

**Facilitating student interaction capabilities:
The interplay of individual, group and course-related factors**

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Abstract

Marketing education increasingly recognizes the active role of students in their learning experience. Students co-create learning outcomes through interacting with course resources and other students. However, there is little understanding of the factors that support the development of students' ability to interact in this learning environment. This paper examines the influence of individual and group characteristics that exist at group formation, on the development of the group and ultimately its interaction capabilities. We identify that individual goal orientation and motivation predict shared academic goals and commitment to learning. Over a period of time, these factors promote a shared vision and recognition of peer learning opportunities provided by the course, and subsequently drive student interaction capabilities. The results implies that in order to enhance interaction among students, marketing educators should focus efforts on developing peer learning opportunities and consider individual and group goals and commitment to learning when forming student groups.

Keywords: interaction capabilities, marketing education, co-creation, peer learning, shared vision, group work

Introduction

Today's tertiary marketing education environment, characterized by a shift in pedagogy and the availability of technological resources, recognizes that students are no longer passive recipients of their learning experience (Taylor, Hunter, Melton & Godwin, 2011; Chad, 2012). Students' active involvement in their learning leads to improved perceptions of teaching quality, commitment and loyalty to the institution (Hennig-Thurau, Langer & Hansen, 2001), enhanced satisfaction with the learning experience (Hernandez, 2002), and better learning outcomes (Bravo, Lucia-Palacios & Martin, 2014). Hence, scholars are increasingly acknowledging the student and the institution as dynamic mutual contributors to the process of value co-creation in an educational context (Bowden & D'Alessandro, 2011; Navarro-García, Peris-Ortiz, & Rueda-Armengot, 2015).

The notion of value co-creation recognizes that students integrate resources with lecturers and other students through a series of interactions for mutual betterment (Vargo & Lusch, 2004). In other words, students are an inherent part of the educational process and co-create their learning experience through interactive activities such as class discussion, group assignments, and general interactions with others (Harrison, 2013; Taylor et al., 2011). In this context, students must develop the necessary capabilities in order to make the most of their learning opportunity (Kotzé & du Plessis, 2003). Empirical studies in the services marketing literature have recently begun to examine the required capabilities for effective interaction and co-creation among service actors (Navarro-García et al., 2015). According to Karpen, Bove and Lukas (2012), six interaction capabilities facilitate the co-creation of value in an organizational setting, namely individuated, relational, ethical, developmental, concerted and empowered interaction capabilities. Nevertheless, these capabilities have not been studied in an educational context or on a group level.

The purpose of this paper is thus to conceptualize and empirically examine a model of individual, group and course factors that foster student interaction in marketing education. Specifically, we measure student interaction capabilities at the end of the course; examining the influence of the individual and group characteristics exhibited at the commencement of the course (i.e., an individual's motivation to learn and performance goal orientation, and a group's shared goals and commitment to learning) as well as the students' informed perception of the group and the course at its conclusion (i.e., shared vision of the group and opportunities for peer learning). This temporal separation of measurement provides (1) insights into the factors that can be identified and facilitated by educators when forming groups, and (2) an explanation on how interaction outcomes can be facilitated over the course duration.

The remainder of this paper is organized as follows. After a brief discussion on value co-creation in higher education, we review extant literature on interaction among student groups. This leads to the development and empirical testing of a conceptual model depicting the interplay of individual characteristics, group characteristics and course-based phenomena to achieve better interaction outcomes. The paper concludes with theoretical and educational implications as well as future research directions.

Value co-creation in higher education

Services marketing theories are frequently used in an educational context (Ng & Forbes, 2009; Taylor et al., 2011), with value co-creation receiving increased advocacy in recent times (Navarro-García et al., 2015; Harrison, 2013). A value co-creation approach to education draws from a theoretical understanding of how firms, customers, and other market actors jointly create value through their interactions (Vargo & Lusch, 2004).

As a co-creator of the learning experience, students integrate their resources through interactions with other students, lecturers, and university services for the purpose of obtaining a value outcome (Diaz-Méndez & Gummesson, 2012). Such value is not passively provided; students must actively interact in a joint process and play an active role in the determination of value outcomes (Zukefli & Uden, 2013). The resources students bring to the interaction (e.g. knowledge, intelligence, study habits, critical thinking skills, communication skills) (Ng & Forbes, 2009) are integrated with those of other students and those provided by the lecturer (e.g. course content, knowledge, facilities, teaching ability, personality). All resources contain potential value, yet without the students' interaction, no value is derived from the resources of the lecturer or other students (Diaz-Méndez & Gummesson, 2012).

