

VALUE OF GROUP PROJECTS - AUSTRALIAN AND ASIAN STUDENTS COMPARED

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ABSTRACT

This study explores Australian and Asian students' perceptions of the value and usefulness of group projects. Factor analysis of 17 items measuring perceptions revealed three main factors - Project Process, Group Interaction, and Group Tolerance. Significant differences were noted along all dimensions. Implications of these findings are discussed, limitations noted and directions for future research addressed.

INTRODUCTION

Group projects are intended to create an environment in which teamwork is enhanced. Students working in project teams typically encounter the "real-world" pressures of delivering a quality project paper. Teamwork increases the active involvement of the student and reinforces communication and problem-solving skills (Adrian and Palmer 1999). This in itself fosters not only a respect for and understanding of the capabilities of their group members, but also the role they play in the process of writing and compiling the project (Ivins, 1997). Collaborative learning experiences through group projects allow participants to gain an awareness of the characteristics and skills required of group members. This is becoming increasingly important given today's business environment. Employers are now expecting commerce graduates not only to possess technical and quantitative skills, but also to be effective communicators, problem solvers, critical thinkers and team players (Floyd and Gordon, 1998). The realization of the benefits students can gain when working cooperatively, both in terms of the quality of the learning experience and the acquisition of team work skills (Healey et al., 1996), has seen many marketing educators incorporate team based experiential learning projects and activities within the curriculum. According to Colbeck, Campbell and Bjorklund (2000) participation in group projects improves communication, conflict management and problem solving skills. They argue that students gain considerable benefit from collaborating with others on group projects throughout their undergraduate careers.

GROUP PROJECTS AS A LEARNING TOOL

Experiential based learning creates an environment where students take more responsibility for their own learning and the instructor assumes the role of a facilitator or coach. This helps instill in students an appreciation for the process of learning, and not just the final grade they receive, and empowers them to contribute actively to their own educational experience (Gremler et al. 2000). Dommeyer (1986) suggests that students prefer to work on team projects, rather than individual projects, and generally rate the experience as more enjoyable with greater educational value. They tend to learn better when engaged in a group effort rather than working on their own, since group work increases the active involvement of the student and provides multiple opportunities for feedback by reinforcing communication and problem solving skills (Adrian and Palmer, 1999). Exposure to group projects also provides a vehicle by which students learn to compare and defend their own views with the opinions or approaches espoused by others (Kolb, 1998) and develop a better understanding of the scope and complexity of the material (Gremler et al. 2000). Such experiences may prepare individuals to work effectively in a diverse workforce. McLean, Redi and Scharf (1998/99) suggest that if students are responsible for the composition of their own group, they are normally more committed and the group can function more effectively in a shorter space of time. The compatibility of group members may not just be concerned with the ability to work together or with social friendship; it may also be affected by factors such as ease of access for group meetings or a common interest in a particular topic area. The use of team based work or experiential exercises in marketing education, however, is not without its problems. Schibrowsky and Peltier (1995) report that there is a greater potential for academic dishonesty compared to traditional activities. Within group problems may also arise when students feel that a group mark is not a fair reflection of individual contribution (Conway et al. 1993). Another issue is that there is a tendency for enthusiastic and talented students to get together to form strong teams while their less effective and more apathetic colleagues form teams that are weak. Experience with this process indicates that there is invariably trouble later in the semester because of a lack of interest and motivation on the part of the students in the weak teams. McCorkle et al. (1999) suggest that the use of group projects, as a pedagogical tool, should be re-examined for its effectiveness and that perhaps an appropriate balance between groups versus individual projects should be created. This study

explores the perceptions of two groups of students, Australian and Asian, with respect to their perceptions of the value and usefulness of group-based work. Australian and Asian students were selected for this study, as their cultural heritage is representative of Hofstede's (1980) individualism-collectivism dimension. This will allow us to explore whether an individual's self- versus group- orientation influences their perception of group based project work.

