

Teaching Strategies for Developing Students' Leadership and Interaction Skills through
Collaborative Learning in Intercultural Virtual Teams

Lori Curtindale

East Carolina University, USA

Svetlana G. Krylova

Ural State Pedagogical University, Russia

Author Note

Lori M. Curtindale, Department of Psychology, East Carolina University

Svetlana G. Krylova, Institute of Psychology at Ural State Pedagogical University

Correspondence concerning this article should be addressed to Lori M. Curtindale,
Department of Psychology, East Carolina University, Greenville, NC 27858, USA.

Contact: curtindalel@ecu.edu

Abstract

The purpose of this paper is to discuss strategies for increasing the effectiveness of collaborative learning in virtual intercultural teams of students enrolled in the “Global Leadership” course at East Carolina University (ECU, United States) and Ural State Pedagogical University (USPU, Russia). Developing students’ leadership and intercultural skills is one of the learning objectives of the “Global Leadership” course. These skills are elements of “collaboration competency” – one of the key competencies for sustainability (Rieckmann, 2017). For effective development of collaborative competence, it is necessary to take into account socio-psychological factors – small group dynamics and distribution of roles in the team. Teaching strategies were developed on the basis of Tuckman’s (1965) scheme for group development (forming–storming–norming–performing) and Kolb’s (1984) four-stage learning cycle (concrete learning, reflective observation, abstract conceptualization, and active experimentation), taking into account specific learning environments and objectives of the “Global Leadership” course. Practices are described for six teaching strategies: 1) forming teams (based on students' interests); 2) encouraging and supporting interpersonal relationships (for faster passage through the initial stages of team development); 3) providing leadership experience within the team; 4) increasing all team members’ responsibility for group discussions and outcomes; 5) planning teamwork; and 6) reflecting on experiences.

Keywords: intercultural virtual teams, leadership skills, intercultural interaction skills

Teaching Strategies for Developing Students' Leadership and Interaction Skills through
Collaborative Learning in Intercultural Virtual Teams

Introduction

The development of students' knowledge and skills related to the major challenges for humanity remain relevant. The UNESCO report "Education for Sustainable Development: Learning Objectives" (2017) states that educational organizations should use approaches that support the development of so-called "sustainability citizens" who have "certain key competencies that allow them to engage constructively and responsibly with today's world" (Rieckmann, 2017, p.10). Among the key competencies in this report, cognitive competencies aimed at solving problems clearly predominate and include: systems thinking competency, anticipatory competency, critical thinking competency, and integrated problem-solving competency (Rieckmann, 2017).

Because the challenges for humanity are global, productive solutions should include the partnership of people from different cultures. This makes collaboration competency relevant because it covers the abilities necessary for effective work in a group: "the abilities to learn from others; to understand and respect the needs, perspectives and actions of others (empathy); to understand, relate to and be sensitive to others (empathic leadership); to deal with conflicts in a group; and to facilitate collaborative and participatory problem solving" (Rieckmann, 2017, p.10). The description of this competence does not explicitly indicate which groups are involved (culturally homogeneous or culturally diverse). However, the broad nature of this competency allows for application at the local, national and international level (Rieckmann, 2017).

The international level of interaction is most relevant to the present paper because we have collaborated together in teaching the "Global Leadership" course since February 2014. This involves the participation of students from both the United States (East Carolina

University, ECU) and Russia (Ural State Pedagogical University, USPU). The objectives of our course include: 1) the development of social skills for communicating effectively with international partners; 2) to provide opportunities for practice working collaboratively with local classmates as well as their international partners; 3) the development of leadership skills that students can apply in the future for meaningful and sustainable changes in their environment. Leadership skills also correlate with collaboration competency because the leader is one of the team members who uses his or her influence to organize effective collaboration within the group.

Collaboration competence differs from other competencies because special organizational conditions are required for its development. This competence can be developed only in a group which is unlike competencies related to the development of cognitive abilities. This makes the task of developing collaboration competence more complicated for organizational and socio-psychological reasons.

