THE RELATIONSHIP BETWEEN LEARNING CLIMATE AND STUDENTS' ACHIEVEMENT AT RAMKHAMHAENG UNIVERSITY

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ABSTRACT

Learning climate is environment in the teaching and learning process. It can facility or obstruct the readiness to learning among students. Teachers should manage the class and create a climate that facilitates students' learning. An understanding of the contributions of learning climate toward students' achievement would benefit educators to organize appropriate learning climate for students. However, the research in this area is scarce. This research project aims to assess the perceived learning climate at Ramkhamhaeng University as well as the students' performance. The samples of the student consisted of 474 students in the MBA program at Ramkhamhaeng University. Learning climate in seven aspects was measured through a questionnaire. Students' grades, GPA in the bachelor level, and current GPA in the graduate level were used as the proxy for students' achievement. It was found that teachers' relationship with student, assessment and evaluation, and teaching process were rated at the highest level. Curriculum, relationship with colleagues, facility, and academic service were rated at the high level. Current GPA was found to be related to students' learning climate.

Introduction

A university is an organization of people. This research paper investigated the learning climate through the organizational climate perspective. Organizational climate can create commitment and performance among personnel. It is expected that learning climate could also contribute to students' commitment and performance. Students comprise an important part of the university. They interact with administrators, teachers, staff, and other organizational members. Administrators and all personnel have the duty to organize the teaching and learning process and other facilities so as to offer quality education to students. All relevant parties interact in order to deliver quality education to students. The co-ordination of personnel and resources of a university creates an atmosphere in which the teaching and learning process take place. Such atmosphere becomes the context in which teachers teach and students study and learn the content of the subjects. Perceptions of students regarding the teaching and learning form their attitudes and eventually result in learning behaviors.

Learning climate is considered one of the important factors leading to students' learning and eventually achievement. Kast and Rosenzweig (1985) suggested that an understanding of an individual's perceptions was the basis for a better understanding of his/her behaviors. The understanding of students' perceptions towards the context of the learning process would yield a better understanding regarding their learning behaviors. Hence, this paper aimed to investigate the teaching and learning climate in classrooms at Ramkhamhaeng University. Moreover, the climate was associated with students' achievement in term of grades from the subject and their current GPA's. GPA from the bachelor level was also investigated since it might influence the students' expectation, and hence perception, regarding the learning climate. This study would provide a better understanding about the dimensions of the learning climate.

Literature

Dessler (1976) suggested that organization climate was the results of the understandings or assessment as well as feelings a person had toward his/her organization. In other word, organization climate is the perceptions of people in the organizations regarding the environment that influences personnel and their performance (HayGroup, 2002). Mathisen and Einarsen

(2004) concluded that organization climate is the perceptions of personnel regarding the environment in their works and the sharing of information within the organization. Organization climate describes the characteristics of the working environment of an organization. Climate of an organization is different from climate of other organization. It influences the expectations of people regarding the functions of the organization and the behaviors of people (Brown & Moberg, 1980). In conclusion, organization climate is the perceptions of people regarding the general environment within the organization. Stringer (2002) supported that organization climate could drive the motivations and performance. In the same token, an appropriate learning climate could stimulate students' motivation to study and their achievement. Stringer described that organization climate consisted of 6 dimensions: the organization structure, standards, responsibility and empowerment, recognition, colleagues' support, and commitment. These were modified into dimensions related to the classroom context.

Quality Value Research (2003) conducted a survey and reported that organization climate or atmosphere was the key success of the organization because it reflects the attitudes and behaviors of personnel. Educators should create a good climate that can facilitate students' learning because students would assess their environment and form their attitudes towards the subject and overall learning.

