Globalisation in the lecture room? Gender and cultural diversity in work groups

Timurs Umans
Kristianstad University

This paper empirically investigates the relationship between cultural and gender diversity and performance in groups of business students working on complex assignments. The study finds that gender diversity in student groups has a positive influence on group outcomes, while cultural diversity, irrespective of its conceptualisation, leads to negative group outcomes. Process variables such as communication, conflict and effectiveness of problem solving were found not to be influenced by demographic diversity or to have any effect on group outcomes. While the non-finding in group process investigation might be attributed to methodological difficulties, the negative influence of cultural diversity in student groups on performance indicates the further need for facilitation of coaching students in intercultural communications and cross-cultural understanding among educators.

Introduction

Having students work in groups has been an integral part of the instructional process (Watson, Johnson & Zgourides, 2002) and has been frequently used as a pedagogical means in institutions of higher education. For instance, team learning (Watson et al. 2002) and cooperative learning (Cheng & Chen, 2008, Pihl, 2010) have been given considerable attention in recent research (Decuyper, Dochy & Van den Bossche, 2010; Pazos, Micari, & Light, 2010; Watson et al., 2008). Diversification in higher education (ethnic minorities and foreign nationals entering institutions, as well as the increasing number of women) has given the researcher something new to ponder and investigate (Umans, Collins & Tagesson, 2008): how do people of different cultural backgrounds and genders work with one another and what are the outcomes of such diversity? Apart from following empirical developments and responding to the demographic changes in the student body, the researcher also responds to the political debate, wherein public figures often argue for the benefit of diversity in higher education (Bollinger, 2003).

This article thus attempts to investigate the effects of cultural and gender diversity in student groups on group processes, as well as group related outcomes, while at the same time contributing to the ongoing debate on diversity in higher education. The aim of this study is to make theoretical and methodological contributions to research on cultural diversity. The methodological contribution of this article is represented by the alternative operationalisation of cultural diversity, expressed not only in terms of race, which has become a tradition in ethnic diversity-oriented research (e.g. Watson, Johnson & Merrit 1998, Watson et al., 2002; Cox, Lobel & McLeod, 1991; McLeod and Lobel, 1992; Oetzel, 1998), but in terms of nationality. The theoretical contribution of this article is an attempt to enquire into the intervening group processes, which is a fairly unexplored area due to its presumed complexity. Furthermore, this paper studies

group processes on a self-reporting basis, which has been a common method used in assessing processes (Watson, BarNir & Pavur, 2005). Therefore, this paper proceeds with the literature review, followed by the presentation of the analysis and results, and concludes with a discussion on the findings.

Literature review

The groups of students, or learning teams as they are more frequently called (e.g., Watson et.al., 2002; Michaelsen & Watson, 1993, Watson, et. al., 2005), have been given substantial attention in the literature. Two contributing and grounding models have been developed by Hackman and Morris (1978). The authors offered a model showing how input and process variables influence team performance. Shifflet (1979) also contributed by describing an approach wherein team resources (R) are transformed (T) through process into team product (P). Based on these two models—which laid the groundwork for the majority of the research in group functioning, group dynamics and group outcomes—researchers studying learning teams have directed their inquiry into how different types of demographic characteristics such as age, gender and personality influence group processes (such as conflict and communication) and group outcomes (such as group performance and innovation) (Watson, et. al., 2005).

The interest in the field has produced a vast amount of research that, however, is bitterly divided along three major lines. First, there is a disagreement over whether one can and should capture the processes taking place within the small group or team. Some researchers think it should be done (Jansen et al., 2010; Pelled, Eisenhardt & Xin, 1999), while others believe that, due to the complexity of group processes, their study should be avoided and focus should be placed instead on the direct link between demography and group performance (e.g., Pfeffer, 1983;), thus leaving the group processes variables in a so-called black box (Lawrence, 1997). The second area of contention concerns whether group demographic diversity has a positive or negative influence on group outcomes. The third issue concerns whether specific types of demographic diversity—namely: cultural diversity, which has become a topic of increased interest in recent years, fuelled by accelerating cultural diversification of the labour force, as well as the student body; and gender diversity, due to the increasing number of women entering institutions of higher educations—has a positive or negative influence on group process and group-related outcomes. Thus, what follows addresses the issues raised and presents a set of hypotheses based on the literature reviewed.

