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## The Relationship between Personality Types, Learning Styles and Problem Solving Approach of Technical and Vocational Education Students

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**Keywords:** Personality types, learning styles, problem solving approach, technical and vocational students

### ABSTRACT

Personality types and learning styles play an important role in higher education. They represent different individual preferences and strengths in learning; and can be a stimulus for developing new ways of learning. Engineering Drawing is one of the subjects for training students to become experts in graphic communication. Students who learn Engineering Drawing acquire a strong foundation, which enable them to work in the field of engineering or to continue their studies. This research reported here focused on the relationship between personality types, learning styles and problem solving at visualization level among final year Technical and Vocational Education (TVE) students in University Technology Malaysia. The Eysenck Personality Questionnaire (EPQ), Kolb Learning Styles Inventory (LSI) and Hatta Effective Problem Solving Approach were used to measure the different personality types, learning styles and effective problem solving for engineering drawing respectively. A total of 33 respondents from three different areas of TVE specifically Civil, Electrical and Mechanical Engineering were randomly selected as samples. The results showed that phlegmatic personality type students tend to have divergent learning style, followed by convergent and accommodator learning styles. The results also implied that sanguine personality type students tend to possess divergent learning style, followed by convergent learning style, while the melancholic personality type students preferred divergent and convergent learning styles. The method used by students to solve engineering drawing problems is a combination of imagination and sketching. However there is no difference amongst students with different personalities and learning styles in solving engineering drawing problems.

### INTRODUCTION

Ancient Greek philosophers had a good advice for us – "Know Yourself". This is a useful advice, especially when we discuss about learning in higher education. With our limited knowledge, it is difficult to make rational choices (Eysenck, 1975) about learning. The differences that exist between personality type and learning style are aspects that represent individual differences which further complicates learning.

However, it is crucial to know the difference(s) so as to achieve success in

addition to allowing the individual to know their behavioral strengths and weaknesses in a more objective light (Eysenck, 1975; Shepherd, 2001). Miller (1991) also concluded that personality based learning style provides a more useful conceptual basis for understanding individual differences in learning. According to Heinström (2000), personality traits are expressed in learning styles, which are in turn reflected in learning strategies, which eventually produce a certain learning outcome.

Engineering Drawing is one of the subjects used to train students to become experts in graphic communication. Students who learn engineering drawing will acquire a strong foundation, therefore enabling them to work the field of engineering or to continue their studies. In the engineering world, Engineering Drawing is the medium of communication. It relates between theory and the picture of reality. It provides an accurate and complete picture for every object in terms of shape and size (Widad and Adnan, 2000).

According to Giesecke (1995), Engineering Drawing requires a mind with the ability to see an image in 3-dimensions. Information and specifications from the real object must be transferred to a drawing. Likewise, interpretation of information from a drawing to produce a reality must occur. The transfer from reality to a drawing and vice versa is not an easy task. It requires a teaching-learning process that encourages the use of mind literacy, which is the use of both hemispheres in thinking. Problem solving using mind literacy thinking style will generate students who are innovative, creative, critical and dynamic (Widad and Adnan, 2000). Therefore, teachers who are responsible for developing such students must be physically and mentally prepared (Angelika, 1987).

#### STATEMENT OF PROBLEM

To determine the relationship between personality types, learning styles and problem solving at visualization level among the final year Technical and Vocational Education (TVE) students in University Technology Malaysia (UTM). Expectations for this research were to provide an assessment instrument in Malay Language for educators to define students personality types and learning styles based on Eysenck Personality Questionnaires (1975) and Learning Style Inventory Kolb (1976). To also suggest a model of problem solving approach based on Hatta Effective Problem Solving Approach (2001).

#### RESEARCH OBJECTIVES

The specific objectives of the research were to:

1. Investigate the personality types among the final year TVE students in UTM.
2. Investigate the learning styles among the final year TVE students in UTM.
3. Determine the relationship between personality types and learning styles among the final year TVE students in UTM.
4. Identify the problem solving approach that students applied to solve Engineering Drawing Problems in Auxiliary View Drawings.
5. Examine the relationships between personality types, learning styles and problem solving at visualization level in Auxiliary View Drawings among the students.

#### RESEARCH METHODOLOGY

A case study design method with a qualitative approach was employed in this research project. Methods of data collection include observations, documentations, questionnaires and interviews (for Engineering Drawing Problem Solving). However, data for personality types and learning styles were collected through questionnaires. The gathered data were analyzed and presented as percentages, frequencies, means and graphs. Qualitative data were analyzed using triangulation method in single-case and cross-cases.

Sixty students from a population of 102 final year Bachelor of Technology with Education students specializing in Civil, Electrical and Mechanical Engineering were selected randomly as samples. The samples selection was done using the proportionate cluster sampling procedure (Wiersma, 1991). However, 27 of the sample did not respond to the questionnaire and were excluded from the research. Then, eight students who excelled in solving auxiliary view drawing problems were interviewed to determine the best pattern of problem solving. Purposeful sampling was used to select the samples.

The instrument used for data gathering comprised three parts namely; the restructured Eysenck Personality Questionnaire (EPQ) in the first part, the Kolb Learning Styles Inventory (KLSI) in the second part, and closed-ended questions related to Auxiliary View Drawing in the third part. There were a total of 120 items in EPQ, 9 items in KLSI and 3 items in Auxiliary View Drawing Problem Solving Inventory. The reliability index for EPQ and KLSI were 0.83 and 0.82 respectively whilst experts in Engineering Drawing verified the Auxiliary View Drawing Problem Solving Inventory.

### RESULTS AND DISCUSSIONS

Tables 1-4 show the results of this research. *Figs. 1 to 3* are graphic representations of respondents' personality types, learning styles and the problem solving approach for auxiliary views.

To determine the students' personality types, data collected were analyzed into two dimensions: Introversion-Extroversion and Emotional Stability – Emotional Instability. These two dimensions intersect each other and form four temperaments that represent the personal categorical personality types, namely Melancholic, Phlegmatic, Sanguine and Choleric. For the Introversion-Extroversion dimension, 66.67% of students were inclined towards the introvert personality while 33.33% showed extrovert personality. In the Emotional Stability–Emotional Instability dimension, a majority of respondents were emotionally stable and the rest (36.36%) were emotionally unstable as illustrated in Table 1. The results showed that students possess the following personality types: Phlegmatic, Melancholic, Sanguine and finally Choleric. *Fig. 1* shows graphically the personality types of respondents.

More than 40% of students possess the abstract conceptualization learning style as shown in Table 2. An approximately same number of students have the concrete experience or active experimentation learning style. Only about 8% are included towards the

TABLE 1  
Respondents' personality types

Dimension Personality	f	Percentage (%)
<i>Introversion-Extroversion</i>	33	100
Introversion	22	66.67
Extroversion	11	33.33
<i>Emotional Stability</i>	33	100
Stable	21	63.64
Unstable	12	36.36
<i>Categorical Personality</i>		
Melancholic	8	24.25
Phlegmatic	14	42.42
Sanguine	7	21.21
Choleric	4	12.12
Total	33	100

reflective observation learning style. To investigate students learning styles, data collected were analyzed into four categories: accommodator, divergent, convergent and assimilator. The results indicated that more than 50% of students showed divergent learning style. About 18% of them possess the assimilator learning style, about 15% tended to have convergent learning style while about 12% showed the accommodator-learning style. *Fig. 2* shows a graphic representation of learning styles.

The findings indicated that phlegmatic personality type students tended to have divergent learning style, followed by convergent and accommodator learning styles. The results also implied that sanguine personality type students tended to possess divergent learning style, followed by convergent learning style, while the melancholic personality type students preferred divergent and convergent learning styles as shown in Table 3.

Table 4 illustrates the demography of the eight best respondents selected to determine auxiliary view drawing problem solving approach. From the data collected through interviews, observations and documentations,

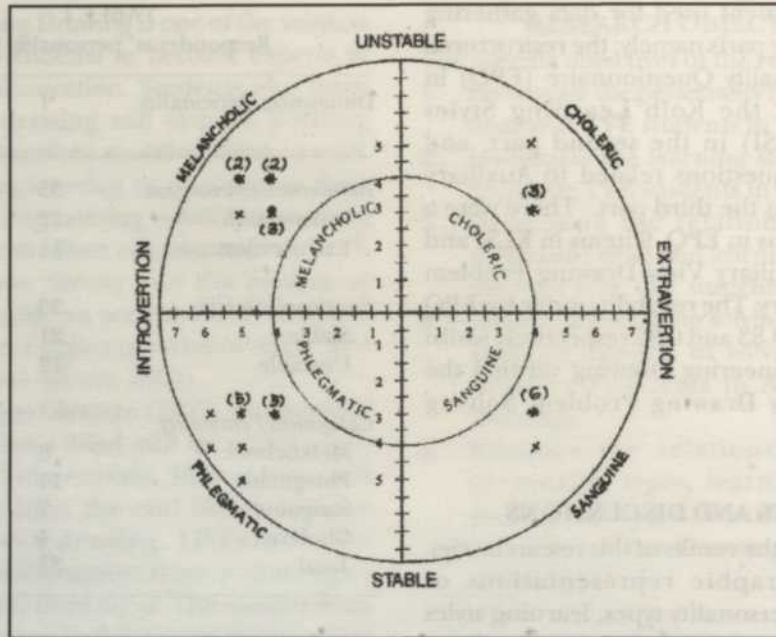


Fig. 1: Graph personality types of respondents

Note: \* = coordinate with frequency more than 1 and the number beside showed the real frequency of that coordinate.

TABLE 2  
Respondents' learning style

Dimension Learning Style	f	Percentage (%)
Concrete Experience (CE)	8	22.22
Reflective Observation (RO)	3	8.34
Abstract Conceptualization (AC)	16	44.44
Active Experimentation (AE)	9	25.00
Total	36	100
Categorical Learning Style		
Accommodator	4	12.12
Divergent	18	54.55
Convergent	5	15.15
Assimilator	6	18.18
Total	33	100

Note: 3 of the respondents have 2 types of Dimension Learning Style

the students showed a complementary application of the two styles of visualization. All respondents, regardless of their learning style and personality types use imagination and sketching to solve auxiliary view drawing problems. The combination usage of imagination and sketching which resulted in visualization enable these students to search for an alternative solution that is more effective. Fig. 3 shows the detailed approach used by the eight best students to solve auxiliary view drawing problems.

Surprisingly most of the TVE students tend to be introverts and emotionally stable. Introverts prefer order in life (Eysenck, 1975), a quality that will assist these future teachers to be systematic. And being emotionally stable with positive thinking and self-control will enable them to be confident and disciplined teachers. For TVE students, being introverts is not something out of the ordinary, since they spend much time working

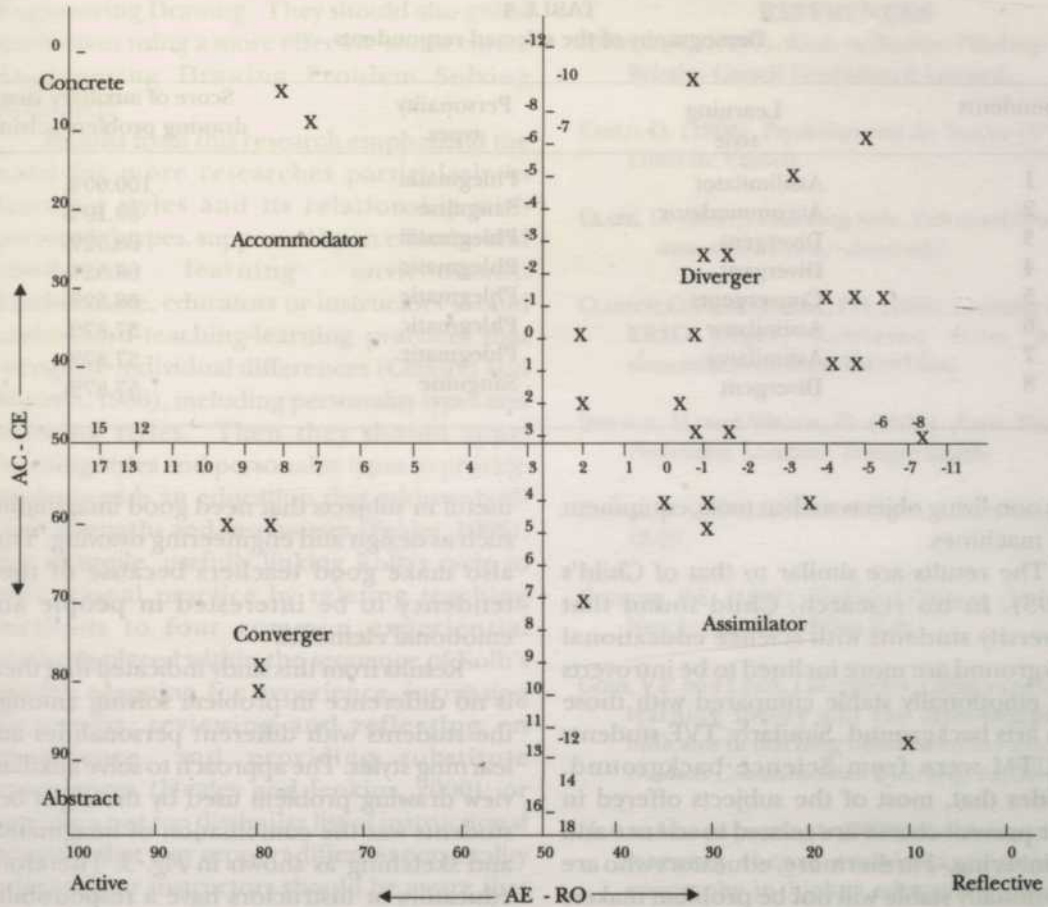


Fig. 2: Grid learning styles of respondents visualization ability  
 Note: \* Respondent that did not following the specific step.

TABLE 3  
 Association between categorical learning style & categorical personality

C.L.S	Melancholic		Phlegmatic		Sanguine		Choleric		T
	f	%	f	%	f	%	f	%	
Accommodator	1	3.03	1	3.03	1	3.03	1	3.03	4
Divergent	4	12.12	7	21.21	5	15.15	2	6.06	18
Convergent	1	3.03	3	9.09	1	3.03	0	0	5
Assimilator	2	6.06	3	9.09	0	0	1	3.03	6
Total	8	24.24	14	42.42	7	21.21	4	12.12	33

Note: C.P=Categorical Personality, C.L.S=Categorical Learning Style.



