



Higher Education Research and Development Society of Australasia, Inc

Learning for an Unknown Future

Proceedings of the

26th HERDSA Annual Conference

6-9 July 2003

Christchurch, New Zealand

Caspersz, D., Wu, M. & Skene, J. (2003) Factors influencing effective performance of university student teams, in *Learning for an Unknown Future, Proceedings of the 26th HERDSA Annual Conference, Christchurch, New Zealand, 6-9 July 2003: pp 71.*

Published 2003 by the
Higher Education Research and Development Society of Australasia, Inc
PO Box 27, Milperra, NSW 2214, Australia
www.herdsa.org.au

ISSN: 0155-6223

ISBN: 0 90 8557 55 8

This research paper was reviewed using a double blind peer review process that meets DEEWR requirements. Two reviewers were appointed on the basis of their independence, expertise and experience and received the full paper devoid of the authors' names and institutions in order to ensure objectivity and anonymity. Where substantial differences existed between the two reviewers, a third reviewer was appointed. Papers were evaluated on the basis of originality, quality of academic merit, relevance to the conference theme and the standard of writing/presentation. Following review, this full paper was presented at the international conference.

Copyright© 2003 HERDSA and the authors. Apart from any fair dealing for the purposes of research or private study, criticism or review, as permitted under the Copyright, Design and Patent Act, 2005, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the publishers, or in the case of reprographic reproduction in accordance with the terms and licenses issued by the copyright Licensing Agency. Enquiries concerning reproduction outside those terms should be sent to the publishers at the address above.

Factors influencing effective performance of university student teams

D. Caspersz

University of Western Australia, Crawley, Australia
dcasperz@ecel.uwa.edu.au

M. Wu

University of Western Australia, Crawley, Australia
mwu@ecel.uwa.edu.au.

J. Skene

University of Western Australia, Crawley, Australia
jskene@admin.uwa.edu.au

***Abstract:** Universities are often criticised for not developing important generic skills, such as teamwork, in their graduates (Eunson, 2002). Students, however, often resist team projects due to previous bad experiences with teamwork. The aim of this paper is to report on research, which sought to investigate university student team effectiveness. The focus was on understanding the impact of team-level issues, and complements previous research conducted by the authors on individual-level issues affecting student teams (Caspersz, Skene & Wu, 2002a & b). Intra group trust and leadership emerged as two significant indicators in team effectiveness. The research therefore supports the proposition that good student teamwork doesn't 'just' happen: proactive and positive facilitation addressing team-work processes is required to ensure teams function effectively.*

***Keywords:** student, team, performance*

Introduction

'Oh no, not another team project!', muttered Bob, as the lecturer outlined the team project exercise for International Management 101. How often do you get this response as you introduce the team project? This is despite your 'sales pitch' that 47% of workplaces surveyed for the 1995 Australian Workplace Industrial Relations Survey (Morehead et al., 1997) use teams in managing work places. Similarly, Eunson (*The Australian*, 11/12/02, p. 26) recently confirmed that a clear message emanating from the Australian federal government report, *Employability Skills for the Future* and other reports (see National Survey of Graduate Employers, 1993; Demand for Education and Training, 1995), was that while employers were reasonably happy with the technical skills of tertiary-level graduates, they were unhappy with graduates' general skills which included the ability to write, speak and solve problems, and work in groups or teams.

Despite these opportunity-related reasons for gaining team-work skills, you know that the majority of students complete the team project assignment only because they have to; in other words, the team project is part of the assessment process. Why are students dissatisfied with team projects? The list of grievances is lengthy as research confirms (see Buckenmeyer, 2000; Caspersz, Wu & Skene, 2002). They include mismatched team member expectations about the grade team members aim for, the 'free rider' or 'social loafer' problem, inadequate definition of roles and responsibilities for successful completion of the team project, lack of leadership and inability to manage conflict, and different team member learning styles.