Cultural and gender diversity and group process

Researchers have usually been divided on the influence of cultural diversity on group process. A minority have predicted a positive relationship, claiming that a variety of viewpoints stemming from cultural differences will lead to higher quality decisions (McCarrey, 1988) and ideas (McLeod & Lobel, 1992), while a variety of behavioural styles associated with cultural differences (Jackofsky, Slocum & McQuaid, 1988) will lead to more effective problem solving (Shaw, 1983). Most researchers, however, have taken a more negative view of cultural diversity's influence on group process,

maintaining that cultural diversity in teams results in interpersonal problems and communication difficulties (Ancona & Caldwell, 1992; Ruhe & Eatman, 1977; Triandis, 1960; Umans, et.al., 2008), and it can result in misunderstandings and lack of team cohesiveness (O'Reilly, Caldwell & Barnett, 1989). Moreover, it is argued that people who are dissimilar to one another experience higher levels of conflict (Jehn, Northecraft & Neale,1999), have poorer communication (Mayo, 2000), and are less integrated into a group (Martins Miliken, Wiesenfeld & Salgado, 2003).

Results have been mixed by the influence of gender composition on team process (Watson, Johnson & Merrit, 1998). However, research indicates that gender diversity tends to affect behaviour, communication and individual experience within groups, while it does not affect group performance per se (Kimble, Yoshikawa & Zehr 1981; Mabry, 1985; Smith-Lovin & Brody, 1989). According to Wood (1987), gender-balanced groups would have more positive interactions, including communication and conflict reduction, compared to the predominantly male or female teams. Moreover, experimental studies by Stringer (1995) have shown that gender-balanced groups are more consensus-seeking, which improves communication within the group and reduces conflict. This leads us to predict that:

H1: Cultural diversity in learning teams will have a negative influence on group process.
H2: Gender diversity in learning teams will have a positive influence on group process.

Group process and group outcomes

The studies of how group process influences groups' outcomes are less contradictory than the studies of the relation between demographic diversity of groups and group process. Researchers mostly agree that positive communication flow (Smith et al., 1994) reduced conflict (Rayesky & Bryant, 1994), and increased cooperation led to positive group outcomes (Watson, Cooper, Torres & Boyd, , 2008). It has also been argued that teams with efficient communication and effective problem solving (Smith at al., 1994), as well as frequent interactions and quality communication (Baldwin, Bedell & Johnson, 1997; Xia, Shami, Yuan, Gay, 2007), will experience a higher rate of performance. Overall, a successful group should be able to communicate, collaborate and compromise to increase its performance (Katzenbach, 1997). This leads us to hypothesise that:

H3: Effective communication, a decreasing degree of conflict and effective complex problem solving will have a positive influence on group outcomes.

Cultural and gender diversity and group outcomes

In their review of how demographic heterogeneity in teams influences performance, Williams and O'Reilly (1989) found that diversity in gender, ethnicity and tenure usually leads to decreased performance (e.g., Chatman and Flynn, 2001; Pelled, et.al., 1999). Moreover, dissimilarity, especially in visible characteristics, is linked to worse performance compared to homogeneous groups (Flynn, Chatman & Spataro, 2001).

When dealing with the influence of cultural diversity on group outcomes, early research has argued that the relation will be positive because diverse groups encompass alternative viewpoints and thus a larger critical base (Cox et.al., 1991). Moreover, early cultural studies by Hofstede (1984) and McCarrey (1988) had assumed that diversity of values would allow for more refined decisions, resulting in positive group and organisational outcomes. However, keeping in mind that the cultural diversity outcomes link ignores the process variables, one could assume that if cultural diversity influences process in a negative way, it will in turn have a negative effect on outcomes, as has been indicated in several later studies (Elron, 1997; Smith et al., 1994; Umans et.al., 2008).

Looking at the influence of gender diversity on group outcomes, a meta-analysis by Wood (1987) showed, for example, that mixed-gender groups tended to perform better than homogeneous-gender groups. Gender diversity was also proven to have an influence on group performance in higher education since females tend to perform better than males (Byrne, Flood & Willis, 2001), implying that a group with a larger number of females might perform better. However, a team that is homogeneous in gender will be limited in terms of the variety of input and diversity of opinion, thus reducing performance in a complex assignment and/or complex environment (Dess & Beard, 1984). Thus, we hypothesise that:

H4: Cultural diversity in learning teams will have a negative influence on group outcome.
H5: Gender diversity in learning teams will have a positive influence on group outcome.

Method

Participants

The sample consisted of 102 participants (57 males and 45 females representing 16 different nationalities, see Table 1) enrolled in the corporate strategy course, which is part of the international business programme, at a university in southern Sweden. The 29 self-arranged teams each consisted of two to five individuals working on the case study. The work represented 20 per cent of the final individual grade, ultimately making the results of teamwork that much more important to each course participant. The course was included in an international business programme offered to foreign exchange and Swedish students. Hence, the class was composed of students from Sweden and other primarily European countries. Since the question measuring the national diversity was “State your nationality” (if more than one, then the one you mostly associate yourself with), it appeared that many students who were enrolled as domestic Swedish programme students and who held Swedish nationality, still felt stronger associations with their country of origin. This explains why countries like Bosnia and Herzegovina, Iran, Ethiopia, and some others came as a surprise when answers were put into the SPSS, since it was known for a fact that the university where the course took place had no exchange agreement with universities in these countries.