TABLE 4  
Demography of the selected respondents

Respondents	Learning style	Personality types	Score of auxiliary view drawing problem solving
1	Assilimilator	Phlegmatic	100.00%
2	Accommodator	Sanguine	89.19%
3	Divergent	Phlegmatic	68.52%
4	Divergent	Phlegmatic	68.52%
5	Convergent	Phlegmatic	68.52%
6	Assimilator	Phlegmatic	57.87%
7	Assimilator	Phlegmatic	57.87%
8	Divergent	Sanguine	57.87%

with non-living objects such as tools, equipment and machines.

The results are similar to that of Child's (1993). In his research, Child found that university students with science educational background are more inclined to be introverts and emotionally stable compared with those with arts background. Similarly, TVE students in UTM were from Science background. Besides that, most of the subjects offered in their present course are related to science and engineering. Furthermore, educators who are emotionally stable will not be problem makers compared to those who are emotionally unstable (Child, 1993). They possess high self-confidence, calm when facing problems, controlled and act rationally to achieve their aims (Shepherd, 2002). Results also showed that TVE students tend to have phlegmatic personality. According to Eysenck (1975), phlegmatic personalities are passive, careful, thoughtful, peaceful, controlled, reliable, even-tempered and calm.

In learning style, TVE students showed the tendency towards the dimension abstract conceptualization with a diverging categorical learning style. Kolb (1984) emphasized that a high score in abstract conceptualization indicates an analytical, conceptual approach to learning that relies heavily on logical thinking and rational evaluation. Possessing a divergent learning style is an advantage to TVE students since their excellent imaginative ability will be

useful in subjects that need good imagination such as design and engineering drawing. They also make good teachers because of their tendency to be interested in people and emotional elements.

Results from this study indicated that there is no difference in problem solving amongst the students with different personalities and learning styles. The approach to solve auxiliary view drawing problem used by the eight best students was the combination of imagination and sketching as shown in Fig. 3. Therefore, educators or instructors have a responsibility to create a learning environment that is most responsive to the unique needs of learners according to personality types and learning styles help students understand themselves better as they also understand better why others may behave differently. A further benefit is individual strengths can be acknowledged and honored (Goby and Lewis, 2001).

In addition, students will be able to modify their behavior when confronted with problems related to people or in a difficult learning situation especially in Engineering Drawing subjects. Beside students, educators or instructors gain benefits too. By reflecting on their students' personality types and learning styles, they can be rectifying a mismatch that might occur between their own teaching styles and their students learning styles. Beside, these teachers can provide a more appropriate motivation to students when teaching

Engineering Drawing. They should also guide students in using a more effective and accurate Engineering Drawing Problem Solving Approach.

Results from this research emphasized the need for more researches particularly in learning styles and its relationship with personality types, supported by an effective and conducive learning environment. Furthermore, educators or instructors should understand teaching-learning practices that recognize individual differences (Claxton and Murrell, 1988), including personality types and learning styles. Then they should apply learning styles and personality types to provide students with an education that address both their strengths and weaknesses (Felder, 1996). For example, usefully linking Kolb's cycle to educational practice by relating teaching methods to four common experiential methods placed within the sequence of Kolb's model: planning for experience, increasing awareness, reviewing and reflecting on experience, and providing substitute experiences (Healey and Jenkins, 2000); or provide a not too dissimilar list of instructional activities that may support different personality educators or instructors should be aware that there is no one "best learning style" or "best personality type". Each of the learning styles and personality types has their own strengths and weaknesses.

### CONCLUSIONS

In this paper, personality types and learning styles among selected TVE students were determined. The approach to solve Auxiliary View Problems in Engineering Drawing was determined. However, further research need to be conducted to determine if the results of this study can be generalized to the whole population of TVE students in UTM, and whether similar results would be found by comparing the TVE students from other universities to the general student body.

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## Employees' Identification, Cohesiveness and Communication Towards Their Work Group in Post-merger of "XYZ Malaysia Sdn. Bhd."

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**Keywords:** Post-merger, group identification, cohesiveness, communication

### ABSTRACT

The most challenging process of a merger is the integration of human factors of the two merging entities. Work group, which is the basic and important structure of an organization, is mostly affected by the integration during a merger exercise. This research study is thus concerned with work group identification, cohesiveness and communication in a post corporate merger. The purpose of the study is to identify the level of employees' identification, cohesiveness and communication toward their new work group in XYZ Malaysia Sdn. Bhd, which has undergone merger process. The study was based on a survey research design. Data were collected from 32 executives from the newly set-up Administration Division using questionnaires. Data collected were analyzed and interpreted with descriptive and inferential statistics. The findings indicated that the overall level of employees' identification, cohesiveness and communication towards their work group is high. The findings also showed that there is a highly significant difference in group cohesiveness and communication among departments. Further, the study showed that there is no significance difference towards the three dimensions between respondents belonging to the previous company prior to the merger. This study suggests several recommendations to ensure a more effective merger process and to ensure organizational expectations on work group yields more desirable results.

### INTRODUCTION

Recently, operations of businesses have taken a new dimension. Merger, consolidation and acquisition are terms that reflect the direction of most businesses to synergize expertise and resources towards a more effective and efficient management. Deregulation, free trade and globalization have led to a massive restructuring in almost every sector resulting in trillions of dollars worth of national and international mergers and acquisitions (McMurdy, 2000). According to Cooke (1986) a merger is deemed to occur when two companies decided to form a new legal entity. Cooke (1986) further defined a merger as a business combination involving new partnerships. It is a method of external growth versus internal growth by a firm. Harvey and

Brown (1990) defined a merger as an organizational transformation, a drastic, abrupt change to total structures, management processes, and corporate cultures.

#### *Motives for a Merger*

It was reported that in 1999 alone, the worldwide value of mergers and acquisitions rose by a third to more than \$3.4 trillion (Economist, 2000). The purpose of a merger may vary between organizations depending on the intended outcome of an organization seeking to undergo the merger process. Green (1990) outlined four broad categories of merger motives: The market for corporate control which represents exchanges of inefficient managements for more efficient

ones, significant tax savings, greater profit, and financial market inefficiency which may result in transfer of a large volume of shares leading to a change in the control of a company.

Many mergers between large corporations were initiated in part due to their being under threat, for instance, McDonnell Douglas merged with Boeing because the Pentagon was cutting spending by half (Economist, 2000). In the context of this study, mergers are part of an organization's efforts to expand and strengthen its Research and Development technology, to maintain its technical competitiveness in the international market and to focus its technical expertise on higher value-added engineering technology.

#### *Impact of Merger on Organizations*

Much research has been conducted to determine the impact of mergers on organizations. The research mainly focused on the short-term impact of mergers on a company's financial performance as it reflects the performance of the new management in maintaining the company's stability and existence. The substantial gains of merger can often be described in financial terms, such as rapid cost reduction, accelerated payback, stock price increase and administration cost efficiencies. However, merger should not be observed solely in terms of financial outcomes. Human issues are another pertinent area which is directly impacted by merger exercises.

From a survey of 88 senior executives and members of the Conference Board it was found that between 9% and 13% of the respondents reported that HR issues are ignored altogether by organizations during mergers (HR Focus, 1998). The human issues in mergers are as significant as financial issues as employees' productivity and attitude determine the quality of the company's products or services. According to a study by Hewitt Associates, Lincolnshire, integrating cultures of two separate work forces was one of the most

significant challenges faced by HR directors (San Antonio Business Journal, 1998). Sixty nine percent of the respondents indicated that integrating organizational structures were their top challenge, 41% reported problems keeping employees focused, while 38% reported problems with integrating employee programs.

Employees of both companies will experience some sense of "buyer's remorse" after an agreement to merge is made (La Piana, 2000). Managers, especially those within the dominant company, tend to assume that they can just superimpose their existing organizational template on the acquired company (McMurdy, 2000).

The most prominent impact of mergers on organizations and its members is the disruption of work group establishments. Integration of people from two different companies results in formation of a new work group. A study by Huang and Kliener (2004) showed that cultural incompatibility is always rated as the biggest barrier to integration being a success. Based on literature, there are three group dynamics that are most affected by a merger exercise namely group identification, group cohesiveness and group communication (van Knippenberg and van Schie, 2000; Langfred, 1998; Hellweg in Byers, 1999; Riordan and Weatherly, 1999).

#### *The Three Factors Theoretical Model*

The Three Factors Theoretical Model proposed by Riordan and Weatherly (1999) portrays three important dimensions of work groups namely group identity, group cohesion and group communication. This model was developed to measure the level of group identification with the work group and it also advocates that group identification is distinct from, but at the same time related to both group cohesiveness and group communication. The model is shown in Fig. 1.

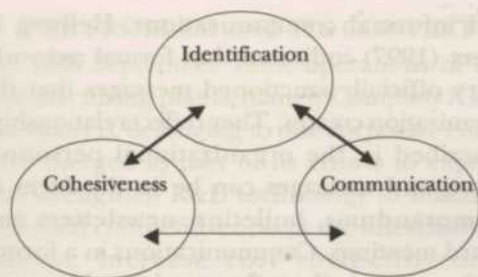


Fig. 1: Three factor theoretical model adapted from Riordan & Weatherly (1999)

To better understand the three dimensions, this study will discuss each dimension and its significance for work group effectiveness.

#### Group Identification

Tolman (1943) originally defined the concept of group identification as a personal cognitive connection between an individual and the work group. Riordan and Weatherly (1999) also defined work group identification as personal cognitive connection between an individual and the work group. Based on the various definitions by various scholars Riordan and Weatherly (1999) assert that there are at least three basic principles underlying the concept of group identification. First, group identification is a perceptual, cognitive construct in which individuals perceive themselves to be psychologically intertwined with the fate of the work group. Second, the construct of group identification captures the idea that individuals personally experience the success and failures of the group. Third, when individuals identify with a group, the attributes that are ascribed to work group also strongly influence the individual's self-definitions.

#### Significance of Group Identification to Work Group Effectiveness

The emergence and spread of team work and team based groups in organizations is a common characteristic of today's organization. Organizations have put considerable effort in

building effective teams at the workplace. Group Identification is important to work groups because it has been hypothesized and proven that it is related to a number of desirable group outcomes (Riordan and Weatherly, 1999). A study by van Knippenberg and van Schie (2000) revealed that work group identification is strongly related to turnover intentions, job motivation, job involvement, and job satisfaction. Becker and Billings (1993) showed evidence that employees committed to both work groups and organizations tend to have lower turnover intentions and better pro-social behavior. Brown and Williams (1984) further suggested that the consequences of group identification include greater commitment to the work group, cohesion, altruism, positive evaluations of the group, and fewer withdrawal behaviors such as absenteeism, social loafing and turnover. According to Ricketta and van Dick (2005) on average work group identification is stronger than organizational identification.

#### Group Cohesiveness

Group cohesiveness is a construct that has been defined and operationalized in a variety of ways. Langfred (1998) defined cohesiveness in his study, as the extent to which group members feel a part of the group and their desire to remain in the group. It determines the strength of the relationship that binds group members together. Murdock (1989) defined cohesiveness in terms of attraction to group. He also noted that other investigators have equated cohesiveness with other concepts such as "group spirit", "bonds of interpersonal attraction", "affective bonds", "sense of belonging", "sticking together" and "sense of we-ness". Riordan and Weatherly (1999) defined group cohesion as the degree to which an individual believes that the members of his or her group are attracted to each other, are willing to work together and are committed to the completion of the tasks and goals of the work group. Carron and Brawley (2000) based on Carton and Hausenblas (1998), defined

group cohesion as that of two or more individuals who possess a common identity, have common goals and objectives, share a common fate, exhibit structured patterns of interaction and modes of communication, hold common perceptions about group structure, are personally and instrumentally interdependent, reciprocate interpersonal attraction, and consider themselves to be a group.

#### *Significance of Cohesiveness to Work Group Effectiveness*

Cohesiveness is an important construct of work groups because it may influence a group's output. Early studies showed that there is significant positive correlation between self-reported measures of personality and cohesion scores (Kapp *et al.*, 1964). Yalom and Rand (1966) stated that in highly cohesive groups, productivity tends to be better and that members tend to participate easily, defend the group norms, express hostility, feel a sense of security, influence others, be influenced and stay with the group. Roark and Sharah (1989) found interdependence of cohesiveness with empathy, self-disclosure, acceptance and trust. Further, Evan and Dior (1991) also found cohesion to be related to performance and productivity.

#### *Group Communication*

Communication is defined as a process through which people act together to manage, sustain and create meanings through verbal and nonverbal means (Conrad, 1994). Byers (1997) added that communication also involves usage of symbols within a particular context. He stated that group communication occurs whenever a number of people come together for a common purpose. Riordan and Weatherly (1999) defined group communication as the degree to which information is transmitted among members of the work group. Communication can be categorized into two categories, namely formal

and informal communications. Hellweg in Byers (1997) indicated that formal networks carry officially sanctioned messages that the organization creates. They reflect relationships described in the organizational personnel chart, and messages can be in the form of memorandums, bulletins, newsletters and board meetings. Communications in a formal setting is heavily influenced by the social structure of an organization. On the other hand, informal communication involves communication, which is carried out in an unpredictable manner. Informal communication is usually known as the grapevine and is characterized as being spontaneous, situationally derived and non-permanent.

#### *Significance of Group Communication to Work Group Effectiveness*

The process of communication helps members of the group to share information, ideas, opinions and suggestions in achieving the work group's goals. The extensive communication and interaction between members can help to break down barriers that frequently inhibit the flow of information from all levels of organization, namely top-down and bottom-up communications. With strong communication, work group will benefit in terms of eliminating potential intra-group conflicts. Intra-group conflict can hurt group cohesion, decrease productivity, and produce a negative group attitude (Rosenfeld, 1973). In order to resolve inter-group conflicts, Neilson (1972) suggested seven strategies which revolve around communication and interaction. The strategies proposed by Neilson (1972) are, multilevel interaction, negotiation, exchange of members, third party consultants, use of integrators, limited interaction and physical separation. Communication about a merger only contributed to organizational identification of directly involved employees (Bartels *et al.*, 2006).

## THE PROBLEM AND ITS CONTEXT

On 10th September 1999, operations of two manufacturing plants, namely Company A and Company B, belonging to one corporate entity, were merged as part of its efforts to expand and strengthen R&D technology to maintain technical competitiveness in the international market, increase cost competitiveness, standardize job functions and promote greater efficiency and flexibility. The new company, XYZ Malaysia Sdn. Bhd. underwent integration of people and manpower from work groups of both companies. One of the important aspects in human management in merger's activities is the establishment of work groups. This is because when operations of two organizations are integrated there will be job and responsibility overlap as well as surplus of manpower. Divisions or departments are combined and it is common to have more than one person performing the same job or holding similar positions. In mergers, it is vital that management has in-depth understanding on the functions of work groups because it is the best tool to instil new work cultures among employees and to ensure successful implementation of the merger exercise. Team development can improve organizational effectiveness because it is the basic unit of the organization and thus provides a supportive change factor. Secondly, the operating problems of work groups are often sources of inefficiency (Harvey and Brown, 1996). Ability of management to develop strong work groups and understand their roles which can influence the total operation of an organization may result in successful merger exercise.