Educational literature has recognized the need for students to actively participate in their learning (Taylor et al., 2013). For example, active learning requires students to accept responsibility and participate in meaningful learning activities (Prince, 2004), but does not dictate whether this is a solitary pursuit or through interaction with others. For example, students displaying higher levels of autonomy are more motivated through active learning and achieve better learning outcomes than their counterparts (Ackerman & Hu, 2011), suggesting that active learning is potentially more effectual as an individual pursuit. This is in contrast to a co-creation approach to education, which places an emphasis on interaction. Given this shift in perspective, there is a need for educators to understand how they can influence students to better interact with one another in a learning environment.

Student interaction within groups

Teamwork facilitates student interaction, which is not only consistent with the new paradigms of learning in higher education (Chad, 2012) but also a competence highly sought after by employers of marketing graduates (Navarro-Garcia et al., 2015). The ability to work

effectively in teams leads to a greater satisfaction with the learning experience and enhanced self-management skills (Hernandez, 2002), with co-creation among students leading to the construction of new knowledge, and improved learning outcomes (Schaffer, Lei & Paulino, 2008). While previous research has examined teamwork competencies, it is predominantly concerned with enhancing team effectiveness (i.e. investigating performance as outcomes) (Bravo et al., 2014) rather than understanding how to nurture students' capabilities to interact with others.

To investigate interaction among student groups, this study adopts the interaction capabilities proposed by Karpen, Bove, Lukas, and Zyphur (2015) and examines them in an educational group setting. Our application of the constructs at a group level means that they reflect the members' ability to facilitate and enhance interaction among members of the group. Five capabilities are relevant to this study (refer to Table 1). The sixth construct, *concerted interaction capability*, was not incorporated, as students are often not able to control the structure and processes in regards to group assessment.

Insert Table 1 here

A review of the literature yields little understanding as to how to develop aforementioned capabilities among students. Given the importance of interaction to both learning outcomes and student employability, marketing educators should consider how course design and group dynamics foster interaction capabilities. This leads to our principle research question – *What individual, group and course-related factors facilitate interaction capabilities among student groups?*

Conceptual framework

The premise of this conceptual framework was to examine the interplay of group, individual and course characteristics that serve as indicators of the likely development of

effective interaction capabilities among student groups. From an educational perspective, these factors could thus be facilitated or enhanced by instructors to improve student interactions. The conceptual framework (refer to Figure 1) reflects individual and group characteristics that are determinable when forming teams and seeks to explain their influence on group and course perceptions that emerge over time (i.e. shared vision and peer learning opportunities). Hence, we seek to demonstrate the interplay among these factors to enhance interaction capabilities within student groups.

Insert Figure 1 here

Shared vision (group level)

A shared vision is a “common mental model of the future state of the team or its tasks that provides the basis for action within the team” (Pearce & Ensley, 2004, p. 260). Without a shared vision, individuals are less likely to share ideas or desired outcomes (Baker & Sinkula, 1999). Group members with a shared vision work together to identify skills and experiences of individuals, developing individualized interaction capability. The group will work in the best interest of all parties toward the shared vision, and hence demonstrate an ethical interaction capability. With a consolidated vision, group members are more inclined to work together harmoniously and hence will build a relational interaction capability. Finally, in working toward the shared vision, all students are empowered to both apply and develop knowledge and skills that help the group achieve their mutual goal, hence facilitating empowered and developmental interaction capabilities. Hence:

H1: A shared vision positively influences interaction capabilities among students.

Peer learning (course level)

Peer learning is the “use of teaching and learning strategies in which students learn with and from each other without the immediate intervention of a teacher” (Boud, Cohen & Sampson, 1999, p. 413), including, for example, mentoring sessions, discussion seminars,

student-led workshops, collaborative group work, and peer-assessment schemes (Boud, Cohen & Sampson, 2014). It involves the sharing of operant resources (e.g. knowledge, ideas, skills and experiences) among participants, extending to positive interdependence in which students teach and learn from each other for mutually beneficial outcomes (Blasco-Arcas, Buil, Hernandez-Ortega & Sese, 2013). The notion of peer learning is hence consistent with the notion of value co-creation and the need to foster interaction capabilities among students.

