

# Towards a more efficient EFL reading comprehension classroom environment: The role of content and critical reading

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Traditional reading comprehension methods background the sometimes controversial content of texts in the interest of 'ensuring comprehension' via dealing with language points. According to Wallace (1992), EFL learners are often marginalized as readers; their goals in interacting with written texts are perceived to be primarily those of language learners. This study explores how a change in teaching approach via a CDA framework along with a change in reading content affects the EFL students' perceptions of their reading comprehension classroom environment. Through a one-group pretest posttest design, the What Is Happening In This Class? (WIHIC) questionnaire was distributed twice among 41 (F=23 and M=18) Iranian EFL students, the first time after a five-sessionlong regular non-critical reading comprehension class and the other time after a fivesession-long reading comprehension class featured by more involving passages and informed by a CDA framework proposed by Cots (2006). The data were analyzed using SPSS and the results showed that there was a significant difference (p<0.05) between the participants' perceptions of each dimension (i.e, Student cohesiveness, Teacher support, Involvement, Task orientation, Cooperation, and Equity) of their reading comprehension classroom before and after introducing the CDA techniques and changing the content of the reading materials. The change in teaching approach via the CDA framework and the change into more involving content led to a reading comprehension classroom environment that was perceived by students as more efficient and facilitative of learning.

*Keywords:* critical reading, EFL reading content, CDA, EFL reading comprehension classrooms, WIHIC; learning environment research

### 1 Introduction

Wallace (1992) believes that EFL learners are often marginalized as readers and they are not directed to interact with the written texts in meaningful ways. Teachers most often choose for practicing reading skills texts that present functional survival or non-involving general interest material and the main

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reading tasks include analyzing linguistic structure or new vocabulary items (Oughton 2007). Such texts are not motivating and involving enough and EFL students take up a rather submissive position during interaction with these texts. Zinkgraf (2003) believes the view of texts as "vehicles or linguistic structure" is the way texts are presented to EFL learners. Because of unawareness of the ideological load of certain expressions or words in authentic second language texts, and because of unawareness of their manipulative effect on the readers' beliefs, EFL learners do not question anything of the foreign language (Zinkgraf 2003). Critical reading approach aims to change this situation by offering students the means by which they can become more assertive and more confident readers. Foreign language learners act as transmitters of foreign thoughts and beliefs to their own culture. It is of importance for these learners to be and become aware of the latent layers of meaning and to know the ways people try to express their ideologies and thoughts. In this regard, critical discourse analysis (CDA) can be of significance and act as a model to improve students' critical reading skills. The role of CDA is to critically investigate social inequality as it is expressed, constituted, signaled, and legitimized by language use (Wodak 2002). Unlike other forms of discourse analysis, it also involves theorizing the social processes and, in particular, the power structures, which give rise to, and are maintained by, discourse.

The present study tries to investigate the effects of a change in reading materials content along with a change in teaching reading via a CDA framework on some Iranian EFL students' perception of their reading comprehension classroom environment. The study is significant from two perspectives. First, this study is one of the few studies that try to put CDA ideas into practice. Much has been written about theoretical aspects of CDA (Fairclough 1992; van Dijk 1993; Wodak 2002) but the practical aspects are not fully explored and a few studies could be found that report how CDA and its frameworks and techniques are implemented to improve EFL students' learning. Second, the present study is among a few studies (e.g. Chua et al. 2011; Ebrahimi et al. 2013; Wei et al. 2009) in the field of learning environments research that explore language and language-related classroom environments. To examine the effects of a change in reading content and in teaching reading via the CDA framework, the present study uses one of the widely used questionnaires (i.e., the What Is Happening In This Class? WIHIC) in the field of learning environments research, a field which is known to be able to present a comprehensive picture of a learning setting.