### *Statement of Problem*

In XYZ Malaysia Sdn. Bhd., one of the earliest organizational philosophies communicated to its employees is the slogan "XYZ – One Team Mind". This organizational philosophy reflects the importance of identification, cohesiveness and effective communication among its employees. Many activities were carried out to achieve this target. Among others were team-

building activities, group meetings and briefing, sports and games competitions, annual dinner, and publishing a monthly company newsletter. It was the management expectation that the work groups perform effectively because it would determine success of the merger. However, the management requires some form of evaluation in order to evaluate the effectiveness of the on-going programs on its employees. It is necessary for the management at this point to know the level of identification, cohesiveness and communication in the work group establishment. The three dimensions of work group were studied because they are essential elements in the group's establishment, involving two different organizations. Thus, it is necessary to address the following research questions of the study: - Why is it important for management to promote a high level of identification, cohesiveness, and communication among its employees? What is the current level of these dimensions in the new work groups? Do previous companies influence the level of identification, cohesiveness and communication in new work groups?

## OBJECTIVES OF STUDY

This study seeks to understand the importance of group identification, cohesiveness and communication and to measure the levels of these variables within the new work groups formed as a result of a merger between two manufacturing plant belonging to the same multinational corporation. The most affected in the integration process are members from the in-direct divisions such as Administration, Finance, Information Technology, and Purchasing. Due to the merger, the divisions involved will share workspace as well as face overlap in jobs and responsibilities. The integration, relocation and work overlap required members to adjust themselves to new work norms instantly.

The general objective of this study is to measure the level of employees' identification,



cohesiveness and communication towards their work groups in the post merger setting in the Administration Division of XYZ Malaysia Sdn. Bhd. Specifically the study seeks to:

1. identify level of group identification, cohesiveness and communication among employees.
2. determine the differences in group identification, cohesiveness and communication in comparison to the situation prior to merger in the same departments.

### METHODOLOGY

Based of the objectives of the study, a quantitative research methodology in the form of a case study has been adopted. A survey instrument adapted from the instrument developed by Riordan and Weatherly (1999) was used to collect the necessary data. Riordan and Weatherly (1999) defined work group identification as personal cognitive connection between an individual and the work group; group cohesion as the degree to which an individual believes that the members of his or her group are attracted to each other, are willing to work together and are committed to the completion of the tasks and goals of the work group; and group communication as the degree to which information is transmitted among members of the work group.

The questionnaire comprises Section A which covers respondent's personal particulars, consists of six questions and Section B which consists of items for group identification (5 items), cohesiveness (8 items) and communication (4 items). A Likert-like scale was used to measure the response of respondents towards each of the items namely, 1 = "Strongly Disagree", 2 = "Disagree", 3 = "Somewhat Agree", 4 = "Agree" and 5 = "Strongly Agree". Brief instructions were provided on the first page of the questionnaire booklet. The definition of "work group" was also given because it is vital that all respondent share a common frame of reference when responding to items listed.

Four reliability tests were conducted on the measurements of the three dimensions. The first test was on item 1 through item 5 which represent the identification factor (5 items). Alpha reading for the 5 items was 0.54. The second test was on item 6 through item 13 which represents group cohesiveness (8 items). Alpha reading for this test was 0.93. The third test was on item 14 through item 17 which represents the communication factor (4 items). Alpha reading was 0.93. The Cronbach's alpha for the overall items of the instrument was 0.93.

The interval for scale values (1 to 5) according to level of group identification, cohesiveness and communication towards the work group was done based on highest scale value to lowest scale value divided by 3 to determine the levels as high, moderate or low.

### *Population and Sample*

The respondents were made of the total population of executives in the Administration Division of XYZ Malaysia Sdn. Bhd. comprising of 32 executive members. The subjects of the study are personnel involved in or who had participated and experienced the direct impact of the merger, especially in terms of the formation of a new work group.

### *Data Collection and Analysis*

The data collection was carried out two years after the merger of the two manufacturing plants. The questionnaires were distributed to all 32 respondents through the Training and Development section. All respondents returned the questionnaires within a week. Descriptive statistics such as percentage, means and standard deviations were determined for each individual item. Independent T- test was used to determine if there was any difference in means to that of the previous companies A and B in terms of group identification, cohesiveness and communication. ANOVA test was used to determine the differences in the three dimensions in the present departments.

## FINDINGS AND DISCUSSION

### *Demographic Profile of Respondents*

Table 1 revealed that majority of the respondents were female (69%) and male respondents comprised 31%. The age distribution of the respondents showed that about 44% of respondents are below 30 years of age, and 38% between the ages of 30 to 35. About 66% were Malay. In terms of respondents' distribution from the previous companies, 44% employees were from Company A, while 56% were from Company B. Further, 31% of the respondents were from the General Affairs (GA) Department, followed by 28% from the Human Resources (HR) Department. Majority of the respondents had worked for the company between 6 to 8 years (44%), while 25% have worked for 5 years or less.

### *The Level of Group Identification, Cohesiveness and Communication*

Descriptive statistics were used to compute the means and standard deviations for group identification, cohesiveness, and communication. Percentages of respondents were used to determine the levels of the dimensions.

### *Group Identification*

To identify the level of the respondents' identification towards their work group, respondents were asked whether other people's perception of the work group, criticism, group success, being a member of the work group and acknowledgement of the group success were important considerations for them. Referring to Table 2, it is interesting to note that the importance of being the member of the group had the highest Mean of 4.69 and SD of .54. Brocher (1999) mentioned that the need of individuals to be part of a group implies the intensity of social needs such as support and commitment. This is particularly true in large organization like XYZ Malaysia Sdn. Bhd.,

TABLE 1  
Demographic characteristics of respondents  
(N=32)

Demographics Variable	Percentage (%)
<i>Gender</i>	
Male	31.20
Female	68.80
<i>Age</i>	
Below 30	43.80
30 - 35	37.50
36 and above	18.80
<i>Race</i>	
Malay	65.60
Chinese	18.80
Indian	15.60
<i>Previous Company</i>	
Company A	43.80
Company B	56.30
<i>Department/Work Group</i>	
Human Resource	28.10
Human Resource Development	25.00
Security	3.10
General Affairs	31.30
Facilities, Planning & Maintenance	12.50
<i>Years of Service</i>	
5 years and less	25.00
6 - 8 years	43.80
9 - 11 years	21.90
More than 11 years	9.40

where each member of a work group needs others in the completion of their tasks. This is because every individual job in a work group is interrelated.

The respondents did not place high emphasis on their work group being criticized by others as shown by the Mean values of 3.47 and SD at 1.19. It shows that respondents put less emphasis on criticism placed upon their work group because more often the head of department usually handled criticisms. The perception on criticism may be influenced by the status of the work group itself. This is consistent with Fisher and Wakefield (1998) findings which suggested that perception of group performance is the most important

TABLE 2  
Mean and standard deviations of items determining level of respondents' group identification  
(N=32)

Group Identification Items	Mean	SD
It is important to me that I am a member of my work group	4.69	.54
It is important to me that my work group is successful	4.56	.56
It is important to me that my work group is acknowledge for its success	4.56	.56
It is important to me that others think highly of my work group	4.34	.60
It is important to me that others do not criticize my work group	3.47	1.19
Overall	4.33	.44

1="Strongly Disagree", 2="Disagree", 3="Somewhat Agree", 4="Agree", 5="Strongly Agree"

TABLE 3  
Mean and standard deviation of items determining respondents' group cohesiveness  
(N=32)

Cohesiveness Items	Mean	SD
In my work group, group members work as a team	4.31	.69
In my work group, there is a lot of team spirit among the members	4.28	.97
In my work group, group members are very cooperative with one another	4.09	.89
In my work group, group members regard each other as friends	4.09	.89
In my work group, individuals pitch in to help one another	4.06	.88
In my work group, group members take interest in one another	4.03	.93
In my work group, group members know they can depend on each other	3.97	.96
In my work group, group members stand up for one another	3.94	1.19
Overall	4.10	.77

1="Strongly Disagree", 2="Disagree", 3="Somewhat Agree", 4="Agree", 5="Strongly Agree"

factor leading to identification for members of successful groups.

#### *Group Cohesiveness*

Respondents were asked about their attraction towards other members of the group in term of team spirit, helping each other, reliability and dependability, and taking interest in each other, friendship and cooperativeness. The item with the highest mean in the group of items on cohesiveness is 'group members work as a team', with Mean of 4.31 and Standard Deviation of 0.69 and the second highest is 'there is a lot of team spirit among the members', with Mean of 4.28 and Standard Deviation of 0.60 as shown in Table 3. The

'work as a team' and 'team spirit' is important if we want to get work done more efficiently.

Based on the mean values, it is obvious that dependability on other members of the group was perceived at the lower end with Mean of 3.97 as was the item measuring if members of the group were willing to stand up for one another (Mean = 3.94). These two items indicated that respondents depend less on others when they are faced with difficulties in performing their tasks and other job functions. These are very important elements in cohesiveness, and lack of these expectations reduces the willingness of members to work with each other.

### Group Communication

Table 4 shows the mean and standard deviation for all items determining respondents' level of communication. The highest mean was derived from respondents' perception that, individuals in their work group do take the time to listen to co-workers' problems and worries (Mean= 4.13, SD =.79) and individuals feel free to offer an opinion regarding work-related issues (Mean = 4.13, SD = .91). In XYZ Malaysia Sdn. Bhd., group discussions and meetings are practiced frequently. The morning meeting conducted on daily basis is one of the platforms where information is disseminated to all members of the department. This is an example of an intra-group communication while respondents' perception on interpersonal communication may be influenced by individual needs to communicate and personal behavior.

### Comparing the Levels of Group Identification, Cohesiveness and Communication

From Table 5, about 100% of respondents perceived a high level of group identification

which may be due to respondents' self-concept of being a unique individual or a member of a group. Tajfel and Turner (1979) argued that the way people perceived identification varies depending upon the circumstances. The level of respondents' perception of their group's success will determine the level of identification. In XYZ Malaysia Sdn. Bhd., it is evident that the level of identification is high because the respondents do associate with the group's success. This is consistent with Fisher and Wakefield (1998) findings which suggested that perceived group performance is the most important factor leading to identification for members of successful groups.

The perceived group cohesiveness is also at a high level (about 8% of respondents), with mean value of 4.10 and Standard Deviation of .77. The high level of cohesiveness as shown by the mean values may be due to individual perception of being a member of a group. It means that if a member of a group perceived that his membership of the group is positive, he or she might feel that there is a higher cohesiveness in the group.

TABLE 4  
Mean and standard deviation of items determining respondents' level of group communication  
(N=32)

Group Communication Items	Mean	SD
In my work group, individuals share ideas and information	4.13	.79
In my work group, individuals feel free to offer an opinion regarding work-related issues	4.13	.91
In my work group, individuals take the time to listen to co workers, problems and worries	3.88	1.01
In my work group, individuals frequently discuss work assignments with each other	3.81	.93
Overall	3.98	.83

1="Strongly Disagree", 2="Disagree", 3="Somewhat Agree", 4="Agree", 5="Strongly Agree"

TABLE 5  
Comparison of levels of group identification, cohesiveness and communication  
(N=32)

Dimensions	Mean Score	%	Mean	SD	Level	
Identification	High	≥ 3.40	4.32	.44	High	
	Moderate	1.68-3.30				100
	Low	≤ 1.67				0.0
Cohesiveness	High	≥ 3.40	4.10	.77	High	
	Moderate	1.68-3.30				81.25
	Low	≤ 1.67				18.75
Communication	High	≥ 3.40	3.98	.41	High	
	Moderate	1.68-3.30				62.50
	Low	≤ 1.67				37.50

Table 5 also showed that there is a high level of group communication among respondents (62.5%). The overall high mean values may be due to perception of employees on interpersonal communication and intra-group communication. In XYZ Company, group discussions and meetings are practiced frequently. The morning meeting conducted on daily basis is one of the platforms where information is disseminated to all members of the department. This is an example of an intra-group communication while respondents' perception on interpersonal communication may be influenced by individual needs to communicate and personal behavior.

#### *Differences in Group Identification, Cohesiveness and Communication among Departments*

Table 6 displays the result of ANOVA analysis on departments. The result indicates that there is highly significant difference in cohesiveness and communication when analyzed by departments. The dimension of identification was not significantly different between or within departments when tested. This study suggests that the difference in level of identification is non significant because each of the employees identifies greatly with the department or work group they belong to. It

shows in addressing themselves in telephone conversations or to employees from other work groups in particular ways. The work place arrangement also contributes to identification where each work group is given its own space as well as signage that displays the name of the work group.

A Bonferroni Multiple Comparison Test was included to compare which of the five departments have significantly different means for group cohesiveness and group communication (see Table 7). Based on the Bonferroni Multiple Comparison Test, it was found that there is a high significant difference in the means for group cohesiveness and group communication among departments.

Table 7 shows that for cohesiveness, there is highly significant difference in means between the General Affairs Department (Mean = 3.70) and Human Resource Department (Mean =4.63). Comparison can be made of these two departments based on their nature of work. Members of the former department work on shift which means that there will be less interaction among members from different shifts compared to members in the latter department. In the Human Resources Department, cohesiveness is perceived to be high due to high

TABLE 6  
One Way ANOVA analysis result on departments  
(N=32)

Dimensions	Mean	SD	F	2-Tailed Sig.
<i>Group Identification</i>			2.06	.114
Human Resource	4.47	.33		
Human Resource Development	4.38	.55		
Security	5.00	.00		
General Affairs	4.06	.37		
Facilities, Planning & Maintenance	4.40	.33		
<i>Group Cohesiveness</i>			5.73**	.002
Human Resource	4.63	.45		
Human Resource Development	4.06	.95		
Security	2.13			
General Affairs	3.70	.44		
Facilities, Planning & Maintenance	4.47	.37		
<i>Group Communication</i>			4.95**	.004
Human Resource	4.42	.63		
Human Resource Development	4.19	.81		
Security	2.50	.00		
General Affairs	3.38	.63		
Facilities, Planning & Maintenance	4.50	.58		

p<.05

TABLE 7  
Mean scores of group cohesiveness and group communication  
N=32

Departments	Mean difference	Significance
<i>Group Cohesiveness</i>		
Human Resource General Affairs	0.93**	.001
General Affairs Facilities, Planning & Maintenance	-0.77*	.047
<i>Group Communication</i>		
Human Resource General Affairs	1.10**	.007
General Affairs Facilities, Planning & Maintenance	-1.13*	.045

p<0.05

TABLE 8  
T-test result of group identification, cohesiveness and communication between two previous companies (N=32)

Dimensions	Mean	SD	t-value	2-tailed sig.
<i>Identification</i>				
Company A	4.41	.49	1.02	.315
Company B	4.26	.39		
<i>Cohesiveness</i>				
Company A	4.03	.92	-.45	.655
Company B	4.15	.66		
<i>Communication</i>				
Company A	4.11	.86	.73	.468
Company B	3.89	.81		

p < .05

interdependence between each other. For instance, when the Human Resources Department is in the midst of recruiting foreign workers, all members from other sections in the department will pitch in and help the Recruitment Section. This practice has helped build strong bonding between the group members.