Involvement in peer learning will require students to consider the unique knowledge and skills of their group members, and hence develop individuated interaction capabilities. For effective peer learning, they will need to consider how to relate and connect with their group members, thus facilitating relational interaction capabilities. To enable open sharing of operant resources within the group, students will need to ensure that they treat each other fairly and with respect, therefore developing an ethical interaction capability. Groups that seek to co-create mutual value from their peer learning experience will empower all members of the group to contribute and become more skilled, hence developing empowered and developmental interaction capabilities respectively. Hence:

H2: Peer learning in the course design positively influences interaction capabilities among students.

Shared academic goals (group level)

Shared academic goals represent the “degree to which one has collective goals, missions and visions with other people” (Chow & Chan, 2008, p. 464). That means group members share the goal to achieve the best mark for the course and work to the best of their ability. The presence of this shared academic goal promotes a mutual understanding among the group and enables members to freely share ideas (Chow & Chan, 2006). This will ultimately facilitate a shared vision among the group regarding not only what they want to

achieve but also how they envisage achieving this goal. Shared goals are a force that holds group members together and allows them to share their knowledge, skills and experiences (Chow & Chan, 2006). A shared academic goal in the initial stages of the group work is therefore expected to facilitate the peer learning experience. Thus we hypothesize:

H3a: Shared academic goals positively influences a shared vision.

H3b: Shared academic goals positively influences recognition of peer learning opportunities.

Commitment to learning (group level)

Commitment to learning is the “degree to which the group values and promotes learning” (Calantone, Cavusgil & Zhao, 2002, p. 516). A committed group considers learning a top priority and key to their improvement and relative advantage over other groups (Baker & Sinkula, 1999). Without a commitment to learning, groups are not encouraged to pursue learning activities or further develop their knowledge (Calantone et al., 2002). In this situation it is unlikely that the cause and effect of their actions would be sufficiently understood to develop a shared vision among the group. They are also unlikely to recognize or acknowledge the peer learning opportunities embedded in a course. Hence,

H4a: Commitment to learning positively influences a shared vision.

H4b: Commitment to learning positively influences recognition of peer learning opportunities.

Performance goal orientation (individual level)

Individuals with a performance goal orientation strive to outperform their peers and seek situations that will allow them to demonstrate their skills and competencies. They focus on how to best perform the task, with an orientation to demonstrate their high skill and competence (Johnson, 2005). Based on Payne, Youngcourt, and Beaubien (2007), students with a high performance goal orientation are likely to manifest an academic performance goal

towards the assessment or task to be completed by the group. With a high desire to succeed, these individuals will communicate this objective and urge all group members to adopt a shared academic goal. Therefore, these individuals are likely to promote learning and achievement within the group along with the shared understanding of the group's goals so as to enhance goal attainment. This is reflected in the following hypotheses:

H5a: A performance goal orientation will positively influence shared academic goals.

H5b: A performance goal orientation positively influences group commitment to learning.

Motivation to learn (individual level)

A student's motivation to learn, the "direction, intensity, and persistence of learning-directed behaviour" (LePine, LePine & Jackson, 2004, p. 884), is a fundamental component of the student's engagement with their learning. Students with a high motivation to learn give increased effort to their learning and take more responsibility for their own learning in peer learning situations (Taylor et al., 2013). By doing so, these students are likely to set a positive example and contribute to their group's overall commitment to learning. Moreover, in line with previous research suggesting individual intrinsic motivation to facilitate management team performance in an organisational setting (Malter and Dickson, 2001), we expect an individual student's motivation to learn will facilitate the development of shared goals in the group due to learning being the primary objective of the group activity in the education context. Hence:

H6a: Motivation to learn positively influences shared academic goals.

H6b: Motivation to learn positively influences group commitment to learning.

Method

Data collection. We collected data from students of two major Australian universities undertaking introductory undergraduate marketing courses with a significant group work component in the course assessments. In each course, we administered two surveys, one at the early stage of group work when groups had just been formed and another at the end of the semester when all group work had concluded. This extended data collection process enabled the measurement of student and group perceptions of academic goals and learning at the initial stage of group formation, while also capturing the perceptions of the course (peer learning), group dynamics (shared vision) and the interaction capabilities that could not be determined at the origination of the group. Overall, we collected complete responses from 148 students. Of those, 43% were local and 57% were international students. The majority (70%) of participants were undertaking a business related degree, while the remaining were in humanities, sciences, engineering, and cross disciplinary degree programs.