In research conducted thus far on student teams, the focus has been on examining these effects at an individual level to better understand what individual-level factors affect student readiness for working in teams (Caspersz, Wu & Skene, 2002a; Caspersz, Skene & Wu, 2002b). In this research, measures related to collectivism-individualism, self-efficacy, locus of control, social approval and perceptions of loafing such as anticipated lower effort and the sucker effect were found to have had a significant individual-level effect on student readiness for working in teams. Findings from this research have stimulated development of print and training resources (see Caspersz, Skene & Wu, 2002 a & b). Comparable to work by others (see Gibbs, 1994, a, b & c; Michaelson, Fink, & Knight, 1997), these have been directed at students themselves, as well as those managing student teams i.e., tutors and lecturing staff.

Despite these efforts however, we continue to get a 'Bob' response from students to team projects. Why? Literature related to managing culturally diverse work-teams provides a possible explanation for this conundrum. Studies by Watson, Johnson and Merritt (1998) and Earley and Gibson (2002) highlight the idea that effective management of these teams demands that both individual-level *and* group-level or team-oriented behaviours be addressed. Individual-level effects include those listed and already researched (Caspersz, Wu & Skene, 2002a); while team-level effects may include intra group trust, team member satisfaction, workload sharing, communication, cooperation and leadership issues. Sub-group formation is of particular interest when assessing the impact of cultural diversity on team performance. In summary, while cautioning that care should be taken not to set up a team- versus self-focus, Watson, Johnson and Merritt (1998, pp. 163-4) justify simultaneous investigation of these twin levels when stating: "Because organizations today are relying more on the effectiveness of work teams as complicated by diversity issues, it is imperative that we better understand team-issues versus self-issues affecting member interdependence". Understanding these levels when dealing with culturally diverse teams is magnified, given that culturally-influenced behaviours may lead to self-oriented behaviour dominating team-oriented behaviour.

Therefore, while it is important to assess the effect of individual-level issues on team members' behaviour (such as the 'free rider' problem), should we also be attempting to better understand team issues, or the team process factors influencing effective student team performance, even where the focus of interest may not solely be on understanding issues of cultural diversity? Effective team performance is where students express satisfaction with both the process and outcome from their team project. It is suggested that adopting this multi-level approach when assessing effective performance in university teams is necessary, if only from the perspective that performance or rather the grade and skills gained by students in team projects is undoubtedly a significant criterion used by employers and others to judge their eligibility for post-university employment and education opportunities (see Eunson, 2002). In summary, because it is inevitable that performance affects student teams, broadening our scope of enquiry to understand how individual and team-level factors affect student team performance is critical. Thus in addition to re-administering a previously

developed survey assessing individual-level responses, a new survey was developed with team issue measures. These measures are described below.

Intra group trust (IT)

Intra group trust refers to the degree of confidence existing between team members. Simons and Petersen (2000) suggest that there are two aspects involved when assessing intra-group trust between team members. Task conflict or cognitive conflict is a perception of disagreement among group members about their decisions and involves differences in viewpoints, ideas and opinions (Simons & Peterson, 2000, p. 102). Relationship conflict is a perception of interpersonal incompatibility and includes tension, annoyance and animosity among group members. Simons and Petersen (2000) further suggest that task conflict can have two beneficial effects on team processes: it can improve decision-making because task conflict encourages greater cognitive understanding of the issue being discussed and it can lead to increased satisfaction with the group decision, as members feel they have had the opportunity to 'voice' their opinion in the decision making process.

Conversely, relationship conflict can negatively impact on group satisfaction and commitment as well as decision quality because it may limit the information processing ability of the group, increase stress and anxiety, and thus limit group members' cognitive functioning. Relationship conflict can also create a self-fulfilling prophecy of negative group experience as the result of animosity and conflict escalation.

The interrelationship between the two (that is, task conflict can lead to relationship conflict) suggests that understanding the effect of intra-group trust as a whole is a key team level issue, which may influence effective student team performance. Thus it is hypothesized:

H1: *that intra-group trust will affect team performance.*

However, it is suggested that intra group trust as a team-level factor is in turn influenced by other factors, which are described below.