In group communication, there is also a highly significant difference in the means for the Human Resource Department (Mean = 4.42) and the General Affairs Department (Mean = 3.80). The nature of work in the Human Resource Department depends heavily on timely and accurate information. The department members are also more cohesive and their work needs them to be involved in discussions, which led to higher communication rates.

*Differences in Group Identification, Cohesiveness and Communication between the Two Previous Companies*

The findings in Table 8 show that there is no significant difference between employees of Company A and Company B in terms of the level of group identification, cohesiveness and communication towards their work groups. Based on the mean values, Company A has

higher mean values compared to Company B in the dimensions of Identification and Communication. These differences could result from the structure of the new Division itself. Many heads of departments in the divisions of XYZ Malaysia Sdn. Bhd. were from Company A. As such, respondents from Company A tend to have better identification with the group because they understand and are familiar with the leadership styles and norms of the group. This situation is however the reverse for respondents from Company B who have to adapt to the new leadership styles and group norms of Company A. Employees from Company B will have to go through a socialization process in order to understand the norms and values of the other group. It is also common for people to communicate more with people they know better or are comfortable with. A study by Han Nguyen and Kleiner (2003) found that the key to successful mergers, beside leadership styles, is open and honest communication with employees. Nevertheless, the level of cohesiveness between respondents in Company B is higher than respondents in Company A. This may be due to the fact that a larger number of the respondents were from Company B. This is maybe due to the fact that the respondents

belonging to Company B tend to bond with each other as they need to adapt to the new culture. Further, respondents from Company B participated in various activities to foster friendship and spirit of togetherness prior to the merger. There were many recreational activities coordinated by the Employee Relations Section of the Human Resource Department at Company B. There were many occasions, in which the other departments in the division helped and worked together such as the Transportation Section, Clinics and Safety and Health. The cooperation within departments in the division may have led the respondents to perceive that their level of cohesiveness is higher since they can always depend on each other.

### CONCLUSIONS

Based on the findings and analysis, the study found that generally, the levels of respondents' identification, cohesiveness and communication are high. It can be implied that efforts by the organization to foster a spirit of oneness among its members have achieved its full expectations after the numerous teambuilding exercises and other measures taken. The management has successfully implemented its strategic plan to increase group identification, cohesiveness and communication amongst the employees in the newly formed corporate entity. The study also showed that there are highly significant differences in group cohesiveness and communication among departments. Further, the findings also showed that there is no significant difference between respondents of Company A and Company B in levels of group identification, cohesiveness and communication towards their new work group.

### RECOMMENDATIONS

There are many aspects of an organization which can be researched where mergers are concerned. There should be more empirical studies done to tackle problems and to measure organizational effectiveness. This study

concerns one of the basic foundations of an organization, that is the people. Based on the study, the researcher has listed some recommendations for practice as well as for further research.

#### *Practical Recommendations*

The management of XYZ Malaysia Sdn. Bhd. should be aware of the status of work groups in the organization. Communication is one of the areas that employees are concerned with. In mergers, there is a lot of information and speculation exchanged at the work place. The publishing of the company's newsletter plays an important role in disseminating information to all levels of employees. However, employees always depend on the heads of departments to personally interact with them. Much information was distorted because employees relied on rumors or the grapevine due to the lack of formal communication from superiors. All communication channels should be utilized to gain and give feedback whether it is top-down or bottom-up communication. This information should be timely and accurate so that employees will not rely on the grapevine and will be able to distinguish true information from rumors.

Another recommendation is that the management of XYZ Malaysia Sdn. Bhd. should train leaders or managers especially in handling human issues. Based on the findings, certain work groups are more receptive to change. There are a lot of reasons for these positive differences which other groups can learn from. Most importantly, the management should bear in mind that different approaches should be adopted to tackle different groups of employees. Management commitment on XYZ - One Team Mind philosophy should be obvious and be genuine. Heads of division should foster this spirit through words and actions among the departments. Inter departmental relationships should be strong and there should be no competition in terms of power, recognition or resources which may eliminate the sense of



togetherness. Identification, cohesiveness and communication among employees can be derived from their social interactions. Leadership by example can enhance positive attitudes, knowledge and skills towards achieving the organizational objective.

It is also recommended that management minimize or give sufficient time for changes in corporate structures because frequent may lead to change of structure, confusion and uncertainty between employees. There are many changes that the employees have to face during the merger. They should be given ample time to get adjusted to their new work environment. Changes made must be planned and information should be provided so that employees are prepared. The level of preparedness on both ends will determine the effective use of expertise, resources, time and cost. Most importantly, management should realize that its merger objective to be competitive in the international market requires intricate and professional decisions.

#### *Recommendation for Future Research*

Based on this study, only a fraction of post merger situations is assessed. There are many other areas that can be studied about mergers. Research should be conducted at the organizational level whereby dimensions are studied among different divisions. This study will enhance knowledge on the overall perception of employees on the organization's visions. With bigger population, many generalizations can be made on the organization's performance. Furthermore, the need for organizational study on merger is significant in determining the status of the company in financial and human resource matters.

Research should also be done on a larger scale whereby dimensions are studied in different departments. This will enhance knowledge on the overall perception of employees on the organization. With larger population, many generalizations can be made on the organization's performance.

Another aspect to study would be the external and internal factors that may affect the level of identification, cohesiveness and communication among employees. The external factors can be derived, for instance from management practices, unions or the work environment itself. Internal factors are personal background, perception, values and beliefs.

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## Relationship between Teachers' Perceptions' Towards Principals' Leadership Practices and Their Job Satisfaction: A Case Study of *Sekolah Harapan Negara*

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**Keywords:** Leadership, teachers, perceptions, job satisfaction

### ABSTRACT

Literature has suggested that good leaders contribute to teachers' job satisfaction. A study was conducted to investigate the correlation between teachers' perception of their principals' leadership practices with their job satisfaction. A total of 257 teachers from selected *Sekolah Harapan Negara* were chosen as the respondents of the study. Questionnaires were used to collect the data. The findings showed that the teachers perceived their principals practiced transformational leadership compared to transactional leadership. There was a moderate positive significant relationship between teachers' perception of their principals' transformational leadership practices and their job satisfaction. However, the relationship between the teachers' perception of their principals' transactional leadership practices and their job satisfaction was not significant. Based on the findings, it was suggested the principals should practice transformational leadership in order to increase their teachers' job satisfaction.

### INTRODUCTION

Burn (1978) identified two broad kinds of leadership, i.e. transactional leadership and transformational leadership. Transactional leadership focuses on basic and extrinsic motives and needs, whereas transformational leadership focuses on a higher order, more intrinsic and ultimately moral motives and needs. Sergiovanni (2001) differentiated the two kinds of leadership as follows:

1. In transactional leadership, leaders and followers exchange needs and services in order to achieve independent objectives. It is assumed that leaders and followers do not share a common stake, and as a result some kind of bargain must be struck.
2. In transformational leadership, by contrast, leaders and followers are united in pursuit of higher-level goals that are common to both parties. Both parties want to become the best, and also want to shape the school in a new direction.

A study conducted by Leithwood and Jantze (1990) found that leaders who practiced the transformational leadership helped their staff develop and maintain a collaborative and professional school culture. This meant that staff members often talked, observed, critiqued, and planned together. Norms and collective responsibility and continuous improvement encouraged them to teach each other how to teach better. Transformational leaders involved their staff in a collaborative goal setting, reduced teacher isolation, shared leadership with others by delegating power and actively communicated school norms and beliefs. They also stimulated teachers to engage in new activities and put forth that 'extra effort'. In addition, a study done by Sagor (1992) found that schools where teachers and students reported a culture conducive to school success had transformational leaders as their principals.

Beachum and Dentith (2004) claimed that school leaders can no longer afford to serve as sole decision makers and holders of power. Models and practices of leadership that facilitate the leadership capacities of others must be developed. School leaders have to build more collaborative and democratic arrangements with teachers and others to achieve the enormous ambitions of schooling and respond to students' diverse needs.

School leaders should move away from administrative leadership that is based on the individual traits of leaders to leadership that includes contemporary ideas such as:

1. Leadership that inspires others in the creation of teaching and learning communities (DuFour and Eaker, 1998; Palmer, 1998).
2. Leaders as guides in the development of sense making, inquiry, participation and reflection among people (Lambert, 2002).

There were several studies conducted to determine the relationship between leadership practices and job satisfaction. For example, a study done by Dauffenbach (1995) found correlations between various leadership practices and various facets of job satisfaction for both deans and department chairs. However, the study did not find correlation between dean's leadership practices and the job satisfaction of department chairs. Brown (1996) found that trained reading recovery teachers demonstrated a significant relationship between leadership practices and job satisfaction. Another study conducted by Jaganathan (1998) found that leadership behaviors could bring about various effects on the organization such as increasing productivity and also employees' job satisfaction.

Evans *et al.* (1986) concluded that although the school climate is frequently associated with school discipline, it is more inclusively associated with teachers' job satisfaction. Job satisfaction has been mentioned as a factor for low morale among teachers. Evan and Johnson (1990) found that goal emphasis of principals tends to be a negative contributor to job

satisfaction of teachers, while interaction facilitation of the principals appears to insignificantly contribute to teachers' job stress. In other words, their study seemed to suggest that leadership of principals do not contribute much to job satisfaction of teachers.

Shawn and Chris (2006) in their study investigated issues that impact attrition, migration and retention of special education teachers in Alabama. Their sample comprised 70 teachers designated as 'highly qualified' who responded to a job satisfaction instrument, with a focus on retention issues. The finding indicated that the major reason for either relocation or attrition were job conditions, occupational stress, increased caseload and class size. These factors may be similar to other teachers' experiences, thus the question of job satisfaction needs to be studied because currently little research has been done to study how teachers perceived their principals' leadership behavior as it relates to job satisfaction.

The studies on job satisfaction and perceived leadership behavior which have been extensively done in Western countries were based on their own societies, and hence may not be applicable to the Malaysian cultural setting. Not much research on this topic has been done in Malaysia especially in school settings. A study of this kind should therefore be done to gather information on the relationship between leadership practices and job satisfaction, especially in well-known schools such as *Sekolah Harapan Negara*.

#### PURPOSE OF THE STUDY

The purpose of this study was to determine whether there was a significant relationship between teachers' perception of their principals' leadership practices and their job satisfaction. Specifically, the objectives of this study were:

1. to identify teachers' perception towards their principals' leadership behaviors;
2. to determine teachers' job satisfaction; and
3. to determine whether there was a significant relationship between teachers'

perception towards their principals' leadership practices and their job satisfaction.

### METHODOLOGY

The study was a descriptive correlation study. A cluster sampling technique was used to select the sample of the study. Seven schools which had been awarded *Sekolah Harapan Negara* for the years spanning 1998 to 2002 were randomly selected as the clusters. All the teachers who taught in the morning session in these selected schools were chosen as the respondents. A total of 257 teachers from the selected schools responded to the questionnaires distributed to them.

The questionnaire was divided into three parts. Part one was allocated for questions aimed at collecting respondents' background information. Part two consisted of items measuring the respondents' perception toward their principals' leadership behaviors and Part three consisted of items measuring the respondents' job satisfaction. The reliability coefficients of the instruments varied from 0.63 to 0.92.

The instrument to measure the principals' leadership behavior was modified from Zainab's study (1998), who utilised the Multifactor Leadership Questionnaire (MLQ). MLQ consists of nine factors which are idealised influence (attribute and behavior), inspirational motivation, intellectual stimulation, individualised consideration, contingent reward, management by expectation, management by exception and Laissez-Faire leadership. For the purpose of this study idealised influence was modified to a new construct called 'group goal acceptance' and 'high performance expectation'. Modification was made through thorough analysis of literature on leadership studies that suit the culture of a *Sekolah Harapan Negara*.

The instrument on job satisfaction was modified from a questionnaire utilised by Rusli (1997), who utilised the Minnesota Satisfaction

Questionnaire (MSQ) to measure respondents' job satisfaction. For the purpose of this study an instrument was developed using the information gathered from the literature. The instrument produced 13 subscales namely job security, responsibility, individual relationship, organisational and administration policies, technical supervision, recognition, job condition, development opportunity, personal life, status, salary and job improvement. The subscales comprised of items that suit the work culture and nature of the job as a teacher in a *Sekolah Harapan Negara*.

The questionnaires were self-administered by all the researchers involved. The data was analysed by using the SPSS version 12 software. Descriptive statistics was used to analyse the descriptive data and inferential statistics was used to analyse the relationship between variables.

### FINDINGS AND DISCUSSIONS

#### *Background of Respondents*

A total of 257 teachers had responded to the questionnaires distributed to all the teachers in the randomly selected schools designated as *Sekolah Harapan Negara*. Out of that figure, 75 (28.7%) were males and 182 (71.3%) were female. The average age of the teachers was 38 years where the youngest teacher was 23 years old, and the oldest was 55 years old. Majority (80.3%) of the teachers were Bachelor degree holders. About 6% of the teachers had their Master's degree. However, there was still a small number of teachers (13.4%) who were not university graduates.

#### *Leadership Practices and Behavior*

Table 1 shows the kinds of leadership practiced by the principals of *Sekolah Harapan Negara* as perceived by their teachers. The teachers were found to perceive their principals' leadership practices as transformational (mean = 3.22, sd = 0.47).

TABLE 1  
The kinds of leadership practiced by the principals of *Sekolah Harapan Negara* (n = 257)

Kind of leadership	Mean	Sd
Transformational leadership	3.22	0.47
Transactional leadership	2.44	0.50

In terms of transformational leadership, Table 2 illustrates the overall leadership behaviors of the principals of *Sekolah Harapan Negara* as perceived by their teachers. The teachers perceived that encouraging group goal acceptance as the highest transformational leadership behaviors portrayed by their principals (mean = 3.42, sd = 0.54). The least transformational leadership behavior portrayed by their principals was individualised consideration (mean = 2.79, sd = 0.52), followed by intellectual stimulation (mean = 2.95, sd = 0.63). These two aspects need to be improved.