Measures. The measurements of all the constructs, on a seven-point Likert scale, were adapted from existing scales, with the sources noted in Table 2. As indicated in the Table and following analysis, we treat each dimension as a separate first-order reflective construct in order to examine individual effects on each interaction capability.

Insert Table 2 here

Data analysis. Given that our sample consists of participants from two universities, an independent samples t-test was conducted to confirm that no significant differences exist in any of the constructs between respondents from different universities. Then, a two-step confirmatory factor analysis (CFA) was performed. Firstly, one-factor congeneric models were tested to ensure that the measurement models are a good fit for the data. Then, all the constructs were integrated into an overall measurement model. The fit indices suggest satisfactory fit ($\chi^2/df = 1.52$, CFI = .94, TLI = .93, SRMR = .05). A further assessment of the measurement instruments confirmed reliability and validity, as presented in Table 3. Finally,

to assess common method bias, we employed Harman's (1976) single-factor test. The results indicate a poor fit to the data ($\chi^2/df = 4.16$, CFI = .59, TLI = .56, SRMR = .12), therefore suggesting that common method bias was not an issue in this study.

Insert Table 3 here

The path model indicates a good model fit ($\chi^2/df = 2.44$, CFI = .96, TLI = .91, SRMR = .07), with results detailed in Table 4. As hypothesized, both shared vision and peer learning exert a positive and significant effect on all interaction capabilities, providing support for H1 and H2. Notably, compared to peer learning, shared vision has a greater effect on each of the interaction capabilities. Both shared vision and peer learning are shown to be significantly impacted by group characteristics measured at the beginning of the group work, including the group's shared goals (H3a and H3b) and commitment to learning (H4a and H4b). In turn, the results confirm the ability of individuals to drive relevant group characteristics. While an individual's performance orientation facilitates the development of shared group goals (H4a), it does not affect the group's commitment to learning, leading to the rejection of H4b. An individual's motivation to learn, however, is significantly and strongly associated both with the group's shared goals and commitment to learning, confirming H6a and H6b. Overall, the individual, group and course level factors explain 40% of the variance in ethical, 45% in individualized, 46% in empowerment, as well as 51% each in relational and developmental interaction capabilities.

Insert Table 4 here

Discussion and implications

Marketing education is undergoing dramatic changes, bringing to the forefront more than ever the role of individual students as active drivers of their learning experience (Bravo et al, 2014). Scholars have recently begun to offer important framing for the co-creation of

mutual value in education (Bowden & D'Alessandro, 2011; Navarro-García et al., 2015). To extend this line of investigation, our study provides unique insight into the development of five capabilities students need for an interactive style of learning in the modern marketing education context.

This study provides an important first step to understanding the interdependencies of individual, group and course-related factors to enhance student interaction capabilities within groups, showing a shared vision as particularly impactful. Developing a shared vision for the group entails the development of common frameworks, providing the group not only with direction (Baker & Sinkula, 1999) but simultaneously building group members' capability to interact, in particular the capability to strengthen social and emotional ties and assist in each other's knowledge and competence development. Our results also indicate the relevance of a course level factor (peer learning opportunities) for the betterment of interaction capabilities in marketing education. Not only do peer learning opportunities significantly accelerate all interaction capability constructs examined, they more strongly influence those aspects of interaction less strongly associated with a shared vision.

Importantly, the results indicate that group and individual characteristics at the initial stages of group formation can predict the development of a shared vision and peer learning perceptions. In particular, the results confirm the relevance of forming groups that are not only committed to learning but also share academic goals early on. That means, those groups that share academic goals and were committed to learning at the onset of the course develop a strong shared vision and view the course as supportive of peer learning. Such initial group coherence is likely to promote a mutual understanding and free flowing discussion (Chow & Chan, 2006) leading to desired outcomes.

Importantly, in line with discourse in the management area on the relevance of individuals and their learning skills for group performance (Malter and Dickson, 2001), an

individual student's motivation to learn offers an important predictor for group learning and shared goals. As previously shown in a sales context, while an individual's orientation to both perform and learn motivate that person to work hard, only learning orientation has a significant effect on working smart (Sujan, Weitz and Kumar, 1994). Working smart, and thus not just developing but also utilizing knowledge in the group process, allows the individual to influence the group in their combined effort. Yet an individual's orientation to perform is only of minimal influence to the group's sharing of goals, with no impact on the group's commitment to learning.