Sub-group formation (SF)

Earley and Mosakowski (2000, p. 27) suggest that an effective team is one with a strong team culture because "shared member expectations facilitate individual and team performance and communication". When team members perceive shared understandings with other members, the positive affect and propensity to trust stimulates improved performance. This concept of a shared understanding for effective teamwork also underpins the work of others (see Earley & Gibson, 2002; Watson, Johnson & Merritt, 1998).

What affects the development of a 'shared team culture'? Team member characteristics most commonly affect the development of a team culture. Quoting others, Earley and Mosakowski (2000, p. 27) suggest that this is in two ways: the first is that personal characteristics shape members' expectations about appropriate interaction rules, group efficacy and group identity. Secondly, personal characteristics influence how team members perceive others will act within a team. However, selection of these 'personal characteristics' by individual team members depends on their own cultural composition.

This reliance on personal characteristics to predict others' behaviour heightens the potential for sub-group formation. Earley and Mosakowski (2000, p. 28) suggest that when challenges or threats confront a team, members will retreat towards sub-group formation using personal

characteristics. Referred to as 'homophily' by Smith, Fisher and Sale (2001), Volet and Ang (1998) confirmed this phenomenon in student teams.

The effect of sub-group formation on team performance can be two-fold. Firstly, it creates a potential for relationship conflict, which in turn affects intra-group trust and subsequently team performance. Secondly, sub-group formation can restrict access to communication and information and thus affect communication and cooperation in the team, as well as interpersonal work group processes. These measures are assessed separately within the research programme (see below). Nonetheless, it is hypothesized that:

H2: *sub-group formation will affect intra-group trust, communication and co operation and interpersonal work group processes in teams.*

H3: *sub-group formation will most likely be a team level issue influencing effective student team performance.*

Team member satisfaction (TMS)

Earley and Mosakowski (2000, p. 37) suggest that like subgroup formation, the effect of team member satisfaction on team performance is also affected by concepts of shared identity, team efficacy, expectations and intra team communication. Thus TMS is related to intra group trust, communication and cooperation in the group, interpersonal work group processes and sub-group formation. Thus it is hypothesized that:

H4: *team member satisfaction will affect intra group trust, communication and cooperation, interpersonal work group processes and sub-group formation in teams.*

H5: *team member satisfaction is also a team-level issue influencing effective student team performance.*

Workload sharing (WS)

Campion, Medsker and Higgs (1993) argue that workload sharing in teams enhances team effectiveness because it prevents social loafing. Because previous research (Caspersz, Wu & Skene, 2002 a, b) found that males were more likely than females to reduce their effort as a result of perceiving lower effort by other team members, it was therefore hypothesized:

H6: *that workload sharing may be a team level issue influencing effective student team performance.*

Communication and cooperation in the group (CCWG)

Communication and cooperation within the group are obvious factors affecting team performance. As already stated, this is particularly true in the case of culturally diverse teams. Previous research highlights the issue of 'process loss' in culturally diverse teams arising from an inability to communicate clearly and a lack of cooperation leading to frequent disagreements concerning expectations, and attitudinal problems such as dislike, mistrust and lack of cohesion (Adler: 1997; Watson & Kumar: 1992). It has already been suggested that communication and cooperation is an underlying factor affecting intra group trust, sub-group formation and member satisfaction in teams. Thus it is hypothesized:

H7: *that communication and cooperation will be a team-level issue affecting team performance.*

Shared leadership (SL) and leadership emergence (LE)

Shared leadership occurs when team members share equal responsibility in facilitating the team process by encouraging diverse points of view, helping the team reach consensus, and solicit the opinions of all team members. Leadership emergence occurs when a team member exerts significant influence over other team members although no formal authority has been vested in the dominant group member (Schneider & Goktepe, 1983). While measures sourced from Watson et al. (1998) were used to assess these, concepts of shared leadership and leadership emergence are relatively untested in the literature on student teams. Thus, investigation of these constructs has to be considered as exploratory. Nonetheless, it is suggested that these factors will interact with other factors already discussed and thus affect team performance. Thus it is hypothesized:

H8: *that shared leadership may be a team level issues affecting team performance.*

H9: *that leadership emergence may be a team level issues affecting team performance.*

