Israeli teachers' perceptions of mentoring effectiveness [1]

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Israeli teachers' perceptions of mentoring effectiveness

Abstract

Purpose – This study attempted to identify Israeli teachers' perceptions about the relationships between mentoring styles and team culture and the effect of these relationships on mentoring effectiveness.

Design/methodology/approach – The sample consisted of 169 Israeli teachers from 22 science and technology teams in junior high schools. Four mentoring styles and four dimensions of team culture were examined. Data analysis was carried out on an individual level, whilst taking into consideration the influence of the entire team.

Findings – Meaning attribution style influenced the perception of mentoring effectiveness in every team culture. Contrary to the expected outcome, the 'fit' between the other mentoring styles and team culture had no significant bearing on mentoring effectiveness.

Research limitations/implications –The self-reported instrument was vulnerable to a same-source bias. However, since the focus of this study is teachers' perceptions of their specific mentors' effectiveness, rather than mentoring effectiveness in practice, it seems to be a suitable tool. In addition, the study sample was limited to science and technology teams. However, it appears that these findings can be generalised beyond these teams, since the study variables have a general psychological character which have been used previously in other fields.

Practical implications –These findings will be able to assist supervisors in recruiting and assigning suitable mentors, thus contributing to school effectiveness.

Originality/value – The study contributed to the design of a model that explains mentoring effectiveness. This model raises doubts regarding the perception that 'fit' between mentoring styles and team culture is necessary for improving mentoring effectiveness.

Key words: mentoring effectiveness, mentoring style, team culture, self-efficacy, junior high schools

Article Type: Research paper

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The use of mentoring is an old tradition in many professions. Mentoring programmes have been studied widely and are reported to be effective in enhancing career development in private industry, graduate education, teacher education and teacher professional growth (Alsbury and Hackmann, 2006; Jonson, 2002; McCann and Radford, 1993). Therefore, many studies have been conducted into the relationships between the various mentoring styles and mentoring effectiveness (Allen and Poteet, 1999; Cunningham, 2007; Daresh, 2004; Gagen and Bowie, 2005; Fairbanks *et al.,* 2000; Mertz, 2004). Nevertheless, only few studies have researched the fit between mentoring styles and team culture in the context of mentoring effectiveness (Crutcher, 2007; Tilman, 2005; Wandersman *et al.,* 2006; Wang, 2001). Most studies dealing with team culture have supported the approach that the fit between mentoring styles and team culture dimensions is necessary for effective mentoring.

Thus, the purpose of this study is to explore the concept of 'fit' in relation to mentoring effectiveness; whether the fit between mentoring styles and the various team culture dimensions will contribute to mentoring effectiveness.

Mentoring and mentoring styles

Definitions of mentoring are very diverse, with the most popular focusing on career advancement or professional development by someone in a position of authority within the professional context (Crosby, 1999; Healey, 1997; Kanter, 1977; Regin and Cotton, 1991). The roles associated with mentoring are confusing and often contradictory, which complicates the act of definition (Levinson *et al.,* 1978; Phillips-Young, 1982). As yet, there is no

accepted definition of mentoring, which hampers the building of a cohesive, coherent empirical base of research (Mertz, 2004).

Thus, in spite of the multifaceted meaning of mentoring, this study investigates mentoring through a conceptual framework of study. Lieberman, et al. (1973) revealed that the mentor's activity can be characterised into four basic styles: *emotional stimulation*, which emphasises challenging, confrontation and exposure of emotions; *caring*, which refers to accepting, understanding and providing warmth and support among the group members; *meaning attribution*, which refers to conceptualising ideas, reflecting and providing explanations to the group members; *executive function*, which emphasises determining work frameworks, organising and directing the group members. Their study findings showed that the most effective mentoring style was made possible by mentors with a very high level of meaning attribution, a high level of caring and an average level of emotional stimulation and executive function.