Table 1: National and gender mix of the students

Country of Nationality	Male	Female	No. of students
Sweden	32	19	51
Germany	8	4	12
China	4	4	8
The Netherlands	5	1	6
Bosnia and Herzegovina	0	5	5
Poland	2	2	4
Iceland	3	0	3
Lebanon	2	0	2
Albania	0	2	2
Lithuania	0	2	2
Iran	0	2	2
Ethiopia	0	1	1
Chile	0	1	1
Sri Lanka	0	1	1
Iraq	1	0	1
France	0	1	1
Total	**57**	**45**	**102**

Measures

Dependent variable
Team performance was measured based on a written analysis of the case study. The student groups submitted one assignment, which was a result of their group work, and each member received the same grade as the group grade. Students were evaluated on a number of criteria such as case presentation, theoretical model application, analysis, conclusion, and use of external sources. Students were informed three weeks in advance concerning the criteria of evaluation, and they were informed that language will not be considered as a part of the grade. The language could have made a difference, since one could presume that the foreign and Swedish students' English language knowledge would diverge.

However, prior to enrolling in the course, all of the students had to prove an intermediary level of English from the high school, and present a transcript of records showing that they had at least one passed course in academic English from their home university and a recommendation from the English teacher at their home university. While the first two were general requirements for both Swedish and foreign students, the latter was a specific prerequisite for acceptance for the foreign students. Thus, with the removal of language being a part of the grade and the required English language knowledge for all students, one could assume that there were no influences of language over the performance of the student groups.

Moreover, foreign students were accepted into the course under the condition that they have passed courses at their home university corresponding to two years of full-time

study, which put them on par with the Swedish students who took the course in their fifth semester of studies. The maximum possible grade for the case was 20 points. In order to ensure an absence of bias in the evaluation process, the names of group members were removed so that only the group number and the number of students in the group were known. The evaluator, who had several years of strategy teaching and strategy research experience, could not discover the identity of the people in the group.

Mediating variables
As in the study by Umans et.al. (2008), process variables were measured on a self-reporting basis, where respondents were asked to mark on a seven-point Likert scale the degree of a certain process such as 'effectiveness in problem solving'.

Communication in the group was observed through three questions on constructiveness of discussion, informality of communication and effectiveness of communication flow. A reliability test of the three variables indicated acceptable reliability (Cronbach's alpha = 0.718). Effectiveness in problem solving was measured by self-evaluation of the group members. Conflict was measured by asking the respondents to indicate the degree of conflict present in the learning team while working on the assignment. The mean values of the responses to each question were used in the construction of the variables.

Independent variables
Cultural diversity was observed in each group by the standard deviation of Hofstede's (1984) four dimensions of culture depending on nationality: masculinity/femininity, uncertainty avoidance, individualism/collectivism, and power distance. These dimensions are defined by Hofstede (1984; 1993) as:

- *Power distance:* a measure of the degree to which cultures feel that inequality between people is normal and functional. Subordinates from high power-distance cultures tend to be more obedient because they believe in the functionality of inequality.

- *Individualism/collectivism:* a measure of the degree to which cultures prefer autonomy or group affiliation. Low-individualism (or collectivist) cultures prefer group affiliation.

- *Uncertainty avoidance:* a measure of the degree to which cultures feel uncomfortable with uncertainty and ambiguity.

- *Masculinity/femininity:* a measure of the degree to which cultures stress achievement, heroism, assertiveness, and material success. Here the assertive pole is called "masculine" and the modest, caring pole (modest pole being the opposite to assertiveness) is called "feminine".

A reliability test of the four above-mentioned culture dimensions indicated acceptable reliability (Cronbach's alpha = 0.929). Thus, the cultural diversity in the group was computed as a sum of standard deviations of each cultural dimension per group.

Gender diversity was measured by self-identification by the group members and as a proportion of people dissimilar to others, in terms of gender in the group and has been done in accordance with Blau's seminal work—Inequality and Heterogeneity (1977)—which argues that proportion of majority/minority membership in the group helps determine the quality of relations between demographically different groups.

Control variable
Group size was considered to be a control variable. When evaluating the performance of the group, the number of students who influenced the performance had to be considered. A group with more students would perform better (ceteris paribus) and receive a higher grade if the evaluator did not consider group size. Thus, if the evaluator is unable to consider the influence of size, we expect a positive relationship between size and performance.

Analysis

The descriptive statistics of the variables are presented in Table 2.