Organization climate was related to learning and innovation of personnel (Montes, Moreno, & Fernández, 2004). Within a positive climate, personnel would be cooperative, share their knowledge, and support the colleagues (Janz & Prasarnphanich, 2003). The exchange of knowledge leads to the learning throughout the organization. Litwin & Stringer (1968) suggested that organizations' positive climate could improve personnel's quality of life. A pleasant climate creates understanding and teamwork among organizational members, i.e., students and teachers. Structure, rules and regulations of the organization is one of the dimension that governs the ways educators work. They have to interact with administrators and colleagues throughout their work life in order to deliver teaching. Good relationships with colleagues help to create a pleasant climate to work in. Naturally, this affects personnel's willingness and effectiveness in teaching and learning process (Freedman, 2005). The changing of classroom climate would influence the performance of a person (Gibson, 1991). Students assess the learning climate and form expectations

toward the university, class and teachers. These expectations influence the ways they study and learn. The changing of learning climate would create uncertainty and unexpected results for students. Evans, Harvey, Buckley & Yan (2009) suggested the relationship between classroom climate and student development. It was proposed that key features of a healthy classroom climate are related to emotional factors, teaching and learning management, and academics. In order to study the learning climate, we have to assess both physical and psychological aspects of the university. The learning climate in this study consisted of teaching and learning process, academic service, teachers' relationship with student, students' relationship with colleagues, learning facility, curriculum, and the assessment and evaluation (Paonil, 1992).

Methodology

The population in this study was MBA students in the special program at the main campus of Ramkhamhaeng University during the academic year 2012. Convenience sampling was performed at the faculty of Business Administration during the month of August 2012. The total number of samples was 474 students. The instrument was based on Paonil's (1992) which examined the teaching and learning process; academic service; relationship between teachers and students; relationships among students; facility; curriculum; and evaluation and assessment dimensions of the learning climate. Items showing the teachers', university's, staff's, students' behaviors relevant to the learning climate dimensions were posed and students were asked to rate them on a five-point Likert scale ranging from 1 equals to rarely to 5 equals to very often. The samples were asked to think of one class they took in previous semester and respond to the questions. Grade obtained from the subject, GPA in the bachelor level, and current GPA in the graduate study were used as the proxy for students' achievement.

Results

The samples consisted of 102 males and 366 females. 372 students belong to the 20-35 age group while 96 students belong to the 36-50 age group none were older than 50 years old. 258 students were in the staff level, 150 students were in the low level managerial level, and 48 were higher level manager and owners. 102 students were from the marketing major, 78 from

accounting major, 114 from management major, and 168 from finance and banking major. The demographic data of the samples are shown in Table 1.

TABLE 1: Demographic data of the samples

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	102	21.5	21.8	21.8
	Female	366	77.2	78.2	100.0
	Total	474			
Missing		6			
Total		474	100.0		

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-35	372	78.5	79.5	79.5
	36-50	96	20.3	20.5	100.0
	Total	468	98.7	100.0	
Missing		6	1.3		
Total		474	100.0		

Job position					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Staff	258	54.4	56.6	56.6
	Low Mgr	150	31.6	32.9	89.5
	Middle/High/Owner	48	10.1	10.5	100.0
	Total	456	96.2	100.0	
Missing		18	3.8		
Total		474	100.0		

Major					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Marketing	102	21.5	22.1	22.1
	Accounting	78	16.5	16.9	39.0
	Management	114	24.1	24.7	63.6
	Finance and Banking	168	35.4	36.4	100.0
	Total	462	97.5	100.0	
Missing		9.00	12	2.5	
Total		474	100.0		

Dimensions of learning climate

The samples reported that relevant parties exhibited behaviors contributing to the learning climate rather often (mean = 4.07, SD = 0.35). The behavioral dimensions were ranked from teacher-student relationship (mean = 4.30, SD = 0.51); evaluation and assessment (mean = 4.26, SD = 0.46); teaching process (mean = 4.25, SD = 0.37); curriculum (mean = 4.15,

SD = 0.48); relationship with colleagues (mean = 3.93, SD = 0.52); facility (mean = 3.83, SD = 0.58); and academic service (mean = 3.73, SD = 0.55) as shown in Table 2.

TABLE 2: The means and standard deviations of climate dimensions

Climate Dimensions	Mean	Std. Deviation
Teaching process	4.2514	.37072
Academic service	3.7300	.54885
Teacher student relationship	4.3038	.51354
Colleague relationship	3.9334	.52141
Facility	3.8249	.58155
Curriculum	4.1544	.47817
Assessment and evaluation	4.2555	.45571
Overall Climate	4.0678	.35020

Perceived learning climate among student groups

Male and female students did not report significant different perceptions regarding the learning climate. Job position did not generate any significant differences among the perceptions. The only significant difference found was the difference between students in the age group 20-35 vs. 36-50 with the mean difference of 0.2092 ($F = 29.051$, $p < .05$) as shown in Table 3.