Mentoring effectiveness

Previous studies have described the nature of mentoring relationships as a way of enhancing classroom teachers' competence (Krupp, 1987, Showers, 1985). Effective mentoring programmes can help teachers gain more confidence in their professional capability, translate educational theory into practice more effectively and develop improved communication skills. They can enhance the mentor's professional growth through increased recognition from peers, and by providing further opportunities for personal career advancement. School districts benefit from mentoring programmes by acquiring more highly motivated teachers, with improved self-esteem and greater productivity (Daresh, 2004; Reyes, 2003).

Therefore, in this study, we examine the mentoring effectiveness not only through teachers' perceptions of their success from an executive point of view, but also through their

perceptions of their self-efficacy. Self-efficacy has been conceptualised as people's belief in their ability to organise and execute courses of action to manage given situations. The belief in self-efficacy may determine whether coping behaviours will be initiated and how much effort will be expected (Bandura, 1997).

Previous studies argued that one of the reasons why mentoring programmes may not reach their full potential is that the parties who enter the programme do not know how to take advantage of the opportunities that a mentoring relationship can afford (Allen and Poteet, 1999; Fagenson-Eland et al., 1997). It might be expected that mentors' knowledge of the participants' team culture may contribute to their mentoring effectiveness. This issue will be discussed later on.

Team culture

One of the most significant criticisms of Lieberman *et al.*'s (1973) study was their total disregard of the potential influence of the mentored students' culture (Dies, 1977). Therefore, the present study examined the relationships between mentoring styles and the mentored teachers' team culture. In this study, the concept of team culture was taken from the competing values model (Quinn, 1988), which suggests that an organisation operates within four patterns of value frameworks on two axes: horizontal and vertical. The horizontal axis is focused on organisation, and moves from internal focus (concern for the employee's welfare) to external focus (on the environment and clients). The vertical axis relates to the organisational structure. This axis ranges from flexibility (the ability to adapt the organisation to change) to control (managerial values of stability). Based on the crossover of these axes, the four team culture dimensions developed: *clan*, which emphasises the group and cooperation in decision-making; *adhocracy*, which emphasises innovation and creativity; *hierarchy*, which emphasises rules, stability and orderly decision-making processes and

market, which emphasises productivity and efficiency, alongside planning and management according to targets. The competing values theory is named as such because the criteria initially appear to be contradictory. In practice, it is found that organisations are characterised by a combination of competing values.

The relationships between mentoring styles and the various team culture dimensions, and mentoring effectiveness

The small number of studies that have examined the relationships between mentoring styles, different team culture dimensions, and mentoring effectiveness supported the approach that the fit between the mentor's mentoring styles and the various team culture dimensions influence mentoring effectiveness. In Jung & Avolio's (1999) study, two leadership styles were applied manipulatively to students: an executive-managerial style, with emphasis on accomplishing goals, and an individual style, with emphasis on developing relationships with the employees. These styles were applied under conditions that enabled group activity, and conditions that enabled individual activity. The results showed that students who worked in groups produced more ideas under an individual leader, whose leadership style supported group activity. Students who worked individually produced more ideas under an executive-managerial leader, whose leadership style was suited to individual activity.

Several comparative studies found that in individualistic cultures, the workers are motivated mainly by the wish to fulfill their individual needs and goals. In these cultures, maximum motivation is achieved via leaders who offer individual remuneration, while emphasising individual achievements. On the other hand, workers in organisations in collectivist cultures (such as Japan), demonstrated very high commitment to the organisation and its goals. They perceived their relationship with the organisation to be long-term, and greatly emphasised the centrality of the group as the most important organisational unit. In

cultures such as these, a leader who emphasises the accomplishment of common group aims is perceived as effective in comparison to other cultures (Hofstede, 1993; Triandis, 1995).

Therefore, there is a theoretical basis for the following group of hypotheses relating to the fit between mentoring styles and team culture, and mentoring effectiveness.

1. *Mentoring will be perceived as more effective when the mentoring style tends to executive function and the team culture is characterised as market or hierarchy.*

This hypothesis is based on the assumption that the market and hierarchy culture dimensions characterise the value of control, i.e. management.

2. *Mentoring will be perceived as more effective when the mentoring style will tend to be caring, and the team will be characterised by clan culture.*

This hypothesis is based on the assumption that clan culture is characterised by the welfare and support of individuals within a group.