### 2 Literature review

# 2.1 Reading materials, critical reading and EFL students

EFL learners are often marginalized as readers and their goals in interacting with written texts are often taken for granted (Wallace 1992). Oughton (2007) states that EFL teachers most often select reading passages that present functional survival or non-involving general interest material and the main reading tasks involve analyzing new vocabulary items or linguistic structure. Zinkgraf (2003) believes that texts are often presented as "vehicles for linguistic structure" to foreign language learners. Zinkgraf (2003) states EFL learners do

not question anything of the foreign language because of unawareness of the ideological load of certain expressions or words in authentic second language texts, and because of unawareness of their manipulative effect on the readers' beliefs. This situation is rejected by the pedagogy of multiliteracies. The term "multiliteracies" was first coined in 1996 by the New London Group to encapsulate two significant shifts in how we view literacy. The concept of multiliteracies acknowledges that in a rapidly changing, culturally and linguistically diverse society we need to use texts in critical, active and reflective ways. It also acknowledges that literacy goes beyond print language and incorporates the multiple modes of meaning found in new information and communication technologies (New London Group 1996, 2000). Multiliteracies provide a bridge between the real-life texts of the community and school texts and encourage a real-world, interdisciplinary approach to learning through the use of disciplined knowledge. Using a multiliteracies approach enables students to understand, use and critically evaluate the multimodal texts of the 21st century.

Critical reading approach also aims to offer students the ways they can become more assertive and more confident readers. Wallace (1992) also admits that critical reading is one of many strategies available to the readers. Moreover, it may become very efficient when learners encounter texts that contain ideological assumptions and whose interpretation depends largely sociocultural contexts. Lots of texts people read in everyday life are of this nature. Some of them include news reports, advertisements, magazine articles, political speeches, even some short stories and novels. EFL students should be equipped with the necessary critical tools in order not to be manipulated with texts loaded with ideologies (Zinkgraf 2003). Critical reading skills can be taught in reading comprehension classes through frameworks proposed by CDA analysts.

### 2.2 CDA

The main assumption of CDA that makes the approach different from other approaches to text analysis is that it stresses not only the decoding of propositional meaning of a text but also its ideological assumptions (Oughton 2007). Proponents of CDA are interested in how a text may influence its readers. They are interested in the use of presuppositions that stem from the author's own, particular view of the world and circumstances of a text production. Therefore, the text interpretation should also include a close analysis of context which is not represented only by "the immediate environment in which a text is produced and interpreted but also the larger societal context including its relevant cultural, political, social and other facets." (Huckin 1997: 79). In other words, one can see a text as the product of discursive practices of production, distribution and interpretation which are embedded in a broader field of social practices (Fairclough 1992). Reading texts critically is a crucial skill since as Fowler (1991: 25) explains: "events and ideas are not communicated neutrally because they are transmitted through the medium that contains certain structural features which, in turn, are impregnated with social values that form some perspective on events." The medium is also used by people who work under certain social circumstances and follow certain conventions of production,

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and as a result will choose such linguistic structures that are going to conform to those circumstances and conventions (Oughton 2007). Thus, it is inevitable that writers, by selecting specific linguistic structures, will tend to make readers accept ideological messages embedded in a text. CDA helps readers detect this manipulation and it is the uncovering of implicit ideologies in texts. It unveils the underlying ideological prejudices and therefore the exercise of power in texts (Widdowson 2000). This research enterprise attempts to critically analyze the relationship between language, ideology, and society. Critical discourse analysts want to understand, expose, and resist social inequality (van Dijk1993).

The practical use of CDA ideas in EFL classrooms has been investigated in a few studies. Cots (2006) presents and uses CDA as a complementary model for analyzing language use and for designing language learning activities in EFL classrooms (see section 2.2 in the following part). In another study by Fredricks (2007), critical pedagogy was implemented in a reading program in Dushanbe, Tajikistan. Tajik students learned in school that concepts such as God and faith did not exist while concurrently learning the values of Islam at home. During the study, teachers selected course content which mirrored the students' interests and goals. According to Fredricks (2007), both teachers and students gained cultural awareness by discussing on texts. In this process, teachers and students could make arguments about each other's biases and views while they acquired valuable knowledge of each other's worldviews. In Correia's (2006) study, the students' feedback revealed that in spite of their fluency in L1 and L2, they tended to accept printed material without questioning the sincerity or bias of the text. Students also said that they considered themselves critical readers in their first language. However, when reading EFL texts, they felt they needed to learn how to read between the lines. Icmez (2009) adapted critical reading practices to traditional EFL reading lessons to increase students' motivations. CDA procedures, which involve asking the students to decide on the texts for analysis and encouraging them to express their positions related to the texts analyzed, result in an increase in students' motivations. In another study by Zinkgraf (2003), methods of CDA were used by non-native speakers of English to analyze texts. In this study, university students started increasing their critical language awareness and a change in their attitude toward texts extracted from the British press. The result of this study indicated that students should be equipped with the necessary critical tools in order to be aware of the different ways the author use to express their point of view.