In intellectual stimulation, principals of *Sekolah Harapan Negara* should encourage teachers to question their own values, beliefs and expectations as well as the leaders. The principals should encourage teachers to think on their own, overcome challenges and consider creative ways to develop themselves. Teachers should become effective problem solvers and be innovative in analysing school problems.

Principals of *Sekolah Harapan Negara* also should improve their individualised consideration behavior. Teachers should be allowed to act and think differently. They should be given the opportunity to behave and think according to their abilities, experiences, need and sometimes according to age and maturity level. Principals should treat the teachers differently on a 'one-to-one' basis, as well as foster teachers' needs and consider the tasks given to teachers as means of learning opportunity.

TABLE 2  
Leadership behaviors of the principals of *Sekolah Harapan Negara* (n = 257)

Transformational Leadership Behavior	Mean	Sd
Group goal acceptance	3.42	.54
Inspirational motivation	3.35	.48
High performance expectation	3.35	.58
Charismatic behavior	3.32	.55
Intellectual stimulation	2.95	.63
Individualised consideration	2.79	.52

Scale: 0 = not at all practiced; 4 = always practiced

#### Job Satisfaction

The teachers in the *Sekolah Harapan Negara* were found to be moderately satisfied with their jobs (mean = 3.89, sd = 0.51). They were highly satisfied with the security of the job (mean = 4.02, sd = 0.46) and their responsibilities (mean = 4.00, sd = 0.43). On the other hand, they were found not to be so satisfied with their job improvement (mean = 3.67, sd = 0.57) and salary (mean = 3.76, sd = 0.62). Table 3 shows the mean score for the various domains of job satisfaction of the teachers in *Sekolah Harapan Negara*. The overall mean score for job satisfaction was moderately high (mean = 3.81, sd = 0.51). Sergiovanni (2001) claimed that when teaching was intellectually satisfying, professionally rewarding and just plain fun for teachers, they are likely to keep improving their effectiveness as the years go by. Students are more successful learners as a result. This study found that teachers were not satisfied with status, salary and job improvement, and this finding contradicts Sergiovanni's (2001) finding which claimed that in successful schools, teachers were more committed, hard working, more loyal to the school and more satisfied with their jobs.

TABLE 3

The mean score of job satisfaction of the teachers in *Sekolah Harapan Negara* (n = 257)

Job Satisfaction	Mean	Sd
Job security	4.02	.46
Responsibility	4.00	.43
Individual relationship	3.98	.50
Organisational and administration policies	3.92	.51
Technical supervision	3.87	.53
Recognition	3.86	.49
Job condition	3.86	.45
Development opportunity	3.85	.50
Personal life	3.81	.63
Status	3.77	.60
Salary	3.76	.62
Job improvement	3.67	.57
Overall job satisfaction	3.81	.51

#### Relationship among Variables

The relationship between teachers' perception towards their principals' leadership practices and their job satisfaction was determined. The data in Table 4 shows that there was a moderate positive significant relationship between transformational leadership practiced by the principals and the teachers' job satisfaction. This showed that when the teachers perceived their principals practiced transformational leadership, they would be more satisfied with their jobs. On the other hand, the findings showed that there was no significant relationship between transactional leadership practiced by the principals and teachers' job satisfaction. The findings clearly showed that teachers in *Sekolah Harapan Negara* satisfied with were their job when their principals practiced transformational leadership as compared to transactional leadership. If the relationship between transactional leadership and job satisfaction is significant, then that relationship will be a negative one as shown in Table 4. The negative relationship means that as the

transactional leadership practiced by the principals decreased, there is a possibility that the job satisfaction of the teachers will increase. In other words, the findings of this study showed that the teachers in *Sekolah Harapan Negara* preferred the principals who practiced transformational leadership rather than transactional leadership in order to bring success to the schools.

The findings of this study are congruent to Nguni *et al.*'s (2006) findings. They examined the effects of transformational and transactional leadership on teachers' job satisfaction in the schools' context. Regression analyses showed that transformational leadership dimensions had strong effects on teachers' job satisfaction. In addition, the findings showed that transformational leadership had significant add-on effects to transactional leadership in prediction of job satisfaction.

TABLE 4

Relationship between leadership practiced by the principals of *Sekolah Harapan Negara* and teachers' job satisfaction

Leadership	Job satisfaction
Transformational	.414*
Transactional	-.031

If we further analyse the relationship between teachers' perception towards principals' leadership behavior and their job satisfaction, we found that there was a strong significant relationship between the charismatic behavior of the principals as perceived by the teachers and their job satisfaction. However, it was found that there was a weak significant relationship between high performance expectation of the principals as perceived by the teachers and their job satisfaction (Table 5).

TABLE 5  
Relationship between principals' transformational leadership behavior and teachers' job satisfaction

Transformational Leadership Behavior	Job satisfaction
Charismatic behavior	.439**
Group goal acceptance	.379**
Motivational inspiration	.344**
Individualised consideration	.302**
Intellectual stimulation	.300**
High performance expectation	.296**

\*\* Correlation is significant at the .01 level (2-tailed)

Scandura and Williams (2004) suggested that leaders might need to serve as mentors to activate transformational leadership and promote positive work attitudes and career expectations of followers. To test this premise, they examined the incremental effects of transformational leadership and mentoring against each other. The findings showed that respondents with supervisory mentors reported receiving higher levels of career mentoring than respondents with non-supervisory mentors. Supervisory career mentoring (SCM) and transformational leadership had incremental effects against each other for job satisfaction. SCM had mediating effects over transformational leadership for organizational commitment and career expectations.

### RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. In order to become successful, and to be rewarded as *Sekolah Harapan Negara*, the principals should practice transformational leadership.
2. By practicing transformational leadership, the principals can motivate teachers to work harder and be satisfied with their jobs.
3. All parties in the school should be involved in the planning and implementing of all sorts of events and activities in order for it to become a successful school.

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### INTRODUCTION

Boatright (1997) claimed that the role of higher education is to incubate, increasingly, the development of the types of skills that will not merely bridge the widening gap between education and employability of graduates. Boatright also recommended that emphasis be given to preparing individuals for change and lifelong learning in order that they can compete and be effective in the increasingly uncertain workplace. He said that although there is no single defined field of graduate skills, the key aspect of the required graduate skills is growth and is transferable across occupational groups and context.

Boatright (1997) argued accordingly that higher education is about preparing students and knowing is the application of knowledge. Knight (2000) encouraged students to seek the best use of learning opportunities to enhance their achievement and the development of transferable skills as well as social personal skills. Sergiovanni (2001)

indicated that in order for knowledge to be understood and used, students must be involved in the learning process. This means not just telling and explaining, but providing students with opportunities to answer questions, in discussion, to debate meanings and implications, and to engage in authentic problem solving in the real context.

Collington (1998) on the other hand supported the influence of role-play in the teaching and learning process. He defined role-play as allowing students to experience real life situations in a protected or simulated context. This means that it is a simulated activity to which students act a role-play in the learning process that it is to make them work as they would in real life.

Boatright and Boatright (1998) point out that entrepreneurial education focuses on equipping and carrying out a new combination of business processes with innovation to small business or startup business on the skills needed to reproduce or acquire

## Lecturers' Perceptions on the Teaching Strategies Utilised in Teaching Business and Entrepreneurship

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**Keywords:** Business, entrepreneurship, lecturers, perceptions, teaching strategies

### ABSTRACT

Business and Entrepreneurship can be trained through proper education and training. Business development programs should develop graduates with a set of abilities, attitudes, values and traits, which are essential for entrepreneurial development. A study was conducted to identify the perceptions of 141 business studies lecturers pertaining to their practice in delivering the essential components of business and entrepreneurship education to their undergraduate students who were majoring in business programs. Findings indicate that lectures, examinations, reading materials and use of handouts, normally associated with teacher-centered techniques, were relatively more extensively used, as opposed to student centered teaching strategies such as field visits, laboratory work, games and simulations. The paper also includes a discussion on some alternative strategies for teaching business and entrepreneurship at higher educational institutions.

### INTRODUCTION

Dearing (1997) claimed that the role of higher education is to inculcate, increasingly, the development of the types of skills that will ultimately bridge the training gap between education and employability of graduates. Dearing also recommended that emphasis be given to preparing individuals for change and lifelong learning in order that they can compete and be effective in the increasingly uncertain workplace. He said that although there is no single defined list of graduate skills, the key aspect of the required graduate skills is generic and is transferable across occupational groups and context.

Assister (1995) argues convincingly that higher education is about the struggle to know, and knowing is the application of knowledge. Wright (1992) encouraged students to make the best use of learning opportunities to enhance their achievements and the development of transferable skills or intellectual personal skills. Sergiovanni (2001)

indicated that in order for knowledge to be understood and used, students must be involved in its active construction. This means not just telling and explaining, but providing students with opportunities to answer questions, to discuss and to debate meanings and implications, and to engage in authentic problem solving in the real context.

Eilington (1996) on the other hand supported the utilization of role-play in the teaching and learning process. He defined role-play as allowing students to experience real life situations in a protected or risk-free location. This means that it is far safer and wiser to make mistakes as a role-player in the training situation than it is to make them in work or other social environments.

Bechard and Toulouse (1998) point out that entrepreneurial education focuses on combining and carrying out a new combination of business elements while education for small business ownership focuses on the skills needed to reproduce or acquire

TABLE 1  
Three models of educators

Model	Principal Beliefs	Possible Educator Behaviour
Executive	Educator's role in executive function is preparing of teaching materials as main source of information	Educator prepares lessons/activities/materials/lessons for learners.
Therapist	Educator's role is that of emphatic facilitator of student growth and self development	Cooperative group activities designed to foster positive self concept.
Liberationist	Educator's function is to liberate students' minds through guided discovery experiences, thus empowering them to learn on their own.	Students are encouraged to examine their intellectual processes and to become aware of and develop intellectual strategies.

Source: Based on Fenstermacher and Soltis, 1992

an existing business. All these components need specific teaching strategies to ensure effective learning to occur.

#### *Business Educator's Instructional Approach*

Educators' teaching behaviors in many ways contribute to effectiveness in executing their duties as educators. The professional behavior of educators should include their ability to master their craft in teaching business studies and to be responsible for arranging teaching-learning situations which include teaching techniques and preparation of materials so that learners will acquire the prescribed skills and information. There are at least three identifiable models of educators and their roles as educators (Table 1).

The executive model emphasizes teaching techniques and the preparation(s) of teaching material whereas the therapist model is more student-centered. In this model, the educator's role is to ensure the healthy and happy development of the learners. The liberationist model, on the other hand, ensures that students learn how to learn whereby educators provide students the tools and the attitudes that are necessary for learning. A good educator in

business studies should rightly subscribe to the liberationist model.

Ineffective educators can cause discipline problems as well as devastating effects on students' performances. In a study at the University of Tennessee, Knoxville, Sanders and Rivers (1996) found that students who had bad educators performed significantly lower levels as compared to those who had good educators. They also found that there were noticeable negative and residual effects of bad educators on later achievement scores of the students. Research (Froyen and Iverson, 1999) also shows there was high incidence of disciplinary problems due to ineffectiveness of the teaching and learning process.

Good educators should be able to learn new concepts or be retrained in business programs. They must have a comprehensive understanding of business subjects necessary to prepare students for a career in business. If the educator chooses the liberationist model, the methodology used must emphasize the intrinsic relationship between content and method. Educators should be able to relate business knowledge with the reality or demands of the work place. Business students should be exposed to areas such as decision making,

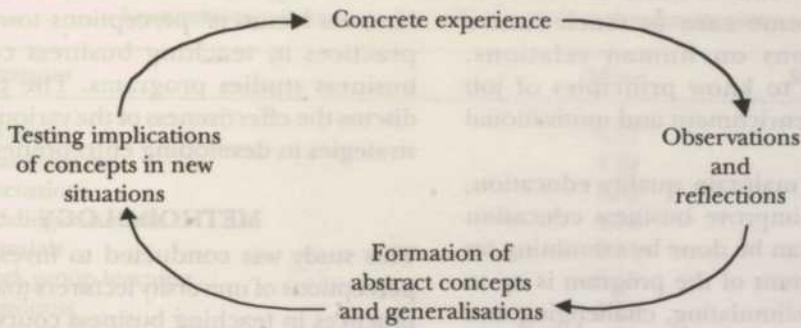


Fig. 1: A critical matrix of learning and teaching  
 Source: Experiential learning cycle (Kolb, 1984; 21)

interpersonal relations and problem solving so that they will better understand the world of work. Based on the principal beliefs of the liberationist model, student's minds should be guided through discovery experiences, and be empowered to learn on their own. Therefore, the stress is on "experience in learning". Based on Kolb's theory of experiential learning 1984, "Learning is the process whereby knowledge is created through the transformation of experience". He has concisely illustrated his theoretical discussion in the widely used cycle of experiential learning (Fig. 1). For this to be effective, educators must be able to maintain a close relationship with business and industry to renew their work experiences or to gain new knowledge from the business enterprise. The university and business should therefore play important roles in educating the nation's future workforce.

In this four-stage cycle, immediate concrete experience provides the basis for observation and reflection. These observations are, in turn, assimilated into abstract concepts and generalizations ('theories') from which implications for action can be read and developed. These implications may be regarded as 'hypotheses' that serve as guides for action, for testing in new concrete situations and, thereby, for generating new concrete experiences. In higher education, the experiential learning cycle incorporates a feedback process directed towards active

experimentation and the abilities/skills that are required (Light and Cox, 2002).

Obviously business education has been affected by current employment trends. There have been important changes in social, economic and demographic factors in our present society. These changes have prompted business educators to access business education programs and curriculum. The business education program must contain appropriate experiences and standards expected by society.

Since, business education should be maintained in the future, it is necessary to examine the content of current business curriculum and bring it in line with the competencies required by employers in today's job market and those of the near future. Modern basic business knowledge and skills offered should include effective oral, written and non-verbal business communication skills, basic business skills, math skills, technological skills, basic accounting concepts and computer skills. In addition, business educators themselves must be willing to accept the age of automation. The constantly changing curriculum is a challenge to even the most progressive educator. Industry cannot wait for well-trained employees, therefore business educators cannot allow their growth to stagnate. In order to provide quality and relevant training, business educators must make the effort to learn new hardware, software

and relevant procedures. Business educators must take extreme care to teach future managers lessons on human relations. Managers need to know principles of job satisfaction, job enrichment and motivational techniques.