Table 2: Descriptive statistics and correlation matrix (n=29)

Variable	Mean	Std dev	1	2	3	4	5	6	7
1. Group size	3.52	0.69	X	.144	.138	-.032	-.035	.159	.147
2. Gender diversity	0.13	0.16		X	.164	.023	.170	-.179	.414*
3. Cultural diversity	46.52	44.33			X	-.107	-.365	.190	-.403*
4. Com-munication	5.86	0.68				X	.764**	-.647**	.057
5. Problem solving	5.55	1.04					X	-.530**	.381*
6. Conflict	3.03	1.37						X	.081
7. Grade	15.04	2.56							X

*p<.05; **p<.01

The values for dependent variable Grade show that the groups received 15.04 points on average with rather small deviation, thus indicating a compressed grading (the minimum grade given was 10 and the maximum was 18). Group size ranged from 2 to 5, with the average being 3.5, and the deviation indicates that most of the groups contained 3 or 4 students. Gender diversity varied between 0 and 0.5, and the average of 0.13 indicates rather low gender diversity. In fact, about 17 of 29 groups had no gender diversity at all. Cultural diversity was measured as national diversity according to Hofstede's (1984) culture scale, which we will comment on later in the paper. The process variables show high averages in communication and effectiveness in problem solving, but lower in conflict.

Inspecting the correlation matrix, grade appears to correlate positively with gender diversity but negatively with cultural diversity. The process variables do not appear to correlate with grade, except for the positive correlation of effectiveness in problem solving. Thus, our hypotheses of culture (H4) and of gender (H5) appear to be supported. Process variables do not appear to be influenced by diversity and do not influence performance (H1: cultural diversity influences on process hypothesis are not supported; H2: gender diversity influences on process are not supported; H3: process influences on performance are not supported). Our control variable—group size—is not correlated to grade, which indicates that the grader considered group size when evaluating the performance of the group.

The correlation matrix indicates that we can expect collinearity problems for the process variables since they are highly correlated. No other independent variable appears to present collinearity problems.

Our first analysis (Table 3) tests the direct influences of diversity on the performance (black box model where group process remains unexplored) regression model, where the diversity measures are directly correlated with the performance (or the grade).

Table 3: Results of black box regression analysis (n=29)

	Beta	SE
2. Group size	0.236	0.619
3. Gender diversity	0.504**	2.424
4. Cultural diversity	-0.560***	0.009
Constant	12.018***	2.186
Adj R^2 0.403		
F 7.066***		

*p<.05; **p<.01; ***p<.001

The model is highly significant, as it is able to explain 40 per cent of the variance. Gender diversity indicates support of H5—increased gender diversity will increase performance. Cultural diversity, measured according to nationality and coded according to Hofstede's (1984) culture index, has a negative influence on performance, indicating support of H4.

Next, we analysed the relationship between the independent variables of diversity and the intermediating process variables of communication, conflict and effectiveness of problem solving. But only the regression model with the highest R2 is presented in Table 4.

As is evident in Table 4, none of the diversity variables correlated with the process variable, as the results in all of the other regression analyses showed. Thus, there is no support in our analyses for the proposition that diversity influences the process (H1 and H2 are not supported).

Table 4: Result of diversity explaining the process variable of problem solving (n=29)

	Beta	SE
3. Gender diversity	0.238	1.205
4. Cultural diversity	-0.402*	0.004
Constant	5.864***	0.981
Adj R^2 0.090		
F 1.928		

*p<.05; **p<.01; ***p<.001**

The third model is the relationship between the process variables and the performance variable of the grade. Since it was found that the process variables created collinearity problems, any model including all three process variables could not be analysed.

Summarising the analyses, we have found an indication that diversity influences performance: gender diversity positively and national diversity negatively. No indications could be found in support of the intermediating model of process (H4 and H5 are not supported).

Discussion

The aim of this paper was to enquire into the relationships between cultural and gender diversity, and group process and group outcomes. This has been done by exploring the so-called team process black box model, where the relationship between cultural and gender diversity has been investigated with a view to its direct influence on group outcomes. Another method of enquiry employed in this paper is the so-called intervening model in which gender and cultural diversity were presumed to have an influence on group outcomes through intervening processes such as communication, problem solving and conflict. Analyses indicate that the black box model has greater explanatory power with regard to the influences of both gender and ethnic diversity on performance, while the intervening model produces no consistent results.

Following suggestions of previous research (Milliken & Martins, 1996; Umans et.al., 2008) arguing for a multidimensional measurement of culture, this paper attempted to measure culture in terms of Hofstede's (1984) cultural dimensions, including individualism/collectivism, uncertainty avoidance, power distance, and masculinity/femininity. The findings indicate that this type of measurement is appropriate when looking at the group outcomes; however, it is possible that oversimplified measures of processes did not allow for plausible results concerning the culture-process outcome link.