3. *Mentoring will be perceived as more effective when the mentoring style will tend to emotional stimulation, and the team will be characterised by adhocracy.*

This hypothesis is based on the assumption that a mentor whose style has a high level of emotional stimulation takes risks and poses challenges. Adhocracy characterises those with a great need for challenge, stimulation and innovation.

4. *Mentoring will be perceived as more effective, as long as the mentoring style will tend to have meaning in all the team cultures examined.*

This hypothesis is based on previous studies. Lieberman et al. (1973) found that the more the mentors utilise sense making, the more they will be perceived as effective. In studies conducted by Berger (1995), Richardson and Piper (1986), sense making was also found to be significant and the most influential factor on learning. In the human resources literature, sense making was found to be a critical factor, which influences the absorption of workers and motivation (Greenhalgh and Jick, 1989).

Method

For the purpose of the study, a science and technology project was selected, which was operating in junior high schools within the Israeli science and technology school network. The mentoring for the project took place inside school with the teams of science and technology teachers over a period of two years. External mentors from the educational network accompanied the school teams. The continuing education programme was built to meet the school's needs, considering, for example, the teachers' experience and style of work, student population, equipment and laboratories. The project had two central objectives: (1) in the content field: to assimilate the Science, Technology & Society (S.T.S.) approach, which combines science, technology and society according to the national curriculum, implemented in the spirit of the team; (2) in the school development process: to empower the science and technology coordinator and to strengthen the school science and technology team.

The study participants were science and technology teachers in the educational network. They were teaching in comprehensive junior high schools in Israel, including 22 junior high school departments participating in the project, with the following distribution: 14 schools in northern Israel, three schools in central Israel and five schools in southern Israel. The sample included 169 teachers, with an average of nine teachers from each school. Study evaluators from the educational network distributed the questionnaires on two separate dates. On the first

date, approximately six months after the start of the continuing education, they distributed questionnaires about mentoring styles and team culture. On the second date, on the completion of the continuing education programme, they distributed the mentoring effectiveness questionnaire. To link each respondent's pair of questionnaires, while ensuring anonymity, the participants each received a unique pair of symbols identifiable only to themselves, to attach to their questionnaires. Teachers who received the questionnaire on completion of the mentoring programme had a 78% response rate. There were various reasons why teachers did not respond to the questionnaire: doubts about complete anonymity, the feeling that some of the questions were too sensitive and the unwillingness to give of their time to complete the questionnaire.

The distribution of the participants' demographic and employment data is presented in Table I.

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Variables and Study Measures

Mentoring style is defined as mentors' work and behaviour patterns in the field of group work, as seen and observed by their group participants (Lieberman et al., 1973). The questionnaire that measured the mentoring styles is based on the complete G.L.F.C questionnaire (Group Leadership Functions Scale, Conyne, 1975). It includes 28 items, scored on a five-point Likert scale ranging from 1 (low) to 5 (high). The Hebrew version of the questionnaire was prepared by Berger (1995), who reported on the following Cronbach's alpha coefficients for reliability: emotional stimulation (a=0.80), caring (a=0.85), meaning attribution (a=0.86) and executive function (a=0.76).

Organisational culture is defined as a shared belief and value system regarding social reality, including: organisational aims, decision-making process, management style, evaluation, and motivation (Schein, 1992). To diagnose the team culture in this study, the I.P.S. questionnaire was used, a tool developed by Krakower and Niwa (1985). The measure includes 16 items, scored on a five-point Likert scale ranging from 1 (low) to 5 (high). The reported Cronbach's alpha coefficients for the four measures of organisational culture were: clan (a=0.84), adhocracy (a=0.81), hierarchy (a=0.77) and market (a=0.78).

Mentoring effectiveness is composed of the effectiveness of the continuing education, and self-efficacy:

1. *The effectiveness of the continuing education* is the extent to which teachers perceive their success from an executive point of view. This study utilised a feedback questionnaire about the mentored teachers' perceptions of the success of the workshop (Nevo and Zakay, 1992). The questionnaire has five measures, from which one was chosen ─ the effectiveness of the workshop ─ due to its relevance to the study. This measure includes nine items. The Cronbach's alpha coefficient for reliability regarding the questionnaire according to Nevo and Zakay (1992), indicated 0.91, and according to Berger (1995), indicated 0.78.