The present study investigates the effects of a change in reading content and in teaching reading via a CDA framework on students' perceptions of their reading classroom environment. It is different from the other available similar studies since it uses the concept of learning environment. The studies based on this concept are known to be able to present a holistic picture of a learning setting. In other words, the effects of the changes in content and approach on students' learning process can be well touched upon by a learning environment study.

# 2.3. The field of learning environments research

The pioneering works of two American scholars, Rudolf Moos and Herbert Walberg paved the way for the field of learning environments research. Walberg

and Anderson (1968) developed the Learning Environment Inventory (LEI). The initial development and validation of the LEI began in the late 1960sin conjunction with evaluation and research related to Harvard Project Physics (Walberg and Anderson, 1968). The final version contains 105 statements (seven per scale) descriptive of typical school classes. The respondent expresses degree of agreement with each statement using the four response alternatives of Strongly Disagree, Disagree, Agree and Strongly Agree. The scoring direction is reversed for some items. Moos (Moos 1968) developed a number of social climate scales, including those for use in correctional institutions and psychiatric hospitals. Fraser (1994) defines learning environment as the social-psychological context or determinants of learning. The concept of learning environment is operationalised based on Moos' tri-partite model (Moos 1974). Moos's three basic types of dimensions for classifying human environments are Relationship Dimensions (which identify the nature and intensity of personal relationships within the environment), Personal Development Dimensions (which assess basic directions along which personal growth and self-enhancement tend to occur) and System Maintenance and System Change Dimensions (which involve the extent to which the environment is orderly, clear in expectations, maintains control and is responsive to change). This model, which is the base of all learning environments studies, including the present one, leads them to be able to present a comprehensive picture of a learning setting.

Numerous research studies have revealed that student perceptions of the classroom environment account for appreciable amount of variance in learning outcomes, often beyond that attributable to background student characteristics (Dorman 2001; Fisher, Henderson & Fraser 1995; Wong & Fraser 1996). Fraser (1998) states that the quality of the classroom environment in schools is a significant determinant of student learning and students' positive perceptions of learning environments will pave the way for meaningful learning.

Decades of research in the field of learning environments have led to the development of a variety of economical, valid and widely-applicable questionnaires for assessing students' perceptions of classroom environments. There are now hundreds of research studies which explore learning environments at various grade levels (primary, secondary, tertiary) and in a variety of classrooms such as science and mathematics (i.e., Wolf & Fraser 2008; Aldridge & Fraser 2000), chemistry (e.g. Hofstein et al. 1996), computer classrooms (Maor& Fraser1996), and physics (e.g., McRobbie et al. 1997). The studies on language and language-related classroom environments are more recent and few studies (e.g., Chua et al. 2011; Ebrahimi et al. 2013; Wei et al. 2009) are available that report evaluation, exploration or improvement of language learning classroom environments. The present study appears to be the first language-related classroom environment study which delves into EFL reading comprehension classrooms.

The growth of learning environment studies can also be viewed from another perspective. Interest in learning environments spread from the USA to The Netherlands where it was picked up by Theo Wubbels and colleagues (e.g., Wubbels& Levy 1993; Wubbels&Brekelmans 1998, 2006), and to Australia, where it was carried forward by Barry Fraser (Fraser 1998). Learning environment research has since spread further afield to Asia (e.g.Scott & Fisher 2004; Hirata &Sako 1998; Fraser 2002) and South Africa (Aldridge et al. 2006).