Interpersonal work group processes (IWGP)

These were a group of measures used by Hyatt and Ruddy (1997) in assessing the relationship between subjective and objective measures of group performance. However, Hyatt and Ruddy (1997) have not been specific about the rationale employed for including this construct, apart from it appearing to be an underlying issue affecting team process. Logic suggests that this is particularly in relation to the other constructs detailed above. Thus it is hypothesized:

H10: *that interpersonal work group processes may be a team-level issue affecting team performance.*

Method

Participants

Research participants were 111 undergraduate business students in an Australian university. This represented 33 teams with at least 3 members per team for which tutor ratings (performance data) were available. Using a self-selection measure, 57% described themselves as non-indigenous Australians, 37% as Asian, 14% as European/UK and 4% as North American. Approximately 70% of students were between 18-20 years of age.

Measures

A 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7) was used for each measure.

Demographics: Students were asked in each survey to provide information such as gender, date of birth, age and cultural description.

Cultural diversity: This was assessed by providing students with a self-selection measure using various categories. Categories included indigenous Australian, non-indigenous Australian, Asian, European/UK, and North American.

Intragroup trust: Intragroup trust was assessed by a 5-item measure taken from Simons and Petersen (2000).

Subgroup formation: Subgroup formation was assessed by a 2-item measure taken from Earley and Mosakowski (2000).

Team member satisfaction: Team member satisfaction was assessed by a 2-item measure taken from Earley and Mosakowski (2000).

Workload sharing: Workload sharing was assessed by a 3-item measure taken from Campion, Medsker and Higgs (1993).

Communication and cooperation in the group: Communication and cooperation in the group sharing was assessed by a 3-item measure taken from Campion, Medsker and Higgs (1993).

Shared leadership: A 5-item measure was adapted from a 26-item group-style instrument (Watson, Johnson, & Merritt, 1998).

Leadership emergence: A 3-item measure was adapted from a 26-item group-style instrument (Watson, Johnson, & Merritt, 1998).

Interpersonal work group processes: Interpersonal work group processes was assessed by a 6-item measure taken from Hyatt and Ruddy (1997).

Tutors' rating of team effective performance: A 9-item measure was adapted from 'Managers' ratings of team effectiveness', a 19-item scale from Alper, Tjosvold and Law (1998).

Procedure

Two surveys were administered to students during 2002. Survey 1 replicated measures previously described (Caspersz, Skene and Wu, 2002; Caspersz, Wu & Skene, 2002). Survey 2 incorporated the measures described. Staff managing academic courses administered the surveys to students during class time. Team performance was assessed by administering a survey to tutors before and after allocation of the team project mark. Participation by both students and staff in the project was voluntary.

Research participants worked in the teams as part of normal study requirements for unit completion. Teamwork constituted approximately 25-30% of the individual's grade; thus, teamwork was important to the individual student. While providing guidelines for the team project, students exercised a degree of discretion in fine-tuning the parameters for their team project. For instance, within management units they determined a country location for a business venture and selected major issues to be researched. The team project was conducted during a 13-week semester. However, most teams only formed in weeks 3 or 4 of semester, thus leaving them approximately 9-10 weeks to complete the project.

To facilitate team project completion, between 10-15 minutes of class time was devoted each week to the team project. Students used this to either have their weekly team meeting or do research work. In addition, exercises were included in the class programme designed to help students plan their team project, assess their progress and execute key tasks such as data collection. Tutors were offered a pre-semester training course to acquaint themselves with these exercises. Participation in this was voluntary and approximately 80% of tutoring staff involved in the surveys attended these courses.

Results

Surveys 1 and 2 were administered to separate groups in two different semesters (over the same year). However, because the focus here is on team-level measures, this paper only presents the results from survey 2. Multi-level analysis (that is, individual-level and team-

level analyses) will be pursued in 2003 research when it is intended to use the MLwiN programme for analyses in an attempt to assess the relationship between individual-level and team-level measures.