Finally, this study is the first to adapt interaction capabilities to a marketing education and a group setting. The results demonstrate the suitability of the scale to measure interaction capabilities at the group level, with the five constructs exhibiting reliability and validity. Hence, future studies can employ Karpen et al.'s (2015) adapted scale to advance our understanding of students' learning experience.

Implications for marketing education

This research has important implications for marketing education, supporting educators who seek to foster a co-creative learning experience and interaction in their classrooms. With a focus on assessment, educators wishing to understand the extent to which interaction capabilities are present within their classes and individual groups can utilize the measures employed in this study (adapted from Karpen et al, 2015). Such measurement is critical to ensure specific tools developed to support the development of students' competences have the desired effect. Moreover, the results suggest that marketing educators should focus their efforts on (1) developing peer learning opportunities as part of their courses, (2) supporting groups in their development of a shared vision, and (3) forming groups that share specific goals and a mutual commitment to learning.

The positive association between perceptions of peer learning opportunities and interaction capabilities suggests the need for educators to not only design courses that provide many opportunities for students to engage with each other but also to ensure that students understand and appreciate these opportunities. This can be achieved by clearly communicating the relevance of peer learning, facets of the course promoting student interaction, as well as opportunities that arise by working together to not only share but shape a collective experience.

Furthermore, educators should develop a system that supports groups in their development of a shared vision. Importantly, a group's shared goals and learning commitment at the beginning of the group process predicted higher shared values and peer learning perceptions at the conclusion of the course, demonstrating the importance of group formation. If allowing students to self-select groups enables them to reap the positive benefits related to group dynamics, attitudes and outcomes (Chapman, Meuter, Toy and Wright, 2006), educators should allow students to familiarize themselves with each other, each other's academic goals and motivation. Moreover, as part of this process, marketing educators may wish to assess students' desire to learn rather than to perform, given the strong positive influence intrinsically motivated students can have on the interaction within their group.

Limitations and future research

While advancing our understanding of the factors that facilitate interaction in a marketing education context, this study encompasses a number of limitations that should be acknowledged. In particular, data was collected at two Australian universities, with the final sample comprising a variety of different students in regards to gender, degree program, cultural background, reflecting a common composition of undergraduate marketing courses in Australia. Yet replications in other countries and across different student cohorts are

necessary to assess the applicability of these results across different contexts. Such studies may also extend our model to include the learning outcomes of interaction on the individual and group level.

Replication and extension studies will also provide the opportunity to confirm the reliability and validity of the group-level interaction capability measures, adapted here from Karpen et al.'s (2015) measures. In particular, the need to limit the measurement of empowered interaction capability to two items due to its close association with individuated interaction capability may be due to the small sample size of this study, yet should undergo further testing to establish the measurement construct firmly in the marketing education and group contexts.

Furthermore, our analysis is limited to the perception of individuals rather than groups. While the extended data collection enabled us to examine the relevance of group and individual characteristics prior to the group work, it led to a relatively small sample size. Future research should thus seek to establish a picture of group characteristics based on the perceptions of all students involved. Such approach would help to not only develop an understanding of the dynamics of groups as perceived by all of its members but also the relevance of such dynamics for the development of interaction capabilities. It would also offer more in-depth insight into the effect of certain individual characteristics (such as one student's motivation to learn) on the group dynamics and the development of interaction within the group.

Conclusion

Marketing education is rapidly changing, leading not only to opportunities and challenges but also to the development of a wide variety of online and offline tools, many of which are focused on encouraging student interaction and co-creation of their learning and

learning experience (Hennig-Thurau et al., 2001; Kotzé & du Plessis, 2003). While the evaluation of novel tools and methods are of great benefit and needed both for the theoretical and practical advancement of marketing education, this paper examines the broader environment in which these tools are implemented, in particular student ability to interact as part of a group. By adopting a co-creation lens and examining interaction capabilities in the educational and the group contexts for the first time, this study builds an important foundation for future research seeking to advance our understanding of co-creation in a modern marketing environment. The results show a group's shared vision, as well as the peer learning opportunities offered by the course, have combined effects facilitating the development of the five interaction capabilities measured.

