiation Effectiveness → CS	.763	.153	7.210	.000	.512	.127	6.400	.000
Negotiation Effectiveness → NR	.327	.104	5.393	.000	.665	.161	6.761	.000
BFF → QENCE1bff	.714	-	-	-	.864	-	-	-
BFF → QENCE5bff	.682	.064	14.357	.000	.799	.045	21.667	.000
BFF → QENCE10bff	.735	.065	15.144	.000	.832	.043	23.125	.000
BFF → QENCE16bff	.684	.062	14.379	.000	.863	.040	24.429	.000
NC → QENCE3nc	.659	-	-	-	.695	-	-	-
NC → QENCE6nc	.711	.076	14.318	.000	.745	.066	14.971	.000
NC → QENCE13nc	.766	.076	15.040	.000	.716	.069	14.449	.000
NC → QENCE18nc	.659	.076	13.507	.000	.771	.069	15.423	.000
NC → QENCE20nc	.628	.076	13.001	.000	.833	.070	16.409	.000
NI → QENCE4ni	.600	-	-	-	.727	-	-	-
NI → QENCE7ni	.829	.081	15.634	.000	.729	.068	15.180	.000
NI → QENCE14ni	.846	.080	15.820	.000	.712	.066	14.842	.000
NI → QENCE17ni	.791	.079	15.179	.000	.800	.068	16.538	.000
NI → QENCE19ni	.833	.078	15.676	.000	.760	.066	15.802	.000
CS → QENCE8cs	.835	-	-	-	.851	-	-	-
CS → QENCE11cs	.812	.046	22.502	.000	.852	.048	23.224	.000
CS → QENCE15cs	.868	.044	23.886	.000	.896	.043	24.407	.000
NR → QENCE2nr	.785	-	-	-	.768	-	-	-
NR → QENCE9nr	.892	.048	23.365	.000	.880	.055	19.950	.000
NR → QENCE12nr	.865	.048	22.903	.000	.777	.057	17.694	.000
NR → QENCE21nr	.489	.055	12.025	.000	.769	.054	17.483	.000

<sup>1</sup> Standard errors, <sup>2</sup>Critical ratio, <sup>3</sup>Probability

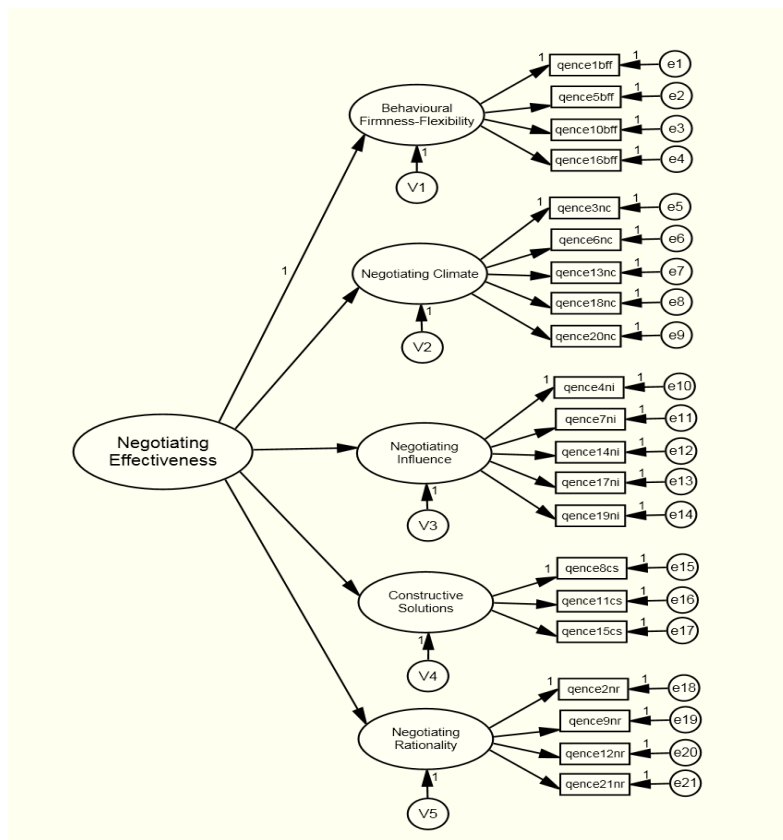


Figure 1. Pictorial specification of model 2.