As hypothesised, gender diversity had a positive influence on group performance, which is in line with previous research (e.g., Wood, 1987), while cultural diversity was shown to have a negative influence on group performance, which has also been supported by authors in the field (e.g., Chatman & Flynn, 2001; Flynn, Chatman & Spataro, 2001; Umans, Collin & Tagesson, 2008). Cultural diversity's negative influence on group outcomes is, however, a rather unfortunate finding, taking into consideration that today's workplace is becoming more global and requires

intercultural communication competence, and the ability to cooperate with people of different cultural backgrounds. However, one could assume that the negative influences found through the analysis can be explained by the fact that the student groups under study had not been working together for very long. According to Watson Johnson, Kumar & Critelli (1998), the benefits of diversity become apparent only later in the work group's life. Watson and his colleagues' observation derives from the groups working over one semester together, thus one could assume that groups investigated in this article did not have enough time to reap the benefits of their cultural diversity. One can also not discount the possibility that the assessment in general, and grading and criteria in particular, could have resulted in the culturally homogeneous groups outperforming culturally diverse groups.

Research in the field of cultural sensitivity of assessment in higher education has a long tradition of evaluating a variety of assessments and sensitivity towards minorities and foreign students (Afrin, 2009, Sleeter, 2004). Several researchers came to the conclusion that Western-oriented, standardised assessment forms, referring among others to multiple-choice tests, usually put the foreign and minority students in a disadvantage (Gopaul-McNichol & Armour-Thomas, 2002; Philpott, Nesbitt, Cahill & Jeffery. 2004). Furthermore, group assessments where students are encouraged to work on the common task are believed to be better suited for culturally diverse classes (Barkley, Cross & Major, 2005). While this study used the latter assessment, several authors have criticised it, positing that group assessment in groups leads to collective rather than individual grades, which in turn does not evaluate each and every student's input into the assignments (Johnston & O, 2010). This could possibly discourage those students from individualistic cultures to put less effort into group assignment, while would put more pressure on the students from more collectivistic cultures, who would be working harder to satisfy the group.. Thus, one solution to these types of issues could be involving students in the assessment of the objectives each member of the group has reached, objectives that group members have agreed on prior to the assignments. (Biggs, 2003)

Previous studies have argued that the demography outcome relationship has intervening process variables that must be taken into consideration; however, the present study does not realise this expectation. There could be several reasons for this non-realisation. First, the problem could lie in the measurement of the process variables. Second, the problem may originate in possible shortcomings of the self-reporting technique used by students when assessing processes in their own groups. The latter theory could be explained by the findings of psychology research, which posits that perceptions of various processes can be influenced by culture-specific interpretations (e.g., Giles & Johnson, 1986): what one culture might interpret as a constructive discussion might be interpreted by another as an aggressive conversation. Third, the non-realisation could be a result of the avoidance of variables that moderate the diversity-process relationship (Ely & Thomas, 2001)—shared goals could be one such type of variables (Larkey, 1996).

The problems of methodology could not be discounted as a reason for non-findings in the diversity-process outcome investigation in this paper, and in other diversity

research in general (Pitcher & Smith, 2001). Drawing on the discussion above concerning the shortcomings of the self-reporting technique, one of the solutions, although not a panacea, might be the use of observation as a method of investigation of processes in diverse groups. Observation as a method allows for understanding of other cultures (Silverman, 2006), as well as understanding the context of the interaction from the participant's perspective (Bryman, 1992). This method could be more advantageous than interviews or surveys in three broad ways. First, the researcher observing the social interaction could be assumed to have more experience in interpreting social interactions than the individuals who are actually interacting, who, as in case of our paper, may have added a cultural dimension into their own interpretations of the interaction. Second, the non-involvement, as well as the indifference to the group work outcome, of the researcher making an observation could reduce the bias that is usually present in the group members' self-reporting of the group processes. Third, if two observers were to be used, the interpretation of the observation could have relatively high reliability due to the inter-rating.

Thus, the theoretical contribution of this paper is expressed in the enquiry into the black box of group processes that, however, as shown in this study does not provide a better understanding of the relationship between gender/cultural diversity and group performance, presumably due to the way the black box variables have been operationalised and/or measured. However, there are certain indications that alternative methods in measuring these processes could yield more interaction revealing results. The methodological contribution of this paper is expressed in terms of the use of alternative and more thorough operationalisation of cultural diversity. Instead of measuring diversity on the proportion basis (based on race or just creating the dummy variable) of culturally diverse/homogeneous teams, this study has investigated cultural diversity by using Hofstede's four cultural dimensions that are based on the nationality dimension of culture. Contributions claimed in this paper could serve as a call for further research in the area on cultural/gender diversity in learning teams, and its influences on team process and team outcomes. Usage of observation as a method in observing team interactions could be one way to bring the research in the area further and to the new depths. The investigation of personality variables in conjunction with cultural and gender variables could add another dimension to the team research. Investigation of the demographic diversity on team interactions in longitudinal studies would be another suggestion for future research, since the number of experimental studies has indicated that team tenure has a moderating effect on the relationship between team diversity and team process (Watson Johnson, Kumar & Merrit, 1998).