2. *Self-efficacy* is the extent to which individuals believe in their capability to organise and perform the required actions to accomplish future goals (Bandura, 1997). Here also, the feedback questionnaire on perceptions of the success of the workshop was used (Nevo and Zakay, 1992). The measure chosen here was: the sense of capability to succeed at the job. This measure includes four items. The Cronbach's alpha coefficient for reliability in Berger's study (1995) indicated 0.82.

The theoretical model

Based on the theoretical model that was presented, the general theoretical model of the study was designed according to how it is presented in Figure 1.

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According to this model, mentoring styles that fit the various team culture dimensions are related to and affect mentoring effectiveness. Influence can be seen in the relationships examined, since information about the mentoring effectiveness was reported after the mentoring styles were applied among the various team cultures. Thus, mentoring style and team culture constitute independent variables. Mentoring effectiveness (composed of the effectiveness of the continuing education and teachers' self-efficacy) constitute dependent variables.

Findings

Since the mentors belonged to school teams, it was necessary to examine the extent to which the homogeneity of the teams was to be considered in the statistic analyses (Schriesheim *et al.*, 1995). For this purpose, the homogeneity measure $r_{wg(J)}$ was used. This generally follows the rule of thumb that when $r_{wg(J)}$ of a specific measure is greater than or equal to 0.7, the team is homogeneous (there is agreement) in the study variable, and therefore the teams, for which $r_{wg(J)}$ of a specific measure was found to be greater than or equal to 0.7, were considered homogeneous in this measure (Hofmann and Stetzer, 1996).

Table II presents averages, standard deviations, reliabilities, one-way ANOVAs and median r_{wg}.

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All Cronbach's alpha coefficients for reliability in the present study were acceptable, as their value was greater than 0.6 (Nunnally, 1978), when most of them ranged between 0.82 and 0.93. One-way ANOVA results showed that all the study variables were significantly different between the study teams (see F calculated). All median r_{wg} values ranged between 0.71 and 0.86, in other words: above the minimum accepted value of 0.7 (Schriesheim et al., 1995), so that homogeneity was found within each team, in addition to the differences between the teams. These findings necessitated continued analysis on the individual level, taking into consideration the team factor.

Team Culture Profiles

Team profile characteristics are important for identifying the team cultures, to support the study's hypotheses. The profiles' function is to outline similarities and differences among organisational sub-units, or in this case, science and technology teams (Schein, 1992; Chatman, 1988). The teams were sorted into different cultures on the basis of these similarities and differences.

The team culture profile characteristics were determined on the basis of the four different culture dimensions. These averages were calculated for science and technology teams, who participated in continuing education within the project framework. The average team scores were found to be higher in the clan (X=3.86) and market (X=3.76) dimensions, than in the adhocracy (X=3.71) dimension. Hierarchy average scores were the lowest of all (X=3.56).

To characterise and determine the culture to which the team belonged, to test the study hypotheses, the median was used. Each team's average was calculated for each of the four

culture dimensions. The median of all the participated teams for each dimension of culture perception was used as a benchmark for determining the team's culture profile. For example: teams with a higher score than the median team culture dimension have a high level of team culture (for the purpose of this study, they are determined as having a specific team culture) and teams who scored lower than the median team culture dimension have a low level of team culture (for the purpose of this study, they are determined as not having a specific team culture).

According to this distribution, it was found that the science and technology teams could be characterised according to the number of dimensions of the culture averages that are above the median of each culture dimension.

Mentoring Style Perception Profiles

To test the study hypotheses regarding the mentoring styles, the averages of the participating teams' perceptions of the four mentoring styles were calculated. The average scores for caring (X=4.00) and emotional stimulation (X=3.77) mentoring styles were found to be highest. The average scores for meaning attribution (X=3.64) and executive function (X=3.69) were found to be lowest.