## References

- Arbuckle, J. L. (2009). *Amos 18.0 User's Guide*. Crawfordville: Amos Development Corporation.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen and J. S. Long (Eds.). *Testing Structural Equation Models* (pp. 445-455). Newbury Park, CA: Sage.
- Byrne, B. M. (2001). *Structural Equation Modeling with AMOS – Basic Concepts, Applications, and Programming*. New Jersey: Lawrence Erlbaum.
- Cunha, P. (2000). *Estratégias e táticas em negociação: para um modelo de eficácia negocial*. Tese de Doutoramento. Facultad de Psicología da Universidad de Santiago de Compostela.
- Cunha, P. (2008). *Conflito e negociação* (2nd ed). Porto: ASA.
- Cunha, P., & Leitão, S. (2012). *Manual de gestão construtiva de conflitos* (2nd ed). Porto: Edições Universidade Fernando Pessoa.
- Deutsch, M. (1990). Sixty years of conflict. *International Journal of Conflict Management*, 1, 237-263.
- Deutsch, M. (1991). *Educating for a peaceful world*. Amherst, MA: National Association for Mediation in Education.
- Deutsch, M. (1994). Constructive conflict resolution: Principles, training and research. *Journal of Social Issues*, 50 (1), 13-32. doi:10.1111/j.1540-4560.1994.tb02395.x
- Hair, J., Anderson, R., Tatham, R., & Black, W. (2005). *Análise multivariada de dados*. Porto Alegre: Bookman.
- Hu, L.-T., & Bentler, P. M. (1999). Cut off criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1-55. doi:10.1080/10705519909540118.
- LaRusso, M., & Selman, R. (2011). Early Adolescent Health Risk Behaviors, Conflict Resolution Strategies, and School Climate. *Journal of Applied Developmental Psychology* 32(6), 354-362. doi: 10.1016/j.appdev.2011.05.003
- Leung, Y. (2010). Conflict management and emotional intelligence. Doctoral dissertation. Southern Cross University. Retrieved from <http://pubs.scu.edu.au/cgi/viewcontent.cgi?article=1121&context=theses>.
- Lowe, B., Winzar, H., & Ward, S. (2007). *Essentials of SPSS for Windows versions 14 & 15: a business approach*. Melbourne: Thomson Learning Australia.
- Mastenbroek, W. (1987). *Conflict management and organization development*. New York: Wiley.
- Mastenbroek, W. (1989). *Negotiate*. Oxford, England: Basil Blackwell.
- Mastenbroek, W. (1991). Development of negotiating skills. In V. A. Kremenyuk. *International negotiation: analysis, approaches, issues*. San Francisco: Jossey-Bass Publishers.
- McClellan, J. (1997a). The conflict resolution questionnaire. Retrieved from <http://www.qvcc.commnet.edu/classes/ssci121/questnr.html>. Accessed 11 November 2010.
- McClellan, J. (1997b). Scoring the conflict resolution questionnaire. Retrieved from <http://www.qvcc.commnet.edu/classes/ssci121/questscore.html>. Accessed 11 November 2010.
- McClellan, J. (1997c). Guideline for conflict resolution. Learning from the survey. Retrieved from <http://www.qvcc.commnet.edu/classes/ssci121/lrnsrvy.html>. Accessed 11 November 2010.



- Montes, C., Rodríguez, D., & Serrano, S. (2012). Affective choice of conflict management styles. *International Journal of Conflict Management*, 23 (1), 6 – 18. doi:10.1108/10444061211199304.
- Mueller, J. S., & Curhan, J. R. (2006). Emotional intelligence and counterpart mood induction in a negotiation. *International Journal of Conflict Management*, 17, 110-128. doi: 10.1108/10444060610736602.
- Pestana, M. H., & Gageiro, J. N. (2015). *Análise de dados para Ciências Sociais – a complementaridade do SPSS* (6th ed.). Lisboa: Edições Sílabo.
- Rahim, M. A. (1983a). *Rahim Organizational Conflict Inventories - I & II*. Palo Alto, CA: Consulting Psychologists Press.
- Rahim, M. A. (1983b). *Rahim Organizational Conflict Inventories: Professional Manual*. Palo Alto, CA: Consulting Psychologists Press.
- Rahim, M. A. (1983c). A measure of styles of handling interpersonal conflict. *Academy of Management Journal*, 26, 368-376. doi:10.2307/255985
- Rahim, M. A. (2001). *Managing conflict in organizations* (3th ed.). Westport, CT: Quorum Books.
- Rahim, M. A., & Bonoma, T. V. (1979). Managing organizational conflict: A model for diagnosis and intervention. *Psychological Reports*, 44, 1323-1344.
- Shapiro, D. (2004). Emotions in negotiation: Peril or promise? *Marquette Law Review*, 87, 737-745.
- Serrano, G., & Rodríguez, D. (1993). *Negociación en las Organizaciones*. Madrid. Eudema.
- Tashakkori, A., & Teddlie, C.(1998). *Mixed Methodology: Combining Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage Publications.