First, the formation of groups consisting of students from different countries requires the resolution of administrative issues by educational institutions. Currently, these issues have been successfully addressed by many educational institutions. The Global Partners in Education organization (GPE) is one of the successful examples of international cooperation between approximately 45 institutions in a globalized educational environment involving the participation of 25 countries (“Global Partners in Education (GPE)”, n.d.). Thanks to the development of information technologies, the task of forming intercultural groups of students from multiple countries has been made possible in the virtual environment. This also allows for an increased number of students and educational organizations worldwide involved in this intercultural partnership. These technologies are also fairly accessible and often already available at many institutions so that they can participate regardless of economic conditions due to limited financial costs to an institution. Secondly, for the successful development of

collaboration competence it is necessary to take into account the socio-psychological aspects of group learning such as: group dynamics (e.g., group conflicts) and the distribution of group roles. These issues can benefit from further development, despite the fact that the group form of learning has been used for several decades in education (Davidson, Major, & Michaelsen, 2014; Springer, Stanne, & Donovan, 1999; UMCLRT, 2016).

Analyzing our experience implementing “Global Leadership” in previous years, we found several points that require change in the process of collaborative interaction between students. To make these changes clearer, we briefly discuss the organization of the classes in “Global Leadership”. Collaborative classes for the “Global Leadership” course are typically held during the Spring semester (February-April) in the US and Russia for approximately 16 class sessions in which students communicated virtually (i.e., videoconference and online chat technologies using IRC). They have met twice per week, usually on Tuesdays and Thursdays. On Tuesdays (whole group link), teachers from ECU or USPU give online lectures to both groups of students on various aspects of leadership. On Thursdays (team link), students collaborate online in small intercultural teams of three to four people: usually 1-2 USPU students and 2-3 ECU students. Each team chooses a global problem (e.g., lack of resources, environmental pollution, restriction of access to education, addictions, etc.) and develops a solution to this problem by applying their leadership skills but also taking the cultural context of each problem into account. The teams then present their projects outlining potential solutions to these problems during the last two virtual meetings.

In general, these projects were successfully presented and even with minor logistical issues, we consider this a productive experience in global leadership for our students in both the US and Russia. In assessing this collaborative experience between students, we also noticed an issue that could limit the achievement of course objectives and the development of relevant competencies. We identified six situations, mainly related to the organization of the

educational process, that we believe require organizational changes. For each situation, we have described the essence of the problem, the objective for improving the situation, and the practical actions that we took in “Global Leadership” during the spring 2018 semester (February-April 2018). These descriptions are grouped into six parts which we labeled “teaching strategies”: 1) forming teams; 2) encouraging and supporting interpersonal relationships; 3) providing leadership experience within the team; 4) increasing all team members’ responsibility for group discussions and outcomes; 5) planning teamwork; and 6) reflecting on experiences. Preliminary results of applying these strategies and the difficulties we encountered are discussed below.

Teaching Strategies

Forming Teams

Problem. In both “Global Leadership” and “Global Understanding”, students from partner universities are divided into small virtual teams (e.g. 2-4 students) to work on a collaborative project. When groups of students are formed randomly, students with different interests in the same classroom may be assigned to the same team. In this case, they need more time and effort to choose a common theme for their collaborative projects. This factor can play a significant role when there is limited time to work on collaborative projects.

Goal. The aim of forming teams was to increase the degree of similarity in students’ interests within the team to facilitate further cooperation.

Practices. Before the first virtual meeting, each student reviewed a list of global problems and chose three (or added his or her own) that he or she considered most relevant (see Google-form “Project topics selection” –<https://goo.gl/forms/tfhxYB8Ais8d5wQA3>). The list of problems was developed based on collaborative project topics chosen by “Global Leadership” students in previous years. Based on the results, students who identified similar problems were placed into teams.