In light of the results of the teams' homogeneity analysis, the mixed model was chosen as the statistics model, using the SAS MIXED procedure. This model gives expression to the nested structure of data: the teachers are nested into teams. The model examines linear relationships between two types of variables: fixed ─ for example, background variables, and random ─ for example, belonging to a team.

Study Hypothesis Findings

Hypothesis 1: Mentoring will be perceived as more effective when the mentoring style tends to executive function and the team culture is characterised as market or hierarchy.

To test the hypothesis, regressions that included interaction between the perceptions of executive function and market and/or hierarchy culture, and the two effectiveness measures (effectiveness of continuing education and teachers' self-efficacy) were examined (Table III).

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Hypothesis 1 was not strengthened. An executive mentoring style in hierarchy and market team cultures, or hierarchy and market culture combined, neither contributed positively to teachers' self-efficacy, nor did they contribute to their effectiveness of continuing education. Nevertheless, a positive and significant relationship was found between an executive mentoring style and both the effectiveness of the continuing education and teachers' self-efficacy, without considering the cultural factor.

Hypothesis 2: Mentoring will be perceived as more effective when the mentoring style will tend to be caring, and the team will be characterised by clan culture.

To test the hypothesis, regression that included interaction between the caring style and clan culture, and the two effectiveness measures (effectiveness of continuing education and teachers' self-efficacy) were examined (Table IV).

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Hypothesis 2 was not strengthened, as the interactions were found to be insignificant. In other words, mentor caring in team culture did not contribute to the effectiveness of the continuing education and teachers' self-efficacy.

Hypothesis 3: Mentoring will be perceived as more effective when the mentoring style will tend to emotional stimulation, and the team will be characterised by adhocracy.

To test the hypothesis, regression that included interaction between the emotional stimulation mentoring style and adhocracy, and the two mentoring effectiveness measures (effectiveness of continuing education and teachers' self-efficacy) were examined (Table V).

-----Insert Table V about here-----

Hypothesis 3 was not strengthened, as the interactions between mentor stimulation and adhocracy, both for effectiveness of continuing education and for self-efficacy were found to be insignificant. In other words, emotional stimulation of a mentor in adhocracy culture did not contribute to the mentoring effectiveness on both measures (effectiveness of the continuing education and teachers' self-efficacy).

Hypothesis 4: Mentoring will be perceived as more effective, as long as the mentoring style will tend to have meaning in all the team cultures examined.

Hypothesis 4 was strengthened. The relationships between the mentoring style of meaning attribution and the perception of the effectiveness of continuing education (B=0.821***), and between meaning attribution and teachers' self-efficacy (B=0.887***) were significant, and were positive for all the existing team cultures. In other words, meaning attribution contributed to the effectiveness of the continuing education in all the existing team cultures.

In sum, the teachers mentored by a meaning attribution style perceived the continuing education as more effective and themselves as having greater self-efficacy.

Discussion

The main study objective was to investigate whether the fit between mentoring styles and team culture contributes to mentoring effectiveness. The present study hypothesised that the encounter between mentoring style and the character of the team culture in which it is operating, will determine the mentoring outcomes. The main study findings indicated that the fit between mentoring styles and team culture did not contribute significantly to mentoring effectiveness. These findings can be explained by means of the 'limited range' phenomenon: The addition of a mentoring style to a team culture with similar characteristics adds only a little to the perception of mentoring effectiveness. A specific culture group with higher starting values than another culture group in the dependent variable (effectiveness of continuing education) will be unable to rise above the possible range of values (1-5 on the Likert scale), and thus, an additional variable, mentoring style, will make an insignificant contribution to the dependent variable (Appendix 1-Figure 2). It is possible that these findings can be explained as such, that in order to bring about a real change, it is necessary to exercise a mentoring style that is different from the team culture. This mentoring style is likely to stimulate the team to act differently, while instilling new foundations for thinking, norms, behaviour and learning.

The importance of the meaning attribution style found in this study corresponds to the literature. Meaning attribution is particularly relevant to this study, in which the school teams already have a shared meaning. Therefore, the mentor needs to break existing conventions and create a new meaning for existing group norms in order to introduce the change (Carole, 1994).