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Figure 1. Conceptual framework

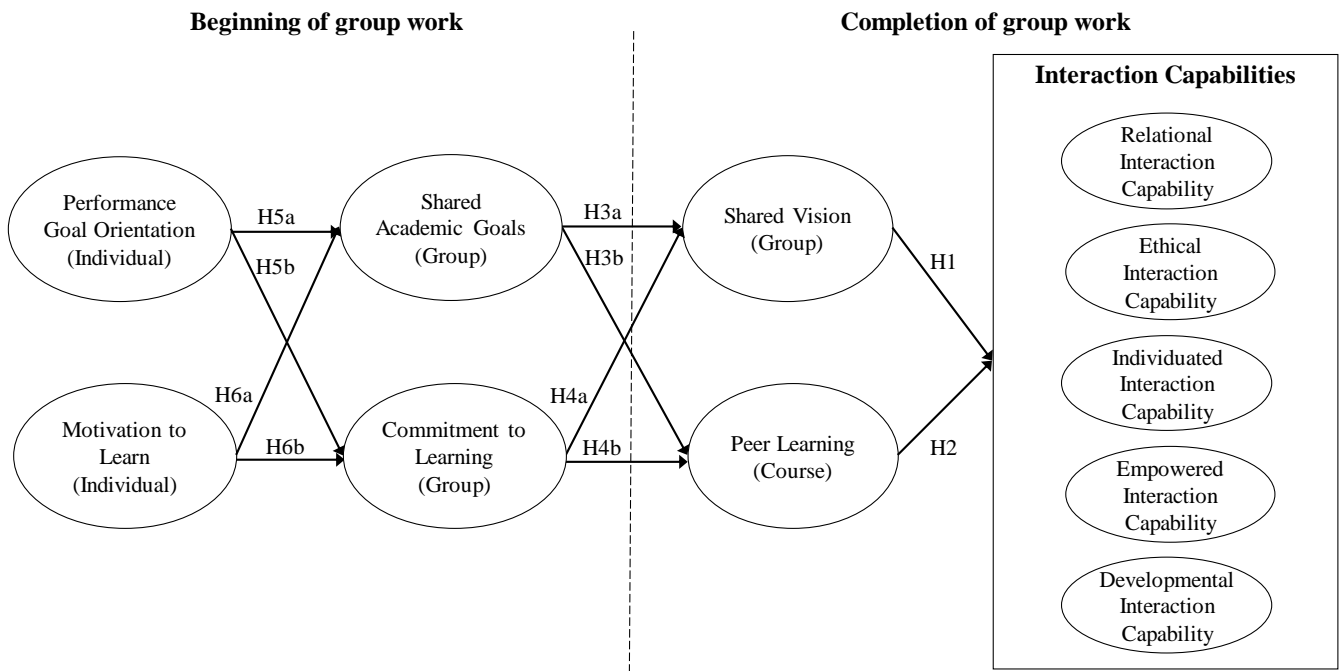


Table 1. Interaction capabilities in marketing group work

Capability	Group characteristics
Individuated interaction	The group's ability to understand the resource integration processes and desired outcomes of individual members.
Relational interaction	The groups' ability to enhance the social and emotional connections among individual group members.
Ethical interaction	The group's ability to act in a fair and non-opportunistic way toward individual members.
Empowered interaction	Enables the group's members to shape the nature and content of their exchange with each other.
Developmental interaction	The ability for the group to assist in the development of skills and knowledge of all group members.

Adapted from Karpen et al. (2015)

Table 2. Construct Measurement

Scale	Source	No. of items
Individual - performance goal orientation	Johnson (2005)	5 items
Individual - motivation to learn	LePine et al. 2004	3 items
Group - shared goals	Marsh et al. (2003)	4 items
Group - commitment to learning	Calantone et al. (2002)	4 items
Group - shared vision	Calantone et al. (2002)	4 items
Peer learning	Lambert et al. (2007)	6 items