TABLE 3: The comparison of perceptions towards overall climate between age groups

	age	N	Mean	Std. Deviation
Overall Climate	20-35	372	4.1162	.35822
	36-50	96	3.9070	.25012

ANOVA					
Climate					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.338	1	3.338	29.051	.000
Within Groups	53.549	466	.115		
Total	56.888	467			

The perceived differences between 20-35 and 36-50 age groups were found in the dimensions of academic service (mean = 3.79 vs. 3.55), colleague relationship (mean = 3.99 vs. 3.74), facility (mean = 3.95 vs. 3.38), curriculum (mean = 4.22 vs. 3.94), and assessment (mean = 4.29 vs. 4.14).

TABLE 4: Mean differences between 20-35 and 36-50 age groups among the climate dimensions

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
teaching process	Between Groups	.230	1	.230	1.682	.195
	Within Groups	63.829	466	.137		
	Total	64.060	467			
academic service	Between Groups	4.406	1	4.406	15.002	.000
	Within Groups	136.876	466	.294		
	Total	141.283	467			
teacher student relationship	Between Groups	.017	1	.017	.065	.800
	Within Groups	123.513	466	.265		
	Total	123.531	467			
colleague relationship	Between Groups	4.685	1	4.685	17.735	.000
	Within Groups	123.113	466	.264		
	Total	127.798	467			
Facility	Between Groups	25.135	1	25.135	87.827	.000
	Within Groups	133.363	466	.286		
	Total	158.498	467			
Curriculum	Between Groups	5.684	1	5.684	26.219	.000
	Within Groups	101.020	466	.217		
	Total	106.703	467			
Assessment	Between Groups	1.673	1	1.673	8.157	.004
	Within Groups	95.590	466	.205		
	Total	97.264	467			
Climate	Between Groups	3.338	1	3.338	29.051	.000
	Within Groups	53.549	466	.115		
	Total	56.888	467			

Students in different majors reported significant different perceived learning climate ($F = 6.863$, $p < .05$) as shown in table 5.

TABLE 5: ANOVA test of perceived learning climate among students in different majors

ANOVA					
Climate					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.447	3	.816	6.863	.000
Within Groups	54.435	458	.119		
Total	56.882	461			

The LSD post hoc comparison revealed that students in Marketing major perceived the climate differently from student in Accounting, Management, and Finance with the mean differences of .13763, .19357, and .16945 respectively (p's < .05). Significance differences were not found

among students in all other majors (as shown in table 6 the mean values of perceived learning climate of students in each major are reported in table 7.

TABLE 6: The LSD post hoc analysis of learning climate among students in different majors

Multiple Comparisons			
Dependent Variable: climate LSD			
(I) major	(J) major	Mean Difference (I-J)	Sig.
Marketing	Accounting	-.13763*	.008
	Management	-.19357*	.000
	Finance and banking	-.16945*	.000
Accounting	Marketing	.13763*	.008
	Management	-.05594*	.270
	Finance and banking	-.03182*	.501
Management	Marketing	.19357*	.000
	Accounting	.05594*	.270
	Finance and banking	.02412*	.565
Finance and banking	Marketing	.16945*	.000
	Accounting	.03182*	.501
	Management	-.02412*	.565
*. The mean difference is significant at the 0.05 level.			

TABLE 7: Mean values of perceived learning climate of students in each major

Descriptives			
Climate			
	N	Mean	Std. Deviation
Marketing	102	3.9410	.37455
Accounting	78	4.0787	.36506
Management	114	4.1346	.33604
Finance and banking	168	4.1105	.32133
Total	462	4.0737	.35127

The relationship between learning climate, GPA in the bachelor level, and current GPA in the graduate level

There were significance relationships between grade obtained from the subject and GPA in bachelor level ($r = .389$, $p < .05$) as well as current GPA ($r = .486$, $p < .05$). Grade obtained from the bachelor level was found to be associated with current GPA in the graduate level ($r = .444$, $p < .05$).

Perceived climate was not significantly associated with grade and GPA in the bachelor level. Only current GPA in the graduate level was found to be related to perceived climate ($r = -.144$, $p < .05$) (Table 8).