METHODOLOGY AND DATA COLLECTION

Data was collected from 551 first year university students enrolled in an introductory marketing course at a university in Western Australia during semester 2, 1999 and 2000. The survey items were designed based on the McCorkle et al. (1999) study that examined the perceptions of 77 marketing students in a university in the USA. Students were asked to indicate their 'disagreement' or 'agreement' on a scale from 1 (strongly disagree) to 10 (strongly agree) to a 17-item questionnaire. In addition some socio-demographic questions were also included to compare results based on these variables. Factor analysis was run to classify the 17 items into mutually exclusive groups with high homogeneity within dimensions and low homogeneity between dimensions (Sekaran, 2000). Independent sample *t*-tests were run to identify the group means and significance levels.

RESULTS AND DISCUSSION

Of the total respondents 57% were female, 60% were 20 years of age or younger (mean age was 21.5 years), 93% single, 89% commerce students, 78% in their first year of studies and 47% Australian students. Given that these students are in their first year of university study, many have not had extensive exposure to group project work. Factor analysis was run to reduce the 17 items into small homogeneous groups that can be managed easily. Kaser-Meyer-Olken (KMO) measure of sampling adequacy (MSA) of .931 was considered meritorious (Hair et al. 1998). Reliability coefficients of the items were .9286 indicating that the 17 items in the instrument were measuring the same trait (Leedy, 1997). Results of the factor analysis revealed three factors (dimensions). These factors have been labeled *project process*, *group interaction*, and *group tolerance*. While factor 1 accounted for 49.7% of variances, together the three factors accounted for 74.1% of variances. Each factor had a very high reliability coefficient of .9584, .9151, and .8129 respectively. The main characteristics of the three factors with associated information for each factor, is presented in [Table 1](#). Independent sample *t*-tests were run to determine the significance levels with respect to country (Asia vs. Australia), gender and age groups (see [Table 2](#)).

Home country: Asian students generally have a positive perception of group projects, with most viewing these as a valuable learning experience. Their involvement in group projects has provided them with an opportunity to enhance their teamwork and negotiation skills and they feel better equipped in their ability to interact and relate to others in a group. They have, however, also encountered some problems whilst working on group projects including the fact that it has allowed some group members to become "free loaders" or lazy, or at least tolerant of this behavior. Whilst Asian students rated higher mean scores on project process and group interaction, Australian students' mean scores were higher on group tolerance. This may indicate that Australian students are more willing to accept the behavior and work patterns of other individuals even though these do not necessarily correspond with their own work ethics and practices.

Age group: Younger students (under 20-years) tend to show more tolerance compared with older students. Given that mature age students are likely to have other priorities and responsibilities that a younger university student would not encounter (e.g. family and work obligations), they may feel that group work impedes their progress or effectiveness and impinges on other commitments. As such, they are perhaps less tolerant of group members who do not partake equally in the assigned work.

Gender: Female students tend to be more tolerant of a group members' slackness compared with their male counterparts. This seems to reinforce the prevailing, and somewhat traditional, stereotype of masculine and feminine values, where aggression, individualism and competitiveness are associated with the former (Collinson and Hearn 1994) and submissiveness and gentility with the latter (Williams and Best 1990). In a workplace situation, women tend to place greater emphasis on forming close friendships and relationships with their colleagues. Perhaps when faced with group tensions, female students tend to use relationship building strategies to overcome such difficulties rather than aggression.