Another possible way forward would be to use a more complex measure of team process, for example a construct called behavioural integration being a meta-construct encompassing a variety of processes taking place in the groups. Investigation of performance measures other than grade could also be a fruitful field of research, for example concentration on the outcome progression in the longitudinal studies could show the rate of improvement of teams compared to previous tasks, as well as in comparison to other groups. Moreover, researchers could enlarge the context within which the learning teams are operating: rather than concentrating on just one university or one country (as this study has done), one could investigate teams from different

universities performing similar tasks for example, the virtual education environment could provide a perfect setting within which team learning and interactions could be investigated.

Thus, one could interpret the overall result of the study as a call for specific action in managing diversity for higher performance. One could form learning teams that are gender diverse and culturally homogeneous in order to get best group performance. Tempting as it is, one should however, consider this result in the context of increasing intercultural interactions within classrooms, universities, institutions, and society as a whole, where avoiding or arranging demographic diversity is impossible since it is a given situation. Therefore, this study indicates a need for managing diversity in the classroom in order to prepare the students for intercultural interactions in the globalised world. One of the possible solutions to this could be an introduction of diversity management courses into the university curriculum. Being part of these courses could benefit both the university staff and students in managing the demographic diversity they are being exposed to.

Acknowledgements

The author would like to thank Sven-Olof Collin at Linnaeus University, Sweden; Bengt Igelstrom at Kristianstad University, Sweden; and three anonymous reviewers for their valuable comments on earlier versions of this paper.

References

Afrin, T. (2009). An overview from different perspectives: Culturally competent assessment in a multi-cultural environment. In L. H. Meyer, S. Davidson, H. Anderson, R. Fletcher, P. M. Johnston & M. Rees (eds.), *Tertiary Assessment and Higher Education Student Outcomes: Policy, Practice and Research*. Wellington, NZ: Ako Aotearoa,. 235–244.

Ancona, D.G. & Caldwell, D.F. (1992). Demography and design: Predictors of new product team performance. *Organization Science*, 3(3), 321-341.

Baldwin, T. T., Bedell, M.D. & Johnson, J.L. (1997). The social fabric of a team-based M.B.A. program: Network effects on student satisfaction and performance. *Academy of Management Journal*, 40(6), 1369-1397.

Barkley, E., Cross, K. & Major, C. (2005). *Collaborative Learning Techniques: A Handbook for College Faculty*. San Francisco, CA: Jossey-Bass.

Biggs, J. (2003). *Teaching for quality learning at university*, 2nd ed. Buckingham: SRHE/ Open University Press.

Blau, P. (1977). *Inequality and heterogeneity*. New York: Free Press.

Bollinger, L.C. (2003). The need for diversity in higher education. *Academic Medicine, 78(5),* 431-436.

Bryman, Alan. (1992). *Quantity and quality in social research*. London: Routledge.

Byrne, M., Flood, B. & Willis, P. (2001). The relationship between learning approaches and learning outcomes: A study of Irish accounting students. *Accounting Education,* 11(1), 27-42.

Chatman, J. & Flynn, F. (2001). The influence of demographic heterogeneity on the emergence and consequences of cooperative norms in work teams. *Academy of Management Journal*, 44(5), 956-974.

Cheng, K-W. & Chen, Y-F. (2008). Effects of cooperative learning in a college course on student attitudes toward accounting: A quasi-experimental study. *International Journal of Management*, 25(1), 140-148.

Cox, T., Lobel, S.A. & McLeod, P.L. (1991). Effects of ethnic group cultural differences on cooperative and competitive behavior on a group task. *Academy of Management Journal*, 34(4), 827-847.

Decuyper, S., Dochy, F. & Van den Bossche, P. (2010). Grasping the dynamic complexity of team learning: An integrative model for effective team learning in organisations. *Educational Research Review,* 5(2), 111-133.

Dess, G.G. & Beard, D. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly*, 29(1), 52-73.

Elron, E. (1997). Top management teams within multinational corporations: Effects of cultural heterogeneity. *Leadership Quarterly*, 8(4), 393-412.

Ely, R. J. & Thomas, D. A. (2001). Cultural diversity at work: The effects of diversity perspectives on work group processes and outcomes. *Administrative Science Quarterly*, 46(2), 229-273.