In order to maintain quality education, educators must improve business education programs. This can be done by examining on whether the content of the program is up to date and if it is stimulating, challenging and appealing to young people. Business educators should encourage students' interest because student's interest will help build self confidence, self image, experience and success.

Betina (1999) claimed that the entrepreneurship movement is characterized by several trends which are influencing the way people choose to work. She went on to say that entrepreneurship education extends beyond learning about price-earning ratios, financial planning and securing venture capital. It involves engaging students in classroom activities and leading them to develop knowledge and skills through learning processes that they can emulate in the workplace. Following are several strategies that practitioners can use to promote higher-order thinking, in-depth understanding and high quality achievement-behaviors and skills associated with entrepreneurship:

1. Situate learning in the context of its real-world application.
2. Require in-depth understanding of a concept or issue
3. Provide learning activities that enable students to engage in their preferred styles of learning.
4. Make classroom student-centered.
5. Integrate context and content.
6. Become a coach and a mentor rather than a dispenser of knowledge.
7. Require collaboration and teamwork.
8. Require students to achieve high intellectual standards.
9. Engage students in exploration, inquiry, problem solving and reflection.

The objective of this study was to identify business lecturers' perceptions towards their practices in teaching business courses in business studies programs. The paper will discuss the effectiveness of the various teaching strategies in developing entrepreneurs.

## METHODOLOGY

This study was conducted to investigate the perceptions of university lecturers towards their practices in teaching business courses. This is a descriptive study. Data were gathered using the survey method. The target population encompassed all business lecturers teaching business courses in four randomly selected public universities in Malaysia. All business lecturers from the selected universities who participated in the study formed the sample of the study. The study involved 141 lecturers. A set of questionnaires was used to measure the lecturers' perceptions on the utilization of teaching strategies in teaching business courses. The lists of teaching strategies were adopted from Norasmah's study (2002) which identified 20 teaching strategies which are relevant in teaching business and entrepreneurship components. Scales of 1 to 5 were used to measure lecturers' utilization of teaching strategies, where 1 indicates "never utilize" to 5, which indicates "always utilize". The reliability of the instruments for teaching strategies is .86 (Cronbach alpha).

### Research Questions

1. What is the level of usage of each teaching strategy as perceived by Business Lecturers in higher educational institutions?
2. What is the pattern of teaching strategies utilized by lecturers according to Kolb's experiential learning style?

## FINDINGS

Table 1 indicates the lecture method frequently utilized by business lecturers. Most often, they utilized the lecture method (mean= 4.77), followed by examinations (mean=4.09) and discussions (mean=4.02). Providing reading

TABLE 1  
Lecturers' perception on the utilization of teaching strategies

Rank	Strategies	Mean	Standard Deviation
1.	Lectures	4.77	0.515
2.	Examinations	4.09	0.887
3.	Discussions	4.02	0.893
4.	Reading materials	3.79	0.958
5.	Tutorials	3.64	1.387
6.	Work group learning	3.63	1.211
7.	Handouts	3.51	0.956
8.	Projects	3.50	1.125
9.	Case study	3.31	1.147
10.	Dialogue	3.24	1.118
11.	Analysis/evaluation of situation	3.06	1.246
12.	Problem based teaching	2.96	1.211
13.	Structured activity	2.43	1.237
14.	Field work	2.17	1.279
15.	Role play	2.01	1.168
16.	Games/simulation	1.91	1.067
17.	Visits	1.78	1.045
18.	Laboratory work	1.65	1.270
19.	Diary/log book	1.54	0.963
20.	Film	1.46	0.726

materials, conducting tutorials and emphasizing work group learning as well as using projects and case studies are in the category of 'moderately' utilized. The least frequently used strategies are games and simulations, field trips or visits, laboratory work, using diary or log books as well as film.

Table 2 indicates the frequency and percentage for each strategy being utilized by the business studies lecturers. Obviously 79.4% of the lecturers indicate they 'always' use the lecture method, 40.4% indicate that they always use examination strategies and 34.0% 'always' use the discussion methods. About 71.6% of the lecturers never use laboratory work in teaching business, about 65.2% indicate they never use film, 68.1% never use diary or log books, 56.7% never use field trips or visits and 48.2% never use role play and simulations. This indicates that business lecturers are not aware of the various instructional strategies that they should utilize to connect learning business to real life situations.

For the research question, "what is the pattern of teaching strategies utilized by lecturers according to Kolb's experiential learning style?" the answer can be obtained through observing the illustration in Table 3. Students are being trained in business courses by teacher-centered strategies, which are more in the "abstract reflective" and "abstract active" quadrant. All the mean scores for strategies in the categories of "concrete active" are low with the exception of using project (mean= 3.50). The effect of using strategies in the concrete active quadrant is that it provides changes in students' competencies and attitudes.

However, for teaching strategies in the quadrant that influences changes in values known as "concrete reflective", the lecturers are moderately utilizing dialogue and case study strategies and often utilized the discussion method ( $\bar{x} = 4.02$ ) even though utilization of films and problem-based teaching methods are still low. As a whole, it proved that lecturers in Malaysian higher institutions mostly teach to

TABLE 2  
Frequency and percentage for teaching strategies utilized by business lecturers

Rank	Strategies	1	2	3	4	5
1.	Lectures		1 (0.7)	3 (2.1)	23 (16.3)	112 (79.4)
2.	Reading materials	3 (2.1)	8 (5.7)	40 (28.4)	54 (38.3)	35 (24.8)
3.	Examinations		4 (2.8)	36 (25.5)	41 (29.1)	57 (40.4)
4.	Handouts	1 (0.7)	18 (12.8)	54 (38.3)	42 (29.8)	25 (17.7)
5.	Discussions	1 (0.7)	6 (4.3)	30 (21.3)	55 (39.0)	48 (34.0)
6.	Dialogues	11 (7.8)	23 (16.3)	45 (31.9)	43 (30.5)	18 (12.8)
7.	Case study	11 (7.8)	22 (15.6)	40 (28.4)	45 (31.9)	21 (14.8)
8.	Film	92 (65.2)	31 (22.0)	13 (9.2)	2 (1.4)	
9.	Problem based teaching	21 (14.9)	26 (18.4)	47 (33.3)	30 (21.3)	16 (11.3)
10.	Role play	68 (48.2)	22 (15.6)	31 (22.0)	13 (9.2)	4 (2.8)
11.	Games/simulation	68 (48.2)	25 (17.7)	36 (25.5)	4 (2.8)	4 (2.8)
12.	Diary/log book	96 (68.1)	19 (13.5)	13 (9.2)	7 (5.0)	2 (1.4)
13.	Structured activity	45 (31.9)	27 (19.1)	33 (23.4)	28 (19.9)	5 (3.5)
14.	Visits	80 (56.7)	20 (14.2)	27 (19.1)	10 (7.1)	1 (0.7)
15.	Projects	11 (7.8)	10 (7.1)	44 (31.2)	47 (33.3)	27 (19.1)
16.	Field work	62 (44.0)	20 (14.2)	27 (19.1)	20 (14.2)	6 (4.3)
17.	Analysis/evaluation of situation	18 (12.8)	25 (17.7)	50 (33.5)	22 (15.6)	24 (17.0)
18.	Tutorial	16 (11.3)	15 (10.6)	24 (17.0)	30 (21.3)	53 (37.6)
19.	Laboratory work	101 (71.6)	7 (5.0)	8 (5.7)	8 (5.7)	10 (7.1)
20.	Work group learning	13 (8.2)	6 (4.3)	41 (29.1)	39 (27.7)	40 (28.4)

Note: 1 = Never, 2 = Seldom, 3 = Sometimes, 4 = Often, 5 = Always

change students' knowledge, followed by changing students' understanding and values

and least of all focus on changing students' competencies and attitudes.

TABLE 3  
Lecturers utilization of teaching strategies according to Kolb's Experiential Learning Style

iii. Concrete Active (Doing) Changes in competencies and attitude = ( $\bar{x}$ = 2.19)				ii. Concrete Reflective (feeling sensing) Changes in value = ( $\bar{x}$ = 2.99)			
	H	M	L		H	M	L
Role play			2.01	Film			1.46
Games/Simulation			1.91	Dialogue		3.24	
Structured activity			2.43	Limited Discussion	4.02		
Diary			1.54	Case study		3.31	
Field work			2.17	Problem based teaching			2.96
Project		3.50					
Visit			1.78				
iv. Abstract Active (thinking) Changes in understanding = ( $\bar{x}$ = 2.99)				i. Abstract Reflective (watching) Changes in knowledge = ( $\bar{x}$ = 4.04)			
	H	M	L		H	M	L
Group learning		3.63		Lecture	4.77		
Laboratory work			1.65	Reading materials	3.79		
Analysis/Evaluation of situation		3.06		Handout	3.51		
Tutorial		3.64		Examination	4.09		

Note: H = Highly utilized, M = Moderately utilized, L = Lowly utilized

### DISCUSSION

Since the mean scores for all the strategies employed in the quadrant "concrete active", which relates learning to situations in which effective learning and information retrieval and selection are required, are still low. Obviously, the strategies employed by lecturers in higher educational institutions to prepare business students for the world of work do not improve students' learning experiences. This finding indicates that lecturers do not understand fully the learning process, which includes cognition, that is how one acquires knowledge, and conceptualization, that is how one processes the information. The quadrant of 'concrete active' involves the process of 'doing', which means that individual students learn best when they can engage in doing

projects, homework and group discussions but dislike passive learning situations such as listening to lectures. Problem solving, small group discussions, games, peer feedback and self directed work assignments, are all strategies which will help students to learn better.

High levels of correlations have been found between student achievement scores and teaching behavior or skills (Alma, 1998). Further analysis of this research finding indicates lecturers should be made to understand that learning should be more closely associated with the ability to perform and expresses the importance of experiential learning. Kolb in his book (1984) stresses the fundamental role of experience in learning: learning is the process whereby knowledge is created through the transformation of



experience. Light and Cox (2002) supported the view that experiential learning focuses on a transformation which is both active by definition and explicitly grounded in the concrete social environment in which experience occurs. Light and Cox (2002) suggest the following to be included in the teaching and learning process for higher education: writing essays and reports, giving presentations, chairing seminars, engaging in discussions, working on tasks as part of a team, performing experiments, solving group problems, engaging in research, carrying out clinical duties, undertaking projects, reading aloud to a group, assessing peers, writing exams and evaluation of learning. They further illustrate a series of relationships between experience and learning. An important feature of the effectiveness of experiential learning is getting the balance right between experience, reflection, theory and action.

By observing Table 3 again, it is obvious that business lecturers in higher educational institutions tend to utilize teacher-centered approaches in their teaching, and by looking at the general practice among these lecturers, it can be assumed that students may not be able to put their learning experiences into practice. Light and Cox (2002) suggested that field trips and other practical work can provide a very good context for learning to occur. To reflect on the teaching strategies utilized by lecturers and to highlight what has been indicated in Kolb's experiential learning style, Malaysian business lecturers perceived that they still do not focus on changing their student's competencies and attitudes. This can be one of the reasons why university graduates fail to get jobs after graduation and are not interested to start their own business ventures. Alma (1998) concluded that effective teaching is highly dependent upon the nature of the educational outcomes and goals which the teachings aim to foster. There are central qualities, skills and behaviors necessary for effective teaching, and an extensive repertoire of teaching models or styles is an essential prerequisite of effective teaching. A question

arises whether the lecturers involved in this study really perform effective teaching? When explaining the importance of effective teaching skills, Alma concluded that teaching skills involve three important elements which are: (1) knowledge, comprising the teacher's knowledge about the subject, curriculum teaching methods, the influence of teaching and learning of other factors and knowledge about one's own teaching. (2) Decision making, comprising the thinking and decision making which occurs before, during and after a lesson, concerning how best to achieve the educational outcomes intended and (3) action, comprising the overt behavior by teachers undertaken to foster pupils' learning. For the Malaysian lecturers, findings of the study revealed that the concentration is only on "knowledge" but not on "decision making" and "action", which is the reason why students do not gain the benefits of learning in practical situations.

Herron (1999) said that experiential knowledge is knowledge gained through action and practice. This type of learning is through encountering direct acquaintance, by entering into some state of being. It is manifested through the process of being there, face to face with the person, at the event and in the experience. Tasey (2002) said that games and simulations are significant forms of experiential learning methods. In play people are most likely to be spontaneous, uninhibited and expressive. Simulations generally place participants in specified roles within a simulated action arena in order to experience the dynamics of 'real' situation within an educational setting. It is good for the business lecturers to utilize experiential learning such as simulations and games because these techniques offer opportunities for the students to voluntarily enter an experience, an encounter, for the purpose of understanding something about themselves, and something about the context and content they are engaged with (Gregory, 2002).

Jarvis (2002) mentioned that in the preparation of individuals for a number of

professions, practical placement in quite crucial. This means that students need to have had preparation before they actually begin that practice - such as induction sessions, visits or discussions with other practitioners. Those already in practice might act as mentors for the students. He also indicated that teachers need to encourage learners to practice generating their own data through writing journals and participating in peer learning communities.

Jarvis (2002) also said that journals will help students to become reflective learners and reflect upon important decisions they have taken since they enrolled in the program, and it also encourages students to examine their own self-development and their own feelings of empowerment. Lecturers of higher institutions may therefore play a big role in helping students to reflect on their practices. This is not book knowledge but practical knowledge. Unfortunately writing diaries or journals received the lowest mean score (mean = 1.54) in the current study.

#### CONCLUSION AND RECOMMENDATION OF THE STUDY

1. This study concurs with literature which states that lecturing remains a major teaching method in all sections of all post - compulsory education system. Business lecturers of higher educational institutions in Malaysia highly utilize the lecture method, which puts the lecturer in complete control of the situation and students in an entirely passive role. Griffin (2002) claims that formal lectures would seem to lack almost every prerequisite for effective learning, it is a one way process and there is little scope for reflexivity and for learners to make experiential connections.
2. Students in the business studies program are missing out on the relevance of learning from experience since all the teaching strategies that meet the principles of experiential education received a very low mean score, such as diary/journal ( $\bar{x}$

= 1.54), visit ( $\bar{x}$  = 1.78), simulation ( $\bar{x}$  = 1.91), role play ( $\bar{x}$  = 2.01), field work ( $\bar{x}$  = 2.17) and structured activity ( $\bar{x}$  = 2.43).

3. Lecturers should utilize more student-centered approaches to teaching, utilize more experiential learning strategies and the application of self directed learning.