ANOVA tests on the measures were run to ensure that the variance between teams was greater than the variance within teams. F-ratios that exceed 1.0 suggest that adequate between-group variance exists on the aggregated measures. In addition, results of a one-way ANOVA test indicated that the measures tested for (except SF) accounted for 51.5% of the variance in effective student team performance. The variance for each team level measure was then calculated, results of which are summarized in Table 1.

Table 1: Levels of significance and team-level issues

Measure	R Square	F ratio	Significance
IT (intra group trust)	.255	10.60	.003
TMS (team member satisfaction)	.000	.00	.994
LE (leadership emergence)	.300	13.28	.001
IWGP (interpersonal workgroup processes)	.290	12.64	.001
WS (workload sharing)	.261	10.92	.002
CCWG (communication within workgroup)	.146	5.29	.028
SL (shared leadership)	.351	16.76	.000

Table 2 further confirms acceptable levels of reliability (Cronbach's alpha) for team-level measures of IT, SE, TMS, LE, IWGP, WS. While below the 0.7 threshold, alpha coefficients for CCWG and SL retain some possibility for further exploration. However, the low alpha level for SF leads to this being discarded from further analysis.

Table 2: Alpha coefficients of team-level measures

Measure	Alpha Co-efficient
SF (sub-group formation)	.5289
IT (intra group trust)	.8518
TMS (team member satisfaction)	.7571
LE (leadership emergence)	.7498
IWGP (interpersonal workgroup processes)	.8135
WS (workload sharing)	.7826
CCWG (communication within workgroup)	.6803
SL (shared leadership)	.6598

Discussion

The results indicate that all measures tested except that of sub-group formation, can be considered as indicators of team level issues influencing effective student team performance. As can be noted from Table 1, both R square and significance levels (with the exception of LE) provide confidence in the prediction that the measures tested validate hypotheses H1, H3, H5, H6, H7, H8, H9 and H10. In summary, there is confidence in the prediction that IT, TMS, WS, IWGP, CCWG and SL will be team-level issues likely to influence effective student team performance. Undoubtedly further analysis is required to assess the direction that these measures are taking in order to present a more meaningful interpretation. Consideration is being given to performing this in future analyses.

Unfortunately, while culture was included as a measure in the SPSS regression analyses undertaken, levels of significance with respect to culture and team-level measures were not found. This could be for a number of reasons which are discussed below in the section outlining the limitations of this study. Nonetheless, by using a group culture composition schema suggested by Riordan and Shore (1997), some tentative comments are offered about the relationship between culture and team-level issues.

Following Riordan and Shore (1997), teams in which all members were non indigenous Australians were grouped into a majority category, teams with members from all other categories except for non indigenous Australians were grouped into a minority category and teams with an equal percentage of non indigenous Australians and other groups were allocated into a 50/50 category. Breaking down the effects of culture from the analyses undertaken using the group composition schema described, it was found that:

- mostly majority groups had highest levels of team member satisfaction, followed by 50/50 groups and then mostly minority groups.
- mostly majority groups had high levels of workload sharing, followed by mostly minority groups and then 50/50 groups.

While inconclusive on account of the indeterminateness of the measure used, these results are indicative that a relationship exists between cultural diversity and team-level issues. While attention will be given to ensure proper validation of the culture measure in future surveys, at the same time these preliminary findings suggest that paying attention to the effects of culture on team-level issues may contribute to more effective student team performance.

Limitations of the study

There are of course many limitations in this study. Firstly, the range of issues investigated is undoubtedly not exhaustive. Just as justification has been provided for inclusion of specific constructs, similar rebuttal can be mounted against these and inclusion instead of other measures. Secondly, while providing useful qualitative information, there is some scepticism about the cultural diversity measure used. This is because no supporting data other than that gathered from participants (as for example identification by the tutor) was collected about the cultural composition of the teams, which could then be matched against self-selection by individual students. In addition, because students completed the surveys during class time, absence of independent information about students' cultural identification meant that there was some incomplete information about a team's cultural composition, if particular students did not attend the class when the surveys were being administered. These problems may also have contributed to rejection of the sub-group formation scale as its reliability was found to be poor. It is also suggested that this reading may be due to having asked only two items for this measure (a limit of three is preferable), and the types of items asked. These matters will be addressed in future research, as sub-group formation is integral to understanding cultural effects on student teams performance. Finally, poor findings on this construct could also be because of the low threshold accepted for team membership (that is, 3). A logical question would be, is sub-group formation likely in teams of only three participants? In future research, the attempt will therefore be made to ensure teams average five or six members, which is a more generally acceptable threshold (Gibbs, 1994, a, b, c).