Flynn, F., Chatman, J. & Spataro, S. (2001). Getting to know you: The influence of personality on impression formation and performance of demographically different people in organizations. *Administrative Science Quarterly*, 46(3), 414-442.

Giles, H. & Johnson, P. (1986). Perceived threat, ethnic commitment and interethnic language behaviour. In *Interethnic Communication: Current Research*, ed. Kim Y.Y., 96–116. Beverly Hills, CA: Sage.

Gopaul-McNichol, S. & Armour-Thomas, E. (2002). *Assessment and culture: Psychological tests with minority populations*. San Diego, CA: Academic Press.

Hackman, J.R. & Morris, C. G. (1978). Group tasks, group interaction process, and group performance effectiveness: A review and proposed integration. In *Advances in experimental social psychology*, ed. L. Berkowitz, Vol. 16 (1-55). NYC: Academic Press.

Hofstede, G. (1984). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.

Hofstede, G. (1993). Cultural constrains in management theory. *Academy of Management Executive*, 7(1), 81-93.

Jackofsky, E.F., Slocum, J.V. Jr. & McQuaid, S.J. (1988). Cultural values and the CEO: Alluring companions? *The Academy of Management Executive,* 2(1), 39-50.

Janssen, J., Kirschner, F., Erkens, G., Kirschner, P.A. & Paas, F. (2010). Making the Black Box of Collaborative Learning Transparent: Combining Process-Oriented and Cognitive Load Approaches. *Educational Psychology Review*, 22(2),139-154

Jehn, K., Northecraft, G. & Neale, M. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in work groups. *Administrative Science Quarterly*, 44(4), 741-763.

Johnston, P.M.G & O, T.W.W. (2010). Towards culturally appropriate assessment? A contribution to the debates. *Higher Education Quarterly,* 64(3), 231-245.

Katzenbach, J. R. (1997). The myth of top management teams. *Harvard Business Review, 75*(6), 82-92.

Kimble, C.E., Yoshikawa, J.C., & Zehr, H.D. (1981). Vocal and verbal assertiveness in same-sex and mixed-sex groups. *Journal of Personality and Social Psychology*, 40(6), 1047-1054.

Larkey, L. K. (1996). Toward a theory of communicative interactions in culturally diverse workgroups. *Academy of Management Review*, 21(2), 463-491.

Lawrence, B. M. (1997). The black box of organisational demography. *Organisation Science*, 8(1), 1-22.

Mabry, E.A. (1985). The effects of gender composition and task structure on small group interaction. *Small Group Behavior*, 16(1), 75-96.

Martins, L., Miliken, F., Wiesenfeld, B. & Salgado. S. (2003). Racioethnic diversity and group members' experiences: The role of the racioethnic diversity of organisational context. *Group and Organization Management,* 28(1), 75-106.

Mayo, M. (2000). Looking into the black box: A social network approach to diversity, communication and work team effectiveness. Paper presented at the annual meeting of the Academy of Management, August, in Toronto, Canada.

McCarrey, M. (1988). Work and personal values for Canadian anglophones and francophones. *Canadian Psychology*, 29(1), 69-83.

McLeod, P. & Lobel, S. (1992). The effects of ethnic diversity on idea generation in small groups. Paper presented at the annual meeting of the Academy of Management, August, in Las Vegas, USA.

Michaelsen, L. K. & Watson, W. E. (1993). Beyond groups and cooperation: Building high performance learning teams. In D.L. Wrights & J.O. Lunde, *To improve the academy*, vol. 12 (pp. 127-146). Stillwater: New Forums Press.

Milliken, F. J., and Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review*, 21(2), 402–433.

Oetzel, J.G. (1998). Culturally homogeneous and heterogeneous groups: Explaining communication process through individualism-collectivism and self-construal. *International Journal of Intercultural Relation,* 22(2), 135-161.

O'Reilly, C.A. III., Caldwell, D. & Barnett, W. (1989). Work group demography, social integration, and turnover. *Administrative Science Quarterly*, 34(1), 21-37

Pazos, P., Micari,M. & Light, G. (2010). Developing an instrument to characterise peer-led groups in collaborative learning environments: assessing problem-solving approach and group interaction. *Assessment & Evaluation in Higher Education, 35(2), 191-209.*

Pelled, L., Eisenhardt, K. & Xin, K. (1999). Demographic diversity in work groups: An empirical assessment of linkages to intragroup conflict and performance. *Administrative Science Quarterly*, 44(1), 1-28.

Pfeffer, J. (1983). Organizational demography. In *Research in organizational behavior,* ed. L.L. Cummings & B.M. Staw, vol. 5, 295–357. Greenwich, CT: JAI Press.