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## The Relationship between Mathematics Self-Efficacy and Mathematics Achievement

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### ABSTRACT

The purpose of this study was to examine the relationship between mathematics self-efficacy and mathematics achievement for 339 high school students aged between 15 and 17 years. Pearson product-moment correlation showed that mathematics self-efficacy was significantly correlated with mathematics achievement ( $r = 0.30, p < .01$ ). Results showed that students with higher mathematics self-efficacy were more likely to achieve better mathematics achievement. The finding was generally consistent with the basic assumptions of Bandura's (1986) self-efficacy theory.

### INTRODUCTION

Self-efficacy can predict one's behaviour better than actual capability because such self-perceptions affect what one does with the knowledge and skills possessed (Pajares and Miller, 1995). Self-efficacy affects several aspects of students' behaviour that are important to learning such as choices of activities, effort, strength of perseverance, persistence and anxiety, and ultimately, their achievement (Pajares and Miller, 1995; Zimmerman, Bandura and Martinez-Pons, 1992). A student with high self-efficacy tends to learn and achieve more than those with low self-efficacy, even when actual ability levels are the same (Pajares, 1996; Zimmerman, Bandura and Martinez-Pons, 1992; Bandura, 1986). In other words, those who believe they can complete a task are more likely to accomplish it successfully than those who believe they are incapable of success, even though they have equal ability. This also helps to explain why different individuals with similar knowledge and skills, or the same individuals in different circumstances, perform differently.

An individual's opinion concerning academic competence is important for many reasons, which include self-evaluation and is related to behaviours that are critical for academic success. Self-efficacy theorists hypothesize that self-efficacy mediates the influence of other determinants of academic outcome (Bandura, 1986). Self-efficacy theorists also maintain that a student's academic achievement is largely determined by the confidence with which an academic task is approached. Student's efficacy belief has been shown to contribute to motivation and academic attainments. The higher the self-efficacy, the better the achievement (Bandura, 1982).

#### *Bandura (1986) Self-Efficacy Theory*

According to Bandura (1986), self-efficacy refers to "people's judgement of their capabilities to organize and execute courses of action required to attain designated types of performances". It is not concerned with the skills one possesses but with judgement of what one can accomplish with the skills. In academic

settings, a student's self-efficacy helps determine what can be accomplished with knowledge and skills. As Bandura (1986) pointed out, there is an obvious difference between possessing skills and being able to use them well in diverse circumstances.

Bandura (1986, 1982) argues that self-efficacy influences choice of tasks where one tends to choose tasks at which it is believed success is guaranteed. When one believes in results through action, there is an incentive to act. One with a strong sense of self-efficacy in a particular area will devote time and effort to the demands in that area.

High self-efficacy can maintain high efforts and persistence in which students with a high sense of self-efficacy are more likely to exert themselves in attempting to accomplish a task (Miller *et al.*, 1996; Bandura, 1986). They are also more likely to try harder and persist longer when faced with obstacles and difficulties. The stronger their self-efficacy, the stronger and persistent are their efforts (Bandura, 1986). However, those with high efficacy might not exert much and ample effort if they felt that the assignments given was within their understanding and as such not of much value.

#### LITERATURE REVIEW

Although researchers have examined the role of self-efficacy in various academic fields, mathematics has been a main focus of a variety of studies (O'Brien *et al.*, 1999; Kranzler and Pajares, 1997; Pajares and Miller, 1997; Pajares and Miller, 1995; Lopez and Lent, 1992). In a paper by Kranzler and Pajares (1997), they cited that Hackett and Betz (1989) defined mathematics self-efficacy as "a situational or problem-specific assessment of an individual's confidence in his or her ability to successfully accomplish a particular (mathematical) task or problem".

Among all academic subjects, success in mathematics is necessary for further studies in many disciplines such as science and engineering (Cajete, 1988 cited in House, 2001). Mathematical skill is required for work in science and engineering, low mathematics

self-efficacy is a possible contributor to less number of people in these fields. Therefore, it is important to understand students' self-efficacy when learning mathematics.

Researchers have shown that mathematics self-efficacy is related to mathematics achievement (Pajares, 1996; Pajares and Kranzler, 1995; Cooper and Robinson, 1991). There is a significant positive relationship between mathematics self-efficacy and mathematics achievement in high school students (Pajares and Kranzler, 1995); graduates (Cooper and Robinson, 1991); college students (Pajares and Miller, 1995); and gifted students (Malpass, O'Neil and Hocoever, 1999; Pajares, 1996). Since self-efficacy is a good predictor of achievements, mathematics self-efficacy becomes increasingly important. Thus, it is important to convince students that they have the capability of acquiring skills (Higbee and Thomas, 1999; Wigfield and Eccles, 1994).

In learning mathematics, one who possesses confidence in his ability and effort, is more likely to attain higher mathematics achievement (Whang and Hancock, 1994). When students study for a mathematics exam, their confidence level determines the amount of effort and time used in solving mathematical problems (Pajares, 1996). When one has high confidence, the chances of successful mathematics achievement are enhanced.

Mathematics self-efficacy has been found to be a stronger predictor of mathematics achievement than mathematics anxiety, mathematics background, gender and previous performance (Pajares and Miller, 1995). Similarly, in Pajares' (1996) study on gifted students, it was found that their mathematics self-efficacy beliefs made an independent contribution to the prediction of mathematics problem-solving, in which the effects of mathematics anxiety, cognitive ability, prior mathematics result, self-efficacy for self-regulated learning, and gender were controlled.

Pajares and Kranzler (1995) used path analysis to test the influence of mathematics

self-efficacy and general mental ability on the mathematics performance of high school students. They reported that students' general mental ability and mathematics self-efficacy have significant direct effects on mathematics performance. Furthermore, mathematics self-efficacy had significant direct effects on mathematics performance even when their general mental ability was controlled. It is a powerful determinant and predictor of mathematics achievement. Mathematics self-efficacy is also a significant predictor of mathematical problem-solving capability as is general mental ability.

Miller *et al.* (1996) utilized multiple regression analysis to identify the variables that contribute to the variance in mathematics achievement. They have shown that self-efficacy is the best predictor of mathematics achievement, compared to goal orientations (learning and performance), cognitive strategies (deep and shallow), self-regulation and persistence. Mathematics self-efficacy contributes significantly to students' mathematics achievement, and thus, this motivational variable should be taken into account in any attempt to improve students' mathematics achievement.

Bandura (1986) argued that "the stronger the self-efficacy, the more likely are persons to select challenging tasks, the longer they persist at them, the more likely they are to perform them successfully". One with higher mathematics self-efficacy is more likely to achieve a better grade. One who obtains a good mathematics grade also tends to possess higher mathematics self-efficacy. This proved that self-efficacy plays a key role in students' achievement in school because efficacy beliefs lead to behaviours that in turn contribute to achievement.

## METHOD

### Subjects

The subjects in this study were 339 high school students aged between 15 to 17 years, with a mean of 15.87 (SD=0.49). There were 226

males (66.67%) and 113 females (33.33%). Most of the subjects were Chinese (68.73%), followed by Indians (21.83%) and Malays (7.67%). Six subjects (1.77%) were from other races.

### Sampling

The sampling method applied in this study was multi stage random sampling. Multi stage random sampling is the combination of cluster random and individual random sampling (Fraenkel and Wallen, 1993). Cluster random sampling involves the random selection of a cluster from the larger population of clusters (Wiersma, 1995). The State, School and Class served as clusters in this study. Groups were selected through simple random sampling (Sowell and Casey, 1982). Firstly, a State in Malaysia was chosen at random. From the State of choice, three schools were then picked at random from a list of secondary schools. Finally, from the schools chosen, nine classes were chosen at random for the study.

### Instruments

The instruments used in this study are a Mathematics test and self-efficacy questionnaire. Subjects were given a mathematics test to assess their proficiency in mathematics. A qualified mathematics teacher who has taught this subject for more than five years prepared this test. The mathematics test was in accordance with the prescribed syllabi of the subjects.

It was an open-ended mathematics assessment in which students had to write down the steps and answers. Appropriate steps and accurate answers were given scores. The total test score was set at between 0 and 100. The scores were used as an indicator of mathematics achievement.

The questionnaire pertaining to students' mathematics self-efficacy was modified from Academic Efficacy of the Patterns of Adaptive Learning Survey (PALS) (Midgley *et al.*, 1996 as cited in Patrick *et al.*, 1997), and Academic Self-efficacy (McIlroy *et al.*, 2000). Mathematics

self-efficacy was measured using fifteen items (Appendix). Seven items on the Mathematics self-efficacy scale were adapted from Midgley *et al.* (1996) cited in Patrick *et al.* (1997); whereas eight items were adapted from McIlroy *et al.* (2000). Students indicate their level of agreement with the fifteen items using a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Twelve items were positively worded and three items (item 7, 12 and 14) were negatively worded. Thus, there were reverse scorings on item 7, 12 and 14.

Permissions to translate and administer the questionnaire were obtained from the authors. The entire questionnaire was translated into the Malay language and back into English by a panel of language teachers in order to ensure translation fidelity. Back translation was used with a few minor linguistic adjustments to ensure that the modified statements were appropriate. After the entire questionnaire was translated, all the items in the questionnaire were checked and verified by a panel of lecturers from Universiti Putra Malaysia. Cronbach alpha coefficient was employed to examine the reliability of the mathematics test and the questionnaire. The mathematics test yielded an alpha coefficient of 0.76. A coefficient of 0.87 resulted for the mathematics self-efficacy scale.

#### Procedure

After informed consent had been obtained, subjects were administered the mathematics self-efficacy questionnaire and mathematics test during the mid-semester assessment period of the academic year. The instrument was administered under the supervision of a teacher and the researcher to ensure that no interaction or discussion took place among students during the administration of the instrument. The subjects were also informed that all information would be kept confidential. Before administration of the questionnaire, they were told it was not a test, that there were no right or wrong answers, but only statements

that would reflect their confidence and behaviour while learning mathematics.

Bandura (1986) cautioned that, because efficacy judgements are task-specific and situation specific, a self-efficacy measure should be administered as closely as possible in time to that achievement. Adhering to this reason, the questionnaire was administered immediately after the mathematics test.

#### FINDINGS AND DISCUSSION

Pearson product-moment correlation was executed to examine the relationship between mathematics self-efficacy and mathematics achievement. Significant positive correlation was found between scores on mathematics self-efficacy and mathematics achievement ( $r = 0.30, p < 0.01$ ). Results indicated that there was a moderate positive correlation between mathematics self-efficacy and mathematics achievement. This indicates that one who is high in self-efficacy is more likely to have high mathematics achievement.

This result is consistent with theoretical assumptions on the consequences of self-efficacy described by Bandura (2000, 1986, 1982), which stated that students with high self-efficacy tend to learn and achieve more. This finding also concurs with results of the studies in self-efficacy that consistently showed the important role of self-efficacy on achievement in mathematics (Malpass *et al.*, 1999; Pajares, 1996; Pajares and Kranzler, 1995; Cooper and Robinson, 1991), and various school subjects (O'Brien *et al.*, 1999; Greene and Miller, 1996; VanderStoep *et al.*, 1996).

Consequences of self-efficacy include higher achievement (Bandura, 1986). It was argued by Bandura (1986) that the stronger the self-efficacy, the more likely the selection of challenging tasks. The longer one persists, the more likely one is to perform a task successfully. Students with higher mathematics self-efficacy have a higher probability to attain better grades. Students who obtained good mathematics grades are also more likely to have higher self-confidence in their overall

mathematical ability. There is a reciprocal relationship between mathematics self-efficacy and mathematics achievement.

In summarising, the findings provide preliminary evidence regarding the importance of motivational belief as revealed by the positive relationship between mathematics self-efficacy and mathematics achievement. Hence, students who possess high mathematics self-efficacy are more likely to have better mathematics outcome than students who possess low self-efficacy. The result of this study suggests that the application of self-efficacy theories in classroom instruction may help to improve students' academic achievement.

### CONCLUSION

The results obtained have important pedagogical implications for schools and teachers. Mathematics self-efficacy is a factor that should be thought of antecedent to mathematics achievement. Although it is a factor that works subtly, it can have a rather significant implication on learning, and therefore deserve attention from both researcher and teacher.

Since mathematics self-efficacy correlated with mathematics achievement, teachers should consider making diagnostic assessments of students' self-efficacy. Assessing students' self-efficacy can provide teachers with important insights about students' academic motivation and behaviour. Since this variable correlated with mathematics achievement, it may well serve as important considerations in any attempt to improve students' mathematics achievement.

The moderate but significant correlation between mathematics self-efficacy and mathematics achievement indicated that self-efficacy plays an important role in students' achievement. Some researchers have suggested that teachers should pay necessarily more attention to students' self-efficacy rather than to actual competence because self-efficacy may be more accurate in predicting students'

motivation in learning. Adhering to this reason, teachers should find ways to motivate students to believe that they possess high ability.

Teachers need to give more emphasis to low achievers, not only to teach the content of curriculum, but also to increase their mathematics self-efficacy, and expose them to better learning methods. Only then, will low achieving students become more confident, motivated and master their learning.

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**Questionnaire: Mathematics self-efficacy**

1. I'm certain I can master the Mathematics skills taught in class this year.
2. I can do even the hardest Mathematics problem in this class if I try.
3. If I have enough time, I can do a good job on all my Mathematics classwork.
4. I can do almost all the Mathematics problems if I don't give up.
5. Even if Mathematics is hard, I can learn it.
6. I'm certain I can figure out how to do the most difficult Mathematics problem.
7. No matter how hard I try, there are some Mathematics problems I'll never understand. (R)
8. I am confident that I can achieve good Mathematics results if I really put my mind to it.
9. If I don't understand a Mathematics problem, I persevere until I do.
10. When I hear of others who have failed their Mathematics exams, this makes me all the more determined to succeed.
11. I am confident that I will be adequately prepared for the Mathematics exams by the time they come around.
12. I tend to put off trying to master difficult Mathematics problem whenever they arise. (R)
13. I am convinced that I will eventually master those items on my Mathematics which I do not currently understand.
14. I fear that I may do poorly in my Mathematics exam. (R)
15. I have no serious doubts about my own ability to perform successfully in my Mathematics exams.