Table 3. Factor loadings, composite reliability, and AVE

Scale	Loadings	Composite Reliability	AVE	Highest Squared Correlation
<u>Performance goal orientation (beginning of group work)</u>				
I feel smart when I do something without making any mistakes	0.80	0.80	0.57	0.20
I like to work on tasks that I have done well on in the past	0.74			
I feel smart when I can do something better than most other people	0.73			
<u>Motivation to learn (beginning of group work)</u>				
In general, I exert considerable effort to learning the material in my courses	0.82	0.88	0.71	0.28
In general, I try to learn as much as I can from my courses	0.86			
In general, I am motivated to learn the skills emphasized in my courses	0.85			
<u>Shared academic goals (beginning of group work)</u>				
Group members agree on the mark we want to achieve	0.76	0.85	0.65	0.30
We agreed that we aim to get the best mark we could	0.88			
We agreed that we work to the best of our ability	0.77			
<u>Commitment to learning (beginning of group work)</u>				
Our group's ability to learn is the key to our competitive advantage	0.71	0.79	0.55	0.31
Learning is the key to our group's improvement	0.82			
Learning is a top priority of us	0.69			
<u>Shared vision (completion of group work)</u>				
There is a total agreement on our vision among all group members	0.83	0.89	0.73	0.58
All group members are committed to the goals of this team	0.89			
Group members are partners in charting the direction of our group	0.84			
<u>Peer to peer learning (completion of group work)</u>				
This course provides many opportunities for me to learn from other students	0.80	0.92	0.69	0.29
This course places great emphasis on sharing ideas and insights among students	0.88			
This course provides plenty of opportunities to engage with other students	0.90			
This course encourages interaction among students	0.81			
Interaction with other students is greatly facilitated by this course	0.76			

<u>Relational interaction capability (time 2)</u>		0.93	0.81	0.69
<i>My fellow team members have the capabilities to...</i>				
make me feel at ease during our dealings	0.88			
try to establish rapport with me	0.92			
encourage two-way communication with me	0.90			
show genuine interest in engaging me*				
<u>Ethical interaction capability (time 2)</u>		0.94	0.81	0.65
<i>My fellow team members have the capabilities to...</i>				
not try to take advantage of me	0.86			
not pressure me in any way	0.88			
not mislead me in any way	0.94			
not try to manipulate me	0.93			
<u>Individuated interaction capability (time 2)</u>		0.92	0.79	0.78
<i>My fellow team members have the capabilities to...</i>				
make an effort to understand my individual needs	0.88			
be sensitive to my individual situation	0.90			
make an effort to find out what kind of offering is most helpful to me	0.88			
seek to identify my personal expectations*				
<u>Empowered interaction capability (time 2)</u>		0.88	0.78	0.77
<i>My fellow team members have the capabilities to...</i>				
invite me to provide ideas or suggestions	0.89			
encourage me to shape the service I receive*				
provide me with control over my experiences*				
let me interact with them in my preferred way	0.88			
<u>Developmental interaction capability (time 2)</u>		0.91	0.77	0.75
<i>My fellow team members have the capabilities to...</i>				
share useful information with me	0.88			
help me become more knowledgeable	0.92			
provide me with the advice I need to use their offerings successfully	0.83			
offer expertise that I can learn from*				

*item was removed after model re-specification.

Table 4. Results for the hypotheses[^]

Hyp	Independent variable	Dependent variable	Standardized direct effects (β)	Critical ratio (t)	Support
H1	Shared vision	Relational interaction capability	0.59	9.57***	Yes
		Ethical interaction capability	0.41	6.00***	
		Individuated interaction capability	0.49	7.50***	
		Empowered interaction capability	0.50	7.75***	
		Developmental interaction capability	0.58	9.45***	
H2	Peer learning	Relational interaction capability	0.25	4.01***	Yes
		Ethical interaction capability	0.36	5.32***	
		Individuated interaction capability	0.32	4.95***	
		Empowered interaction capability	0.32	4.88***	
		Developmental interaction capability	0.25	4.06***	
H3a	Shared academic goals	Shared vision	0.33	4.02***	Yes
H3b	Shared academic goals	Peer learning	0.22	2.53*	Yes
H4a	Commit. to learning	Shared vision	0.32	4.05***	Yes
H4b	Commit. to learning	Peer learning	0.18	2.02*	Yes
H5a	Perf. goal orientation	Shared academic goals	0.18	2.24*	Yes
H5b	Perf. goal orientation	Commitment to learning	-0.06	-.73 n.s.	No
H6a	Motivation to learn	Shared academic goals	0.36	4.56***	Yes
H6b	Motivation to learn	Commitment to learning	0.47	5.93***	Yes

[^] Results are based on bootstrap = 500, 95% confidence level

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; n.s. = not significant