It also should be noted that the present study is one of those rare learning environment studies concerning EFL classroom settings in Iran. After three decades of efforts in designing and redesigning the EFL policy in Iran, some problems with the teaching of English at public schools and universities still A major problem seems to be the movement from a positivistic framework, with a set of rigid and predetermined procedures, to a more constructivist process oriented framework (Farhady, Sajadi&Hedayati 2010). In this line, learning environments studies, especially those blended with constructivism, can play a significant role in improving Iranian EFL classroom environments.

# 3 Methodology

# 3.1 Participants

The participants of this study were selected from a group with an advanced proficiency level of English. Advanced learners were selected to make sure that careful critical analysis of texts is not too complicated for them. They were 41 Iranian (F=23 and M=18) EFL students in a class who were studying advanced reading comprehension in Parto English Institute, Arsanjan, Iran. With regard to age, the participants were between 21 and 27. Most of them took part in this class to improve their reading comprehension to be able to get better results in the mainly reading-based English part of the Iranian PhD and master's degree entrance exams. The others were in the class to prepare themselves to get better band scores in the reading module of the academic IELTS.

# 3.2. The teaching framework

The model proposed by Cots (2006) was used for teaching critical reading. The 'critical' nature of the model is that it relies on the learners' capacity to interpret a text within a specific communicative, social, and ideological context and react to it taking into account their personal experience and values. Following the analytical model proposed by Fairclough (1992), Cots (2006) presented a list of questions that may be used by teachers to approach language use with a 'critical' attitude, and as a reference framework to plan how to present language use to learners. The model considers discourse as the result of three different types of practice: social, discursive, and textual. At the level of social practice, the goal is to discover the extent to which discourse is shaped by and, at the same time, influences social structures and the nature of the social activity of which it forms part. The discursive practice dimension acknowledges the specificity of the communicative situation, taking into account both material and cognitive aspects related to the conditions of textual production and interpretation (for example, intertextuality, presuppositions, etc.). Finally, the textual practice dimension focuses on formal and semantic features of text construction, such as grammar or vocabulary, which contribute to conveying or interpreting a specific message. Some of the questions related to each type of practice are as follows:

## Social practice

- What is/are the social goal(s) the author(s) has/have with the text?
- In what kind of social situation is the text produced? How conventional is
- Does/do the author(s) represent or appeal to particular beliefs?
- What are/may be the social consequences of the text?

### Discourse practice

- Can we classify it as representative of a specific type?
- Is the text more or less accessible to different kinds of readers?
- Does it require us to 'read between the lines'?
- Does it presuppose anything?

### Textual practice

- Are there features in the text that contribute to projecting a specific image of the author(s)?
- Is the author's attitude expressed in the text?
- How does syntactic structure as well as lexical choice affect the meaning? Are there alternatives?
- Are there any relevant terms, expressions, or metaphors that contribute to characterizing the text?

# 3.3 The questionnaire

The WIHIC questionnaire brings parsimony to the field of classroom environment research. It combines modified versions of the most salient scales from a wide range of existing questionnaires with additional scales that accommodate contemporary educational concerns such as equity and constructivism (Fraser 1998). The original 90-item nine-scale version was refined by both statistical analysis of data from 355 junior high school science students and extensive interviewing of students about their views of their classroom environments in general (Fraser et al. 1996, cited in Fraser 1998). The final form of the WIHIC (Appendix A) contains seven eight-item scales including Student cohesiveness, Teacher support, Involvement, Investigation, Task orientation, Cooperation, and Equity (Chionh& Fraser1998). Full descriptions of these scales have been provided in Table 1. Each item can be responded on a five-point Likert scale ranging from Almost Never to Almost Always. A typical item in the Student cohesiveness scale is "I know other students in this class". In the Teacher support scale items such as "The teacher helps me when I have trouble with the work" can be found. Items like "I give my opinions during class discussions" form the Involvement scale. In the Investigation scale, which is mainly related to science classrooms and was omitted for the purpose of this study, there are items such as "I explain the meaning of statements, diagrams and graphs". Task orientation scale contains items like "I know the goals for this class". Items such as "I work with other students in this class" form the Cooperation scale and the Equity scale involves items like "I am treated the same as other students in this class". This range of scales and items can present a better picture of the two learning processes (i.e., before and after the change in content and teaching approach) under exploration in this study. The WIHIC has

been used in a variety of studies (e.g. Aldridge & Fraser 2000; Ebrahimi et al. 2013; Huang et al. 1998; Wallace et al. 2002).