IMPLICATIONS, LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Overall, the results of this study suggest that students view major projects as a means of developing their interpersonal and communication skills, which contributes positively to their learning process. Differences in perception on the value of group projects are most notable on the basis of ethnic origin. Asian students in particular, value group interaction and the process involved in project work more than Australian students, but are less tolerant of students who do not contribute equally to the group effort. This is consistent with Hofstede's (1980) individualism-collectivism dimension that differentiates between cultures in which individual identity and goals are preferred from those that are oriented toward the welfare of the group. In particular, individualists believe that personal goals and self-interest have priority over group goals and their personal beliefs, values and attitudes drive their social behaviors. By contrast, collectivists define the self in terms of the connectedness to others in a group, give priority to the collective interests of the group rather than personal goals and are driven by social norms, duties and obligations (Triandis 1995). Hence, in Asian based cultures, if an individual is seen not to be contributing to the group effort they are likely to be ostracized and criticized by other group members for being lazy and putting their own interests ahead of that of the group. Australians, by contrast, seem to be somewhat more tolerant of this type of behavior. Whilst it is generally agreed by marketing educators and researchers alike that the benefits of group projects and other experiential learning techniques generally outweigh the problems (Stanier 1997), we need to recognize that this approach may not suit all students. As shown in this study, all students do not meet group projects with the same level of enthusiasm, and some feel that they do not derive any benefit from this particular learning technique. In creating a positive learning environment, marketing educators should consider using alternative methods, such as case studies or simulations, in conjunction with group projects to ensure that the relevant learning objectives are met. Identifying the learning needs of different groups within the student body, places educators in a position where they can develop a program that maximizes the benefit and value gained by students. A limitation of our study is that because of the administration of the survey in classrooms the sample might have a slight skew towards females and consisted mainly of non-married people who resided in Asia. Future research could be conducted using a larger sample using one of the sampling techniques applicable (Alreck and Settle, (1995) to include a broader cross section of respondents, such as from different disciplines or cultural backgrounds. A longitudinal study to assess how attitudes and perceptions of students change towards group projects as students' progress through their university studies may provide some useful insights into the longer-term effects of this learning technique.

Table 1. Factor loading of scale items

Items	Factor 1 Project process	Factor 2 Group interaction	Factor 3 Group tolerance
Each group member participated equally in final report writing	.869		
Each group member participated equally in the successful completion of the project	.868		
Each group member participated equally in analysis of the problems involved	.861		
Each group member participated equally in conceptual development of the project	.846		
Each group member participated equally in each part of the project	.836		
Each group member participated equally in data gathering	.829		
Each group member participated equally in final submission of the project	.799		
The group project demanded equal work from all group members	.654		
The group project taught me the importance of negotiation between group members		.889	
The group members helped me how to better relate to team members		.880	
The group members helped me to interact with other students in a team environment		.863	
The group project taught me the importance of teamwork		.855	
The group project taught me the importance of synergy	.526	.534	
The group project did not allow some group members to free ride.			.838
The group project did not promote laziness in some group members			.800
There were times when individuals within the group did not tolerated others' free-riding			.755
Group members never felt that they were doing the least amount of work for the group			.688
<i>Eigen value</i>	<i>8.46</i>	<i>2.68</i>	<i>8.61</i>
<i>Percentage of variance explained</i>	<i>49.7</i>	<i>15.8</i>	<i>8.6</i>
<i>Percentage of variances explained (cumulative)</i>	<i>49.7</i>	<i>65.5</i>	<i>74.1</i>
<i>Cronbach's Alpha (Reliability coefficients)</i>	<i>.9584</i>	<i>.9151</i>	<i>.8129</i>

Along a scale, 1 "strongly disagree" to 10 "strongly agree";

Table 2. Factors and demographic characteristics

Factors	Demographics	T-test for equality of Means			
		Means	t-value	df	Sig. (2-tailed)
Project process	Asia	7.34	3.040	489	.002
	Australia	6.78			
	20 years or younger	7.14	1.171	526	.242
	21 years or older	6.93			
	Male	6.97	-.634	538	.526
Group interaction	Female	7.09			
	Asia	7.84	8.072	488	.000
	Australia	6.56			
	20 years or younger	7.15	-.203	525	.839
	21 years or older	7.18			
Group tolerance	Male	7.04	-1.232	537	.218
	Female	7.25			
	Asia	5.90	-4.688	489	.000
	Australia	6.79			
	20 years or younger	6.60	2.808	526	.005
	21 years or older	6.06			
	Male	6.07	-2.698	538	.007
	Female	6.57			

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