Thirdly, attention has to be given to improving the robustness of the team performance measure. This is particularly important when trying to link individual-level measures to performance, as no individual performance measure (as in, for example, an individual

assignment related to team content) was used. Thus future research will seek to collect team member scores plus individual team member marks, as it is felt this information will improve the data collected for this measure. Nonetheless, the correlation between the tutor ratings surveys (that is, before and after allocation of team marks) was .484, which in itself is quite a healthy indicator.

Conclusion

It is clearly the case that no piece of research is without its problems, but it is also true that if these are recognized and as far as possible, principles of rigour are attended to in data collection, analysis and reporting, all research is a potential contribution to the expansion of knowledge. Thus, while there are clear issues in the construct of measures underpinning the results analysed here, they nonetheless provide some useful information for those wishing to better understand factors influencing effective student team performance. In particular, results reinforce previous findings examining individual-level measures, which similarly found that team-related issues are of great importance in contributing to effective student team performance.

Underlying this however are other related matters, one being the type of task set for team projects and the length of time required to complete the task. In noting the influence of sub-group formation on communication and cooperation in teams, Watson et al. (1998, p. 165) highlight the importance of the task in generating cooperation within culturally diverse groups. They suggest that in complex tasks of long duration, culturally diverse teams have reported greater cooperation than non-diverse groups. This reinforces findings by others of the importance of task in general to effective team performance (Hyatt & Ruddy: 1997, p. 557).

While constructing a culturally appropriate task is important, a bigger challenge regarding length of task with student teams is encouraging students to regularly address the team project, rather than trying to compress a 12-week project into 2 weeks: that is, 'cramming' at the last moment. Building the team project into the weekly tutorial programme is one way to do this, while administering regular 'progress' tasks on the team project is another.

Nonetheless, along with other suggestions for improvement in data collection already made, it is intended that some attention be given to this question of task construction and length of time taken to complete team tasks. In summary, the direction is clear: effective performance of student teams does not just happen. Positive and proactive intervention will always be required.

References

- Adler, N. J. (1997). *International dimensions of organizational behavior*. (3rd ed.). Cincinnati, Ohio: South-Western College Publishing.
- Alper, S., Tjosvold, D. & Law, K. S. (1998). Interdependence and controversy in group decision making: Antecedents to effective self-managing teams. *Organizational Behavior and Human Decision Processes*, 74, 33-52.
- Buckenmyer, J. A. (2000). Using teams for class activities: Making course/classroom teams work. *Journal of Education for Business*, 76(2), 98-282.
- Campion, M, Medsker, G. & Higgs, C, (1993). Relations between work group characteristics and effectiveness:

- implications for designing effective work groups. *Personnel Psychology*, 46, 823-50.
- Caspersz, D., Skene, J. & Wu, M. (2002, Feb). 'Team members that bring you down dead?' The antecedents of student willingness to participate in team projects. *Teaching and Learning Forum, Perth*.
- Caspersz, D., Wu, M. & Skene, J. (2002, July). The influence of gender and race-ethnicity on student processes in team projects. *Paper presented at the Higher Education Research and Development Society of Australasia, Perth*.
- Cox, T. H. & Blake, S. (1991). Managing cultural diversity: Implications for organizational competitiveness. *Academy of Management Executive*, 5, 45-56.
- Distefano, J. J. & Maznevski, M. L. (2000). Creating value with diverse teams in global management. *Organizational Dynamics*, 29, 45-63.
- Earley, P. C. & Gibson, C.B. (2002). *Multinational work teams, a new perspective*, London: Lawrence Erlbaum Assoc .
- Earley, P. C. & Mosakowski, E. (2000). Creating hybrid team cultures: An empirical test of transnational team functioning. *Academy of Management Journal*, 43, 26-49.
- Eunson, B. (2002), Off to work we go, lacking basic skills, *The Australian*, Dec, 11, 26-7
- Gibbs, G. (1994a). *Learning in teams: A student manual*. Oxford: The Oxford Centre for Staff Development, Oxford Brookes University.
- Gibbs, G. (1994b). *Learning in teams: A student guide*. Oxford: The Oxford Centre for Staff Development, Oxford Brookes University.
- Gibbs, G. (1994c). *Learning in teams: A tutor guide*. Oxford: The Oxford Centre for Staff Development, Oxford Brookes University.
- Hill, G. W. (1982). Group versus individual performance: Are N + 1 heads better than one? *Journal of Applied Psychology*, 91, 517-539.
- Hinds, P. J., Carley, K. M., Krackhardt, D. & Wholey, D. (2000). Choosing work group members: Balancing similarity, competence, and familiarity. *Organizational Behavior and Human Decision Processes*, 81, 226-251.
- Hyatt, D. E. & Ruddy, T. M. (1997). An examination of the relationship between work group characteristics and performance: Once more into the breach. *Personnel Psychology*, 50, 553-585.
- Kirchmeyer, C. (1993). Multicultural task groups: An account of the low contribution level of minorities. *Small Group Research*, 24, 127-148.
- Morehead, A., Steele, M., Alexander, M., Stephen, K. & Duffin, L. (1997). *Changes at work: The 1995 Australian workplace industrial relations survey*. South Melbourne: Longman.
- Richard, O. C. (2000). Racial diversity, business strategy, and firm performance: A resource-based view. *The Academy Management Journal*, 43, 164-177.
- Riordan, C. & Shore, C. (1997). Demographic diversity and employee attitudes: An empirical examination of relational demography within work units. *Journal of Applied Psychology*, 82, 342-358.
- Schneider, C. E. & Goktepe, J. R. (1983). Issues in emergent leadership: The contingency model of leadership, leader sex, leader behavior. In H. Blumberg & A. Hare & V. Kent & M. Davies (Eds.), *Small groups and social interaction (Vol. 1)*. Chichester, England: Wiley.
- Shaw, M.W. (1983). *Group dynamics: The psychology of small group behaviour*. New York. McGraw-Hill.
- Simons, T. & Petersen, R. (2000). Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology*, 85, 102-111.
- Smith, P. B., Fischer, R. & Sale, N. (2001). Cross-cultural industrial/organisational psychology. In C. L. Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology* (Vol. 16, pp. 147-193). West Sussex, England: John Wiley & Sons.
- Thomas, D. (1999). Cultural diversity and work group effectiveness. An experimental study. *Journal of Cross Cultural Psychology*, 30 (2), 242-263.
- Volet, S. E. & Ang, G. (1998). Culturally mixed groups on international campuses: An opportunity for intercultural learning. *Higher Education Research & Development*, 17(1), 5-23.
- Watson, W. E. & Kumar, K. (1992). Differences in decision making regarding risk taking: A comparison of

culturally diverse and culturally homogenous task groups. *International Journal of Intercultural Relations*, 16, 53-65.

Watson, W. E., Johnson, L. & Merritt, D. (1998). Team orientation, self-orientation, and diversity in task groups. *Group & Organization Management*, 23, 161-188.

Watson, W. E., Kumar, K. & Michaelson, L. K. (1993). Cultural diversity's impact on interaction process and performance: Comparing homogenous and diverse task groups. *Academy of Management Journal*, 36, 590-602.

Acknowledgements

The authors gratefully acknowledge the assistance of Karina Hannssen in preparing this paper.

Copyright © 2003 Donella Caspersz, Judy Skene and Madeline Wu: The authors assign to HERDSA and educational non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to HERDSA to publish this document in full on the World Wide Web (prime sites and mirrors) on CD-ROM and in printed form within the HERDSA 2003 conference proceedings. Any other usage is prohibited without the express permission of the authors.