Theoretically, the study contributed to the design of a model that explains the effect of mentoring styles, assisted by the team's culture, on mentoring effectiveness. This model raises doubts regarding the perception that 'fit' between mentoring styles and team culture is necessary for improving mentoring effectiveness.

Methodologically, this study used a total homogeneity measure (r_{wg}), which enabled the measuring of the study variables on the individual level, while taking the team level into consideration. It was found that this type of measuring has seldom been used with Israeli school teams.

In practice, these findings will be able to assist mentors to exercise operation strategies. It will be possible to diagnose the team culture and planning the assimilation programme accordingly. In addition, these findings will assist in recruiting suitable mentors in accordance with their mentoring style and the team culture of the mentored teachers. Recruiting suitable mentors will contribute to school effectiveness.

Limitations and future research

The self-reported instrument was vulnerable to a same-source bias. In addition, by using self reports, results could have been influenced by 'social desirability' response, endangering the 'trueness' of the study findings. Since objective data of mentoring effectiveness were not available, the study focuses on teachers' self-reports. However, since this study focuses on teachers' perceptions of their specific mentors' effectiveness, rather than mentoring effectiveness in practice, it appears to be a suitable tool. It is recommended that the study be replicated using different data sources, including non self-report data (e.g., organisational records, supervisory reports).

It appears that these findings can be generalised beyond the Israeli science and technology teams. For example, for mentoring school teams in other countries and for other

school subjects, since the study variables have a general psychological character and psychometric qualities, which have been used previously in other fields.

In the present study, the assimilation of the new learning programme was measured with the completion of the mentoring process. In the future, evaluation methods should be developed for measuring mentoring effectiveness some time after the learning programme has been integrated into the classroom.

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Table I: Description of the study participants' background variables (N=169)

Background variable	N	%	Average	Standard deviation
Gender: women	123	76		
men	40	24		
Age	163		40.76	8.51
Education (years)	168		16.32	2.44
Seniority in Education	163		15.56	8.68
Seniority in school	164		9.54	6.89
Academic degree:				
Nonacademic	42	25.0		
Academic (B.A)	82	48.8		
Advanced Academic degree	44	26.2		

Note: Some of the participants did not respond to all the questionnaire items. Therefore, in some cases, N is lower than 169.

Table II: Averages, standard deviation, reliability, one-way ANOVA and median r_{wg} (N=169)

Index	Number of items in the present study	a in the present study	a in previous study	Average	Standard deviation	$F_{calculated}$	Med r_{wg}
Emotional stimulation	4	.82	.80[1]	3.77	.85	3.22 ***	.70
Caring	7	.88	.85[1]	4.00	.72	5.79 ***	.86
Meaning attribution	9	.88	.86[1]	3.64	.73	3.17 ***	.86
Executive function	8	.83	.76[1]	3.69	.68	3.59 ***	.83
Effectiveness of continuing education	9	.93	.78[1]	3.37	.92	1.90*	.73
Self-efficacy	4	.85	.82[1]	3.19	1.01	1.59*	.74
Clan culture	4	.92	.84[2]	3.86	.92	2.76 ***	.71
Adhocracy culture	4	.86	.81[2]	3.71	.87	3.27 ***	.74
Hierarchy culture	4	.87	.77[2]	3.56	.80	3.13 ***	.77
Market culture	4	.86	.78[2]	3.76	.80	2.43 **	.81

P*<.05
P**<.01
P***<.001
(1) - Berger, 1995
(2) - Quinn & Spreitzer, 1991

Table III. Regression coefficients (B) of the MIX model: Prediction of the effectiveness of the continuing education and teachers' self-efficacy by executive function, market and hierarchy culture (N=169)

	Effectiveness of continuing education	Self-efficacy
Executive function	1.082***	1.000***
Market culture	1.712*	1.546
Executive function X Market culture	-0.400	1.546
Executive function	1.104***	1.027***
Hierarchy culture	2.212**	2.229*
Executive function X Hierarchy culture	-.526**	-.572**
Executive function	1.213***	1.110***
Hierarchy & Market culture	2.222**	2.078**
Executive function X Hierarchy & Market culture	-.520**	-.533