Philpott, D., Nesbit, W., Cahill, M. & Jeffery, G. (2004). Educational assessments of first nations students: A review of the literature. In W. Nesbit (ed.), *Cultural Diversity and Education: Interface Issues*. St John's, NL: Memorial University, 77–102.

Pihl, H. (2010). Is coordination influenced by culture? A comparison of Sweden and China. *Problems and Perspectives in Management*. 8(1), 61-69

Pitcher, P. & Smith, A. (2001). Top management team heterogeneity: Personality, power, and proxies. *Organization Science,* 12(1), 1-18.

Rayeski, E. & Bryant, J.D. (1994). Team resolution process: A guideline for teams to manage conflict, performance, and discipline. In M. Beyerlein & M. Bullock (Eds.). In *Proceedings of the international conference on work teams proceedings: Anniversary collection*. The best of 1990–1994 (pp. 215–221). Denton: University of North Texas, Center for the Study of Work Teams.

Ruhe, J. & Eatman, J. (1977). Effects of racial composition on small work groups. *Small Group Behavior*, 8(4),479-486.

Shaw, M. E. (1983). Group composition. In H.J. Blumberg, A.P. Hare, V. Kent, & M.F. Davies (Eds.), *Small group and social interaction*, vol. 1. Chichester, England: Wiley.

Shiflett, S. (1979). Toward a general model of small group productivity. *Psychological Bulletin*, 86(1), 67-79.

Silverman, D. (2006). *Interpreting qualitative data: Methods for analyzing talk, text and interaction*. 3rd ed. London: SAGE

Sleeter, C. (2004). Critical multicultural curriculum and the standards movement. *English Teaching: Practice and Critique*, 3(2), 122–138.

Smith, K.G., Smith, K.A., Olian, J.D., Sims, H.P. Jr., O'Bannon, D.P. & Scully, J.A. (1994). Top management team demography and process: The role of social integration and communication. *Administrative Science Quarterly*, 39(3), 412-438.

Smith-Lovin, L. & Brody, C. (1989). Interruptions in group discussion: The effects of gender and group composition. *American Sociological Review*, 54(6), 425-435.

Stringer, D. M. (1995). The role of women in workplace diversity consulting. *Journal of Organisational Change Management*, 8(1): 44-51.

Triandis, H. C. (1960). Cognitive similarity and communication in a dyad. *Human Relations*, 13(2), 175-183.

Umans, T., Collin, S.-O. & Tagesson, T. (2008). Ethnic and gender diversity, process and performance in groups of business students in Sweden. *Intercultural Education*, 19(3), 243-254.

Watson, W. E., Johnson, L. & Zgourides, G.D. (2002). The influence of ethnic diversity on leadership, group process, and performance: An examination of learning teams. *International Journal of Intercultural Relations*, 26(1), 1-16.

Watson, W.E., BarNir, A. & Pavur, R. (2005). Cultural diversity and learning teams: The impact of desired academic team processes. *International Journal of Intercultural Relations*, 29, 449-467.

Watson, W.E., Cooper, D., Torres, M. & Boyd, N.G. (2008). Team process, team conflict, team outcomes and gender: An examination of U.S. and Mexican learning teams. *International Journal of Intercultural Relations*, 32, 524-537.

Watson, W.E., Johnson, L. & Merritt, D. (1998). Team orientation, self-orientation, and diversity in task groups. *Group and Organization Management*, 23(2), 161-188.

Watson, W.E., Johnson, L., Kumar, K. & Critelli, J. (1998). Process gain and process loss: comparing interpersonal processes and performance of culturally diverse and non-diverse teams across time. *International Journal of Intercultural Relations*, 22, 409-430.

Williams, K.Y. & O'Reilly, C.A. (1998). Demography and diversity in organisations: A review of 40 years of research. In L. Cummings & B. Staw (Eds.). *Research in organizational behaviour,* 20, 77-140. Greenwich, CT: JAI.

Wood, W. (1987). Meta-analytic review of sex differences in group performance. *Psychological Bulletin*, 102, 53-71.

Xia, L., Shami, S.N, Yuan, C.Y. & Gay, G. (2007). The impact of negative relations on performance and satisfaction in group work. *Proceedings of the 40th Hawaii International Conference on System Sciences.* Hawaii, USA.

Timurs Umans is a lecturer in Business Administration at Kristianstad University. He has received his MSc in Business Administration from Kristianstad University and is currently a PhD Candidate in Corporate Governance and Strategy at the School of Economics and Management, Lund University. He is lecturing in strategic management, human resource management and international business at the Centre for Business Studies, School of Health and Society, Kristianstad University. His research interests are in the area of strategy and corporate governance, and his dissertation project deals with cultural diversity of top management teams and its influence on organisational outcomes.
Email: timurs.umans@hkr.se