**Table 1**. Scale descriptions of the WIHIC

WIHIC scale	The extent to which	Moos (1974) dimension
Student cohesiveness	students are friendly and supportive of each other.	Relationship
Teacher support	the teacher helps, befriends and is interested in students.	Relationship
Involvement	students have attentive interest, participate in class and are involved with other students in assessing the viability of new ideas.	Relationship
Investigation	there is emphasis on the skills and of inquiry and their use in problem-solving and investigation.	Personal growth
Task orientation	it is important to complete planned activities and stay on the subject matter.	Personal growth
Cooperation	students cooperate with each other during activities.	Personal growth
Equity	the teacher treats students equally, including distributing praise, question distribution and opportunities to be included in discussions.	

# 3.4 The procedures

After five sessions of their regular reading comprehension class, the participants were asked to express their perceptions of their reading classroom environment through the WIHIC questionnaire. During these sessions, a non-critical approach to reading comprehension was adopted. The teacher, who also was the researcher, chose expository reading texts that presented functional survival or non-challenging general interest material and the reading tasks included analyzing linguistic structure or new vocabulary items. Interpretation of these passages would not depend upon a social-cultural context. Topics of the reading passages used in these sessions include City Life, Tehran, Letter Writing, Physical Education, and Computers. Each reading activity began with presenting some new words. Then the students were encouraged to read the passages and the teacher was ready to help the students to overcome the structural and lexical problems they may face. Next, the students were directed to answer the reading comprehension questions and do some vocabulary and grammar exercises.

From the sixth session on, passages with different content were used and a critical approach based on CDA framework and techniques was adopted in the target reading comprehension classroom with the same teacher. Cots' (2006) model, which he elaborated based on Fairclough (1992), was used for teaching critical reading skills to the students. During these five sessions, students encountered some persuasive texts whose interpretation depended largely on a sociocultural context and were characterized by various ideological assumptions

which were considered by the authors as unquestionable and undeniable. The texts were selected from news reports, magazine articles, and political speeches. The reading passages used during these five sessions were Rights and Duties, Dialogue Among Civilizations, Protests Hit Saudi Capital, Sanctions Do Not Work, and Iraq Invasion. The students were directed to read the passage and the teacher was there to help them with problematic linguistic structures and difficult lexis. Then social, discursive and textual practices for each passage were discussed in the class. First, the social contexts in which the passages had been produced, the social beliefs of the author and the social consequences of the passage were discussed. Then the textual aspects of the passages were analyzed and technical terms such as genre, framing, foregrounding, backgrounding, presupposition, and connotations were defined and introduced to the students to make them able to talk about the textual characteristics and types of the passages and the different ways the authors use to impose their ideas. In addition, through asking appropriate questions, the teacher tried to direct the students to pay attention to the syntactic and lexical features of the passages. Passivization, euphemization, derogation, and metaphors were mentioned to be the ways the authors use to express their ideas. The teacher didn't expect students to give a right answer but let them give a range of interpretations.

After five sessions of their critical reading comprehension class, the participants were asked to express their perceptions of their existing reading classroom environment through the WIHIC questionnaire. The students' responses to the Likert scale including almost never, seldom, sometimes, often and almost always alternatives, were scored 1, 2, 3, 4 and 5 respectively. Next, scores on all scales of the WIHIC (i.e., Student cohesiveness, Teacher support, Involvement, Task orientation, Cooperation, and Equity) for all students before and after the change in teaching approach and the content were provided. The score for each scale was the sum of the each participant's answer on the items of that scale. The data were analyzed using SPSS and different t-tests were conducted to see whether there is a significant difference between the participants' perceptions of each dimension of their reading comprehension classroom before and after the changes in teaching approach and the content of reading materials.

### 4 Results and Discussion

The six pairs of scores were computed using SPSS for conducting different paired-sample t-tests between the scores of the same scales of the WIHIC that were collected after and before the change in teaching approach and the content. The results of these paired-sample t-tests are provided in Table 1. As it is clear, there are significant differences (p<0.05) between scores on Student cohesiveness, Teacher support, Involvement, Task orientation, Cooperation, and Equity dimensions before and after the change in teaching approach and the content.