## Comparing Factors of Couple Resilience Across Ethnic Groups in Malaysia

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**Keywords:** Factors, couple resilience, ethnic groups, Sabah

### ABSTRACT

Resilience involves the capacity to withstand and rebound from crisis and adversity and to maintain successful adaptation, positive functioning or competence (Egeland, Carlson & Sroufe, 1993; Walsh, 1999). Couple resilience is a unique and complex construct, comprising 17 individual components that were logically clustered into four groups and can serve as a framework for understanding couples. The four groups are Personal Characteristics, Interpersonal Characteristics, Intrapersonal Characteristics and External Factors. The purpose of this study was to identify which of the factors are important for each ethnic group. Using the Resilience in Couples Questionnaires (Everts 1998) and scoring guidelines, 200 postgraduate students who have been married for more than 10 years, were interviewed. The students included 46 Malays, 34 Chinese, and 20 Indians from Peninsular Malaysia; and 58 Kadazandusuns and 42 Bajaus from Sabah. Results showed that the dominant factors for most groups were affection, commitment and tolerance. For the Chinese, communication skills were important factor. For the Malays, optimism and self-protection were important factors, and for the Kadazandusuns, Bajaus and Indians, shared values was important. The majority of responses across all ethnic groups fell in the Intrapersonal Cluster. For the total sample, the factors mentioned in descending order were: Intrapersonal Characteristics (27.3%), Interpersonal Characteristics (13.5%), External Factors (10.5%), and Personal Characteristics (7.4%). The findings of this study indicate that despite differences among the ethnic groups, they agree generally on factors of couple resilience.

### INTRODUCTION

Resilience is described in developmental psychopathology literature in numerous ways. Rutter (1987) refers to it as "individual variation in response to risk" (p. 317), Werner (1989) as "successful adaptation following exposure to stressful life events" (p. 72), and Garmezy (1993) as "functioning following adversity" (p. 129). Hawley and Deal (1996) suggest that many of these definitions encompass several themes. First, resilience surfaces in the face of hardship. It involves the manner in which individuals respond to difficulties. Without struggle, resilience does

not exist. Second, resilience carries a property of buoyancy. It assumes that individuals exhibiting resilience are able to "bounce back" or "rebound" from adversity, reaching or surpassing a pre-crisis level of functioning. Finally, resilience is generally described in terms of wellness rather than pathology. Antonovsky (1987) calls this a "salutogenic orientation" (p. 2). Strengths, rather than deficits, are emphasized and are viewed as the resources that allow individuals to overcome adversity.

The term "resilience" has been used most commonly by clinical or developmental

psychologists and psychiatrists interested in how children and adolescents overcome significant adversity in their lives (Luthar, Cicchetti and Becker, 2000; Masten, 2001). Sociologists and social psychologists have tended to use terms like successful coping to describe couples who remain competent, or regain competence, after experiencing negative life events (Coleman and Ganong, 2002). The definition of resilience proposed by Luthar *et al.* (2000): "Resilience refers to a dynamic process encompassing positive adaptation within the context of significant adversity" (p. 543).

There are several advantages to this conceptualization of resilience. First, this perspective on resilience focuses on the processes through which couples become more or less resilient to the difficulties in their lives rather than on rigid and unchanging traits or personal dispositions. When one considers the means by which families might influence resilience, the mechanisms involved typically relate to interaction processes that occur over long periods of time. For example, nurturing and involved parenting (i.e., parenting that provides both support and effective management in a child's life) during childhood and adolescence appears to protect children from the negative consequences of significant adversities in their lives (Masten, 2001). Similarly, spouses' demonstration of support and understanding in their interactions over years of marriage seems to promote resilience to major life stresses (Walsh, 1998). Resilience in families involves processes that may fluctuate over long periods of time rather than being static or constant. Moreover, these processes may be influenced by life's stresses and strains in a dynamic consistent with the perspective advocated by Luthar *et al.* (2000).

Is resilience a characteristic, a process, or an outcome? When is couple resilience manifested? Is resilience a phenomenon that must be accompanied by unusually difficult circumstances (i.e., significant risks) or can resilience be observed as individuals and families encounter normative or everyday

challenges? Do individuals only experience resilience or is there such a thing as family or relational resilience?

According to Walsh (1998), resilience involves the capacity to withstand and rebound from crisis and adversity and to maintain successful adaptation, positive functioning or competence despite high-risk status, chronic stress or prolonged severe trauma (Egeland, Carlson and Sroufe, 1993). Some research has addressed individual resilience as well as the characteristics of happy marriages or relationships, but few studies have addressed couple resilience from a multicultural perspective.

Werner (1995) conducted a study in which fifteen couples who had been married at least 30 years were asked in separate one-hour interviews to describe the qualities that sustained them in times of closeness and relationship strain. The results yielded five key characteristics: intimacy balanced with autonomy; commitment; communication and conflict resolution; religious orientation; and congruent perceptions of the relationship. In a later study, Coleman and Ganong (2002) reported that greater marital satisfaction was present for those couples who could support each other and respond emphatically despite stressful situations. In addition, couples are more effective in coping with adversity when they share a cognitive style that includes ample general interaction, self-disclosure, good decision-making skills and a focus on the concrete and manageable aspects of problems.

Everts (1998) explored the concept of resilience as it applies to the couple relationship using a field based, qualitative study. Using a middle class group of participants, he asked them to respond to an open-ended question regarding the elements of resilience in a couple that they knew. Using a modified grounded theory approach (Evert, 1998) identified 17 categories in the qualitative analysis of the responses. These included: role models, personal resilience, optimism, religious faith, awareness, shared values, affection, commitment, tolerance, recreation,

communication skills, collaboration, support network, self-sacrifice, physical resources, self-protection and couple relationship history. He logically clustered these components with the first cluster representing the personal characteristics of each partner, i.e., optimism, personal resilience, religious faith and psychological awareness. The second cluster included the values and attitudes that the partners held toward the relationship, i.e. affection, commitment, tolerance and shared values. The third cluster involved the cognitive and behavioral skills that the partners used in the management of the relationship, i.e. communication skills, collaborative ability, learning accumulated in the course of their life together, recreational activities, physical resources and self-sacrifice. The final cluster included social network, the influence of role models and couple's self-protective skills.

Susman, Sattberger, Fuller and Castelino (2000) replicated Everts' study with a sample of 187 graduate students in counselling psychology and social work programs in the United States and India. The data were analyzed to see if there were any differences in the factors across cultures and were compared to those of Everts (1998). Results indicated that there were some common characteristics among groups and some factors that were unique to each culture. Overall, the results of this study highlighted the cultural differences in the perception of couple resilience in populations from two different countries. However, the study did not address differences that exist within each country.

The objectives of this study were to compare the 17 factors across ethnic groups in Malaysia (half of the sample were taken from Peninsular Malaysia and the other half from Sabah), and to identify factors that are important to each group in maintaining couple resilience. This study is a modified replication of Everts (1998) study by Susman *et al.* (2000) using a sample of graduate students in the United States and in India. Our findings showed that there were many similarities across ethnic groups, yet some differences.

## METHOD

### *Participants*

Participants were 100 graduate students from Sabah and 100 graduate students from Peninsular Malaysia. They included 58 Kadazandusuns, 42 Bajaus, 46 Malays, 34 Chinese, and 20 Indians. Participants ranged in age from 28 to 45. The couples have been married for more than 10 years.

### *Instruments*

The Resilience in Couples Questionnaire (Everts, 1998) briefly described the purposes of the research and provided a definition of resilience. Participants completed demographic information in regard to their age, gender and ethnic background. Then, they were given the following instructions, "List the main reasons that have made couples resilient because they have coped successfully with serious adversity and maintained, if not strengthened, their relationship in the process". Adequate space was provided and ample time was allotted for the participants to list these reasons.

The Couple Resilience Scoring Guidelines (Everts, 1998) that consists of 17 categories was used to categorize the data. Each category was operationally defined and examples and rules for scoring were provided.

### *Procedures*

Two faculty advisors combined all responses that were written in paragraph form. When responses were listed, each item was considered to be a unit.

Coders were trained on the use of the Couple Resilience Scoring Guidelines for approximately 20 hours. They first memorized the operational definitions for each coding category and became familiar with the examples. Coders were divided into pairs. Each coder independently coded the responses, and then the partners compared the categories assigned, resolving disagreements through discussion (Elliott, Shapiro, Firth-Cozens, Stiles Hardy, Llewelyn and Margison, 1994). The

combined interrater agreement for Sabahan and Peninsular Malaysian samples was approximately 0.70. The interrater agreement for Sabah sample was approximately 0.76 and 0.65 for the Peninsular Malaysia sample.

## RESULTS

Using the scoring categories, frequencies and percentages of responses per coding factor and cluster (both for the total sample and within each ethnic group) were calculated (see Table 1). To answer the research question as to whether there were any differences among ethnic groups by factors, the frequency of mentions by factor within each ethnic group was calculated. In Table 2, the three most frequently mentioned factors are summarized.

An overall look at the data shows that the majority of responses across all ethnic groups fell in the Intrapersonal Cluster. For the total sample, the factors mentioned in descending order were: Intrapersonal Characteristics (68.3%), Interpersonal Characteristics (13.5%), External Factors (10.6%), and Individual Characteristics (7.4%).

Looking at responses within specific ethnic groups, there is a difference in perception as to what are considered important factors of couple resilience. Chinese, Kadazandusun, and Bajau participants frequently indicated Commitment and Affection as being important to couple resilience, but varied across ethnicity in terms of the hierarchical ranking of the importance. For example, the Kadazandusun subjects in our sample indicated Commitment and Affection to be equally important, Bajau participants ranked Commitment as secondary to Affection, and Chinese listed both Affection and Shared Values more often than Commitment. Tolerance was found to be the most frequently listed factor among Malays, with Affection and Shared Values ranked second and third, respectively. Indian participants listed factors, which equally denoted Commitment, Communication and Support Network as reasons for couple resilience. Other participants most frequently

reported Shared Values as the reason for couple resilience. The factors of Religious Faith (0 responses), Physical Resources (1 response) and Role Models (1 response) were the least frequently listed factors across participants.

## DISCUSSION AND CONCLUSION

In this study, factors that are important to each ethnic group for maintaining couple resilience were identified and differences in the perception of couple resilience among ethnic groups in Sabah and in Peninsular Malaysia were described. The findings of this study indicate that while participants from all ethnic groups may *generally* appear to agree on similar qualities as factors of couple resilience, slight differences in the rankings of these factors may indicate significant differences in the values of different ethnicities regarding what is important to couple resilience. This finding corroborated the results of past research (Susman *et al.*, 2000).

Using the 17 factors to define the component elements of couple resilience, we were able to delineate the differences in perceptions between participants of different ethnic backgrounds. Some of the factors were mentioned by the majority of the respondents (i.e. Affection and Commitment), while other factors were given negligible or no mention (i.e. Role Models, Physical Resources, and Religious Faith).

The results revealed that for Chinese students, communication skills were an important factor. This is probably because Chinese has a very close family relationship where the extended family lives together in the same house. Therefore, interaction and communication among them were very important to preserve harmony. Optimism and Self-protection were two important factors for Malay students because they have positive attitude and thinking; always think far for their future generations and protection for old aged. For the Kadazandusun, Bajau and Indian, shared values were important factors. This is because for ethnic group they probably hold

TABLE 1  
Frequencies and percentage of total response by category

Category	Total (%)	Kadazan Dusun	Malay	Bajau	Chinese	India
<b>Cluster One:</b>	25	7	0	9	8	1
<b>Individual Characteristics</b>	(7.4%)	(6.9%)	(0%)	(18.4%)	(6.0%)	(7.7%)
Personal Resilience	13 (3.9)	4	0	4	5	0
Religious Faith	0 (0.0)	0	0	0	0	0
Self- Protection	9 (2.7)	0	0	5	3	1
Self- Sacrifice	3 (0.9)	3	0	0	0	0
<b>Cluster Two:</b>						
<b>Intrapersonal Characteristics</b>	228	69	29	32	92	6
	(68.3%)	(68.3%)	(78.4%)	(65.3%)	(69.7%)	(46.2%)
Affection	72 (21.2)	23	6	12	30	1
Awareness/Empathy	10 (3.0)	1	0	2	5	1
Commitment	56 (16.7)	23	5	6	20	2
Optimism	23 (6.9)	7	4	5	6	1
Shared Values	50 (14.9)	12	6	4	27	1
Tolerance	18 (5.4)	3	8	3	4	0
<b>Cluster Three:</b>	45	16	4	6	17	2
<b>Interpersonal Characteristics</b>	(13.5%)	(15.8%)	(14.8%)	(12.3%)	(12.7%)	(15.4%)
Collaboration	10 (3.0)	3	2	1	4	0
Communication Skills	33 (9.9)	13	2	4	12	2
Recreation	2 (0.6)	0	0	1	1	0
<b>Cluster Four:</b>	36	9	4	2	17	4
<b>External Factors</b>	(10.6%)	(8.9%)	(11.1%)	(4.1%)	(12.7%)	(30.8%)
Couple Relationship History	11 (3.3)	3	2	1	4	1
Physical Resources	1 (0.3)	1	0	0	0	0
Role Models	1 (0.3)	0	0	0	1	0
Support Network	23 (6.9)	5	2	1	12	3

strong values among couples and shared with family members. They try to preserve the values from one generation to another. These ethnic groups too have strong family bond and close relationship that they can share their values.

Though the results of this study are both interesting and compelling, certain limitations need to be addressed. First, because the sample was predominantly graduate students in psychology, the results may be limited for generalisation. Secondly, because the ethnic distribution of the sample was not too varied, any interpretations based on population must

be made carefully. Finally, due to a lower than expected response rate, the sample size was not as large as would have been desirable for solid interpretation of results. Future studies are needed to address the current research question with a larger, more diverse sample.

Despite limitations, the results of this study add to our understanding of the factors that are important across ethnic groups.

These findings may prove helpful in future research as comparisons are made between perceptions of couple resilience and actual development of interventions that enable

TABLE 2  
Percentages of top factors reported within ethnic groups

Ethnicity	Factor
Kadazandusun N = 58 ; # of Responses = 101	Commitment (22.8%) Affection (22.8%) Communication Skills (12.9%)
Malay N = 46 ; # of Responses = 37	Tolerance (21.6%) Affection (16.2%) Shared Values (16.2%)
Bajau N = 42 ; # of Responses = 49	Affection (24.5%) Commitment (12.2%) Optimism (10.2%) Self - Protection (10.2%)
Chinese N = 34 ; # of Responses = 134	Affection (22.4%) Shared Values (20.1%) Commitment (14.9%)
Indian N = 20 ; # of Responses = 13	Commitment (15.4%) Communication Skills (15.4%) Support Network (23.1%)
Total N = 200	

couples of various ethnicities to develop increased resilience. In addition, an understanding of these differences can help clinicians more adequately address issues of conflict and resolution when conducting marital therapy. Finally, the results of this study can be used to develop couples prevention programs which specifically address issues of multicultural diversity.

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Swan and Kanwal (2007) reported that ...

The results have been interpreted (Kanwal et al. 2006).

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  - Hawe, P. (2005). Capturing the meaning of "community" in community intervention evaluation: Some contributions from community psychology. *Health Promotion International*, 9, 199-210.
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