TABLE 8: Pearson Correlation coefficients among subject grade, GPA in bachelor level, current GPA, and learning climate

		grade	GPA bachelor	GPA gradate
GPA_bachelor	Pearson Correlation	.389**		
	Sig. (2-tailed)	.000**		
GAP_graduate	Pearson Correlation	.486**	.444**	
	Sig. (2-tailed)	.000**	.000**	
Learning climate	Pearson Correlation	.084**	-.018**	-.144**
	Sig. (2-tailed)	.092**	.699**	.002**

$^{**}p < .01$

Significant associations were found between grade and the dimensions of curriculum ($r = .119$, $p < .05$); and evaluation and assessment ($r = .225$, $p < .05$). GPA obtained from bachelor level was significantly associated with the dimensions of academic services ($r = -.298$, $p < .05$); facility ($r = -.123$, $p < .05$); curriculum ($r = .133$, $p < .05$); and evaluation and assessment ($r = .185$, $p < .05$). Current GPA was significantly associated with teaching and learning process ($r = -.151$); academic service ($r = -.179$); and facility ($r = -.240$) (Table 9).

TABLE 9: Pearson Correlation coefficients between students' achievement and learning climate dimensions

	grade	GPA bachelor	GPA graduate	teaching process	Academic service	teacher student relation	Colleague relation	facility	curriculum
grade									
GPA bachelor	.389**								
GAP graduate	.486**	.444**							
teaching process	.012	.054	-.151**						
academic service	-.070	-.298**	-.179**	.163**					
teacher student relation	.074	.007	-.036	.449**	.300**				
colleague relationship	.033	.040	-.029	.399**	.384**	.556**			
facility	.031	-.123**	-.240**	.152**	.564**	.374**	.405**		
Curriculum	.119*	.133**	-.050	.402**	.324**	.573**	.532**	.375**	
Assessment	.225**	.185**	-.022	.530**	.193**	.600**	.559**	.339**	.598**

$^{*}p < .05$; $^{**}p < .01$

Discussion and conclusion

Students in the 20-35 age group perceived the learning climate differently from students in the 36-50 age group. Younger students perceived that relevant parties exhibit behaviors pertaining to learning climate more often than the elders in all dimensions. The younger and older age groups' perceptions regarding academic service and relationship among colleagues were different but both fell in the "often" or "high" level. The difference was highest regarding the perception regarding the physical facility. Students in the older age group perceived the facility offered was at the medium level while the youngsters reported the found the facility were offered at the high level. Older students wanted the university to improve the physical facilities. They were important contributors for learning climate among elder students rather than younger students. The younger students perceived the curriculum and assessment were offered at the highest level but older students perceived they were offered at the high level. They mean differences were little but they fell into different level of perception.

The elders perceived that teachers/university exhibited behaviors related to the assessment and evaluation more often than any other behaviors, the physical facility was offered at the lowest degree. The younger students also perceived that the university emphasized highest on the assessment and evaluation while lowest on the academic service dimension.

Students in the marketing major perceived relevant parties exhibited less behavior in all except facility dimensions than students in other majors. In the facility dimension, marketing major students' perception was at the second from lowest level while accounting major reported they perceived the facility was offered at the lowest level.

Naturally, GPA obtained from the bachelor level was related to current GPA and grade from the subject. It is likely that students with higher baccalaureate GPA are more studious and should obtain higher grades in several subjects which results in graduate level GPA.

Grade from one subject is an inaccurate indicator for current GPA. Learning climate is related to current GPA but not grade from the subject. Climate was inversely associated with current GPA. Students who had higher current GPA reported less perceived levels of climate dimensions. Students with lower current GPA reported higher perceived levels of climate dimensions. It is likely that students with higher GPA's seek to see relevant

parties improve the climate dimensions. They are likely to be more demanding for climate contributing to their study.

While baccalaureate GPA was not associated with overall learning climate, it was related to academic and facility dimensions. The associations were negative. Students with higher baccalaureate GPA reported lower degree of perceived offering regarding the academic service and facility. They are likely to expect more or better services and/or facility in the learning climate. In the similar manners, current GPA in the graduate level was associated with teaching and learning process, academic, and facility.

In conclusion, academic service and facility were reported as too low by students who had higher achievement level as compared to students with lesser achievement level.

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