**Table 2.** The results of different paired-sample t-tests between the scores of the same scales collected after and before the change in teaching approach and the content

	Paired Differences								
					95% Confidence Interval of the Difference				
		Mean differenc e	SD	SEM	Lower	Upper	T	df	Sig. (p<0.05)
Pair 1	SC1-SC2	-8.927	10.845	1.694	-12.350	-5.504	<b>-</b> 5.270	40	.000
Pair 2	TS1-TS2	-4.049	12.029	1.879	-7.846	252	-2.155	40	.037
Pair 3	IV1-IV2	-11.244	11.106	1.734	-14.749	-7.738	-6.483	40	.000
Pair 4	TO1-TO2	-12.195	12.230	1.910	-16.055	-8.335	-6.385	40	.000
Pair 5	CP1-CP2	-9.634	12.573	1.964	-13.603	-5.666	-4.906	40	.000
Pair 6	EQ1-EQ2	-8.634	11.821	1.846	-12.365	-4.903	-4.677	40	.000

Note: SC stands for Student cohesiveness, TS for Teacher support, IV for Involvement, TO for Task orientation, CP for Cooperation, and EQ for Equity. Also, 1 signifies pre-treatment non-critical reading comprehension classroom and 2 signifies post-treatment CDA informed classroom

Overall the results reported here clearly reveal that there are significant differences between students' perceptions of all dimensions (i.e., Student cohesiveness, Teacher support, Involvement, Task orientation, Cooperation, and Equity) of their reading comprehension classroom environments before and after implementing the CDA framework and changing the content of the reading materials. Taking into account the direction of the differences, it can be stated that, from the participants' perspectives, the critical approach to teaching reading via the CDA framework and the change in the content of reading materials have affected all dimensions of the classroom environment in a positive way. The changes in instruction in this study helped the students to be more friendly and supportive of each other (i.e., Student cohesiveness) and caused them to perceive the teacher as more helpful and more interested in them (i.e., Teacher support). The changes were perceived by students to increase the extent to which they had attentive interest, participated in class and were involved with other students in assessing the viability of new ideas (i.e., Involvement). The critical approach via the CDA framework and the change in content helped students to perceive that they are more serious to complete planned activities and stay longer on the subject matter (i.e., Task orientation). They perceived that in the CDA-informed class featured by more involving reading materials they cooperate extensively with each other during activities (i.e., Cooperation). They also perceived that the teacher in this class treats students more equally, including distributing praise, question distribution and opportunities to be included in discussions (i.e., Equity).

The results show that implementing a critical reading approach and more challenging reading materials in the target reading comprehension class helped the Iranian EFL students participating in this study to find their classrooms as a better and more efficient place for learning. These EFL students (F=23 and M=18) were between 21 and 27 years of age. Most of them were in the reading

comprehension class to be able to get better results in the mainly reading-based English part of the Iranian PhD and master's degree entrance exams.

### Conclusion

This study has investigated the effects of adopting a critical reading approach via a CDA framework and changing the content of reading materials on the some Iranian EFL students' perceptions of their reading comprehension classroom environment. A one-group pretest posttest design was used and the results showed that the students in a CDA-informed reading comprehension classroom featured by more involving reading materials perceived their classroom learning environment more positively (p<0.05) than regular noncritical reading classes. In other words, the CDA-informed reading comprehension class which was also featured by more involving reading passages was perceived by the EFL students participating in this study as more efficient. The result of this study can be significant specifically for EFL material developers and teachers.

EFL material developers should be careful about the content of the materials they include in EFL textbooks and resources. The content of the material can affect the extent to which the EFL students are involved or get motivated in the related tasks. Avoiding controversial topics in order to make textbooks acceptable in many different contexts is one of the main problems that can be found in commercial textbooks and materials.