P*<.05, P**<.01, P***<.001

Table IV. Regression coefficients (B) of the MIX model: Prediction of the effectiveness of the continuing education and teachers' self-efficacy by caring and clan culture (N=169)

	Effectiveness of continuing education	Self-efficacy
Caring	.843***	.759***
Clan culture	.436	-.073
Caring X Clan culture	.098	-.019

P***<.001

Table V: Regression coefficients (B) of the MIX model: Prediction of the effectiveness of the

continuing education and teachers' self-efficacy by emotional stimulation and adhocracy

culture (N=169)

	Effectiveness of continuing education	Self-efficacy
Emotional stimulation	.870***	.876***
Adhocracy culture	1.250	1.146
Emotional stimulation X Adhocracy culture	-.261	-.293

P***<.001

Independent variables   Dependent variables

Mentoring styles:

Meaning attribution

Caring

Executive function

Emotional stimulation

Mentoring effectiveness

Effectiveness of continuing education

Self-efficacy

Team culture:
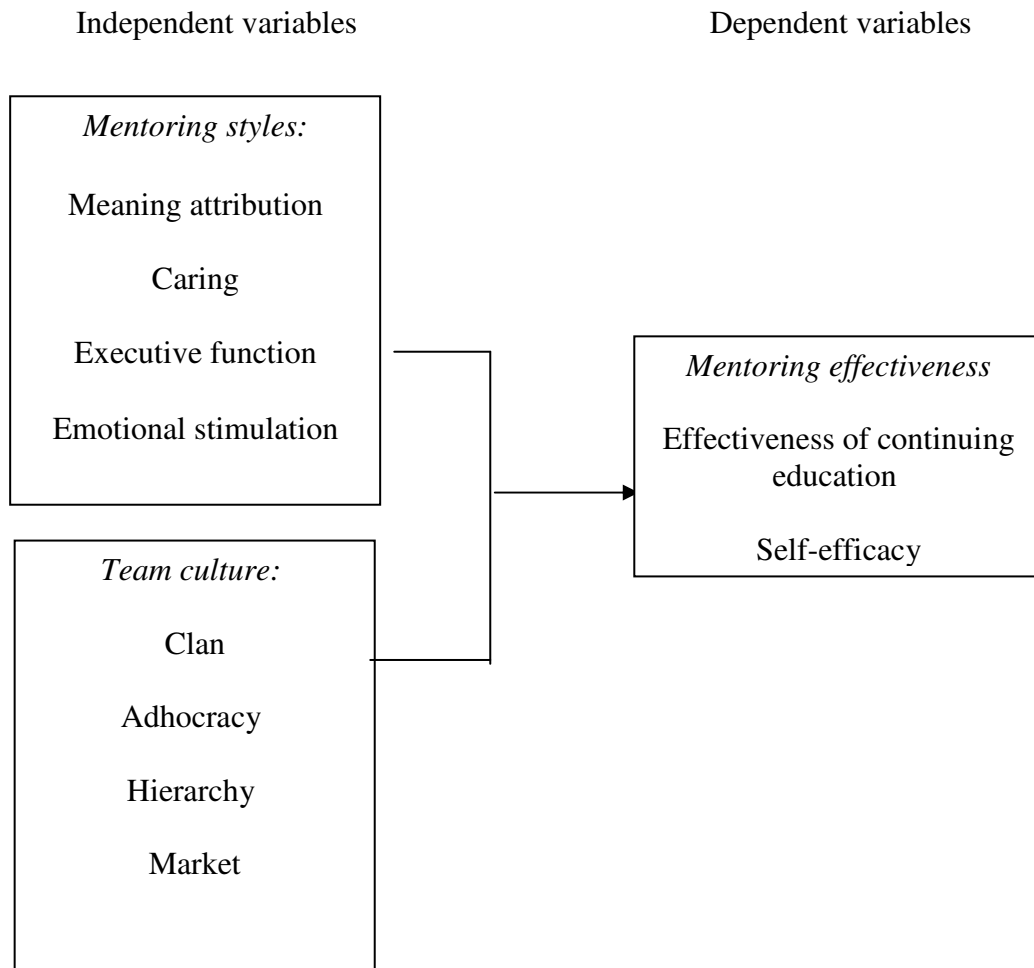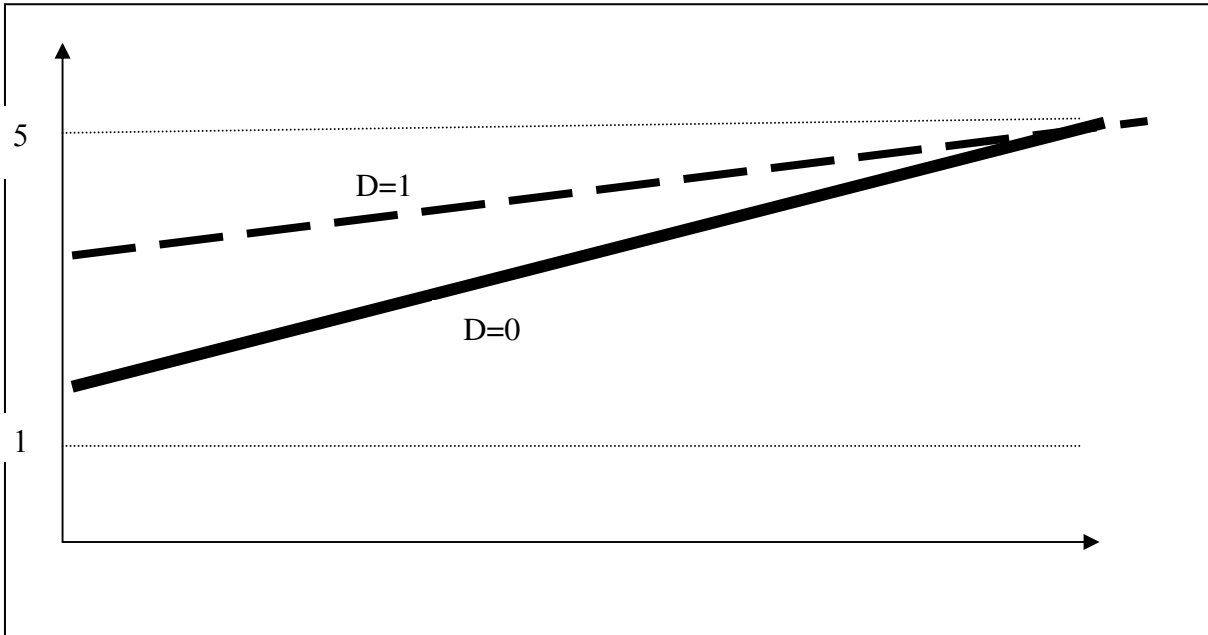
Clan

Adhocracy

Hierarchy

Market

Figure 1: The theoretical model of the study

Appendix 1

Effectiveness of
continuing education

Mentoring style

Figure 2: Explanation of the phenomenon of the 'limited range'

Explanation of the findings of Hypothesis 1:

The regression equation that was accepted:
1) $Y=B_0+B_1*X+B_2*D+B_3*X*D$
When:
Y- Effectiveness of continuing education
B0-Constant
B1- Executive function coefficient

B2- Adhocracy culture coefficient

B3- The interaction coefficient between Executive function and Adhocracy culture
X- Executive function style
D- Adhocracy culture

The graph in Figure 2 represents the equation, when the broad line represents a non-hierarchy culture (D=0) and the broad broken line represents a hierarchy culture (D=1).
The negative value accepted in the interaction between hierarchy culture and executive mentoring style can be explained by the fact that for teams with hierarchy culture, the starting value of the perception of effectiveness is higher than for other teams. In this manner, the insignificant addition of the executive function mentoring style in teams with hierarchy culture is lower than in teams that are not defined as such, because of the 'limited range' phenomenon — the range of possible values that is defined by the effectiveness (1-5).