The implication for EFL teachers is that in reading comprehension classes, a sensitivity and consciousness about the invisible fabricated and manipulative nature of texts should be created. By learning critical approach students attempt to take a closer than indifferent look at what is usually taken for granted. Critical reading is a means to make learners more empowered language users and such an approach to reading can be motivating for EFL students. Students by analyzing texts become aware of the sources of power, dominance, inequality and bias and they find the connections between discourse and social practices. Another implication for the EFL teacher is that in teaching reading strategies, they should not limit themselves to teaching scanning or skimming but they should also teach inferencing, evaluating, explaining, that is, the higher-order thinking processes in critical reading.

Having proposed the above interpretations, the authors suggest the following ways in which future research might build upon and strengthen these findings. Qualitative research methods could be used to complement the picture gained through quantitative methodology. Further research can offer some insights as to whether the reported changes in students' perceptions were also somehow reflected in their observable classroom behavior.

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# Appendix A.The What Is Happening In this Class? (WIHIC) Questionnaire

STUDENT COHESIVENESS		Almost Never	Seldom	Sometimes	Often	Almost Always
1	I make friendships easily among students in this class.	TTEVEL				Invays
2	I know other students in this class.					
3	I am friendly to members of this class.					
4	Members of the class are my friends.					
5	I work well with other class members.					
6	I help other class members who are having					
	trouble with their work.					
7	Students in this class like me.					
8	In this class, I get help from other students.					
TEA	CHER SUPPORT	Almost	Seldom	Sometimes	Often	Almost
		Never				Always
9	The teacher takes a personal interest in me.					
10	The teacher goes out of his/her way to help me.					
11	The teacher considers my feelings.					
12	The teacher helps me when I have trouble with					
	the work.					
13	The teacher talks with me.					
14	The teacher is interested in my problems.					
15						
13	The teacher moves about the class to talk with					
1.0	me.					
	16 The teacher's questions help me to understand.		C 11	C .:	Of	A1 .
	OLVEMENT	Almost Never	Seldom	Sometimes	Often	Almost Always
17	I discuss ideas in class.					
18	I give my opinions during class discussions.					
19	The teacher asks me questions.					
20	My ideas and suggestions are used during classroom discussions.					
21	I ask the teacher questions.					
22						
23	I explain my ideas to other students.					
23	Students discuss with me how to go about					
24	solving problems					
24	I am asked to explain how I solve problems.	4.1	0.11		Of	41 .
INV	ESTIGATION	Almost Never	Seldom	Sometimes	Often	Almost Always
25	I carry out labs in class to test my ideas.					
26	I am asked to think about the evidence for statements.					
27	I carry out labs in class to answer questions					
20	coming from discussions.	-	<del>                                     </del>	-		-
28	I explain the meaning of statements, diagrams and graphs.					
29	I carry out labs in class to answer questions, which puzzle me.					
30	I carry out labs in class to answer the teacher's questions.					
21	1	<del>                                     </del>		1		
31	I find out answers to questions by doing labs in class.					
32	I solve problems by using information obtained					
	from my own labs in class.					

TASI	TASK ORIENTATION		Seldom	Sometimes	Often	Almost Always
33	Getting a certain amount of work done is important to me.					
34	I do as much as I set out to.					
35	I know the goals for this class.					
36	I am ready to start this class on time.					
37	I know what I am trying to accomplish in this class.					
38	I pay attention during this class.					
39	I try to understand the work in this class.					
40	I know how much work I have to do.					
COOPERATION			Seldom	Sometimes	Often	Almost Always
41	I cooperate with other students when doing assignment work.					
42	I share my books and resources with other students when doing assignments.					
43	When I work in groups in this class, there is teamwork.					
44	I work with other students on projects in this class.					
45	I learn from other students in this class.					
46	I work with other students in this class.					
47	I cooperate with other students on class activities.					
48	Students work with me to achieve class goals.					
EQUITY		Almost Never	Seldom	Sometimes	Often	Almost Always
49	The teacher gives as much attention to my questions as to other students' questions.					
50	I get the same amount of help from the teacher, as do other students.					
51	I have the same amount of say in this class as other students.					
52	I am treated the same as other students in this class.					
53	I receive the same encouragement from the teacher as other students do.					
54	I get the same opportunity to contribute to class discussions as other students.					
55	My work receives as much praise as other students' work.					
56	I get the same opportunity to answer questions as other students.					