Encouraging and Supporting Interpersonal Relationships

Problem. In the “Global Leadership” course, three to four students are organized into teams for work on collaborate projects. These teams include the main characteristics of small groups: regularity of interaction over time, interdependence (collaborative work on the project), common identity grounded in shared goals, and structure (determined by various functions that students perform in a team when working on a collaborative project) (Jones, 2016). Small groups change with time and these changes are described as "small group development". Tuckman’s (1965) model for the development of small groups is one of the most popular and cited models. This model includes 4 stages: forming–storming–norming–performing. At the initial stage of the group's development (forming), when the members of the group first meet virtually in class, they usually behave politely, trying to make an impression as a “good” team member which is a desire that is quite natural. The members of the group do not criticize each other's proposals because they do not know how their partners will react to criticism. Team members also try to avoid conflicts. However, this approach reduces the productivity of the group because it is impossible to make a good decision without group discussion and constructive criticism. During the initial stage of group development, the focus should be on relationships between team members. To accelerate passage through this stage and help teams become more productive, it is necessary to use tasks that would allow members of the team get to know each other better. These tasks are not necessarily directly related to the team goals but require interaction between group members (Oyster, 2000).

Goal. The aim of encouraging and supporting interpersonal relationships was to provide faster passage through the initial stages of team development due to time limitations for producing the project.

Practices. The plan for encouraging and supporting interpersonal relationships was implemented through four practices.

- 1) We scheduled the first team meeting for acquaintance only.
- 2) We asked students to bring a personal artifact to represent them (i.e. “show and tell” technique) and to discuss it with their partners.
- 3) We incorporated questions to motivate students to talk about themselves and discuss their previous experiences in teams. The questions (a-e) given to students for the first team meeting are listed below.
 - a. In which groups did you have experience working together (educational, hobby, sports ...)?
 - b. Did you have experience working in a group with a diverse composition (by sex, culture, language)?
 - c. Do you prefer working in a group or individually (or does it depend on the specific circumstances)?
 - d. What advantages did you personally get when working in a group?
 - e. What difficulties did you encounter when working in a group?
- 4) We assigned students to write an essay entitled “Our team” based on the results of the team discussion after the first team link class. This task was aimed at motivating students to listen more carefully to their partners in the team.

Sample questions for the essay “Our team”

- a. What kind of teams is your team? (see S&S Chapter 9). Explain why you have chosen this type of team.
- b. What experiences do the members of your team have working in groups?
- c. Think about teams that you have worked on and the respective roles of the team members. Identify roles of team members of a team that you are on now or for a previous team.

- d. Identify your role. Are you the idea generator, the person who maintains harmony, the jokester?
- e. What strengths does your team have that can help you complete a group project?
- f. What challenges do you expect when working in your team?
- g. What cultural differences are you already feeling?

Providing Leadership Experience within Teams

Problem. One of the main goals of the “Global Leadership” course is to develop students' leadership skills. This goal is achieved through the process of students studying modern theories of leadership, developing their own theory of leadership, and planning a project to address the global problems based on their leadership possibilities. Student interaction in intercultural virtual teams is an appropriate situation for students to gain immediate leadership experience. This situation is useful for developing new skills because the mistakes made when learning do not have serious consequences as in real life. Students can try the leadership role in a simple or safe situation and reflect on the difficulties they face performing this role. When planning educational activities to develop students' leadership skills, we relied on the four-stage learning cycle of Kolb (1984): 1) concrete experience, 2) reflective observation of the new experience, 3) abstract conceptualization, and 4) active experimentation.

Goal. The aim of providing leadership experience within teams was to teach students the role of a leader, in accordance with Kolb's (1984) four-stage learning cycle and enable them to gain experience as leaders in small teams.

Practices. The plan for providing leadership experience within teams was implemented through two practices:

- 1) It is difficult for students to acquire concrete leadership experiences in a small team without a clear idea of what needs to be accomplished. Therefore, we developed a description of

the role of the leader to help students through the first stage of the Kolb's (1984) learning cycle (Figure 1). The description is suitable for groups with at least three members but can be used with small adjustments for a group of two people. Once a week, when students worked in teams and one student in each team had the opportunity to perform the role of leader. We assigned students to the role of leader based on the first letter of their last name and alphabetically. Students could refuse to perform the role of leader. In that case, the team would work without a leader during that class. Students who agreed to perform the role of leader received a description of the leader's role (Figure 1) and the plan we developed for that team meeting.

Leader's Role Description:

Today you are the leader of your team. This means that you are responsible for the result of your team's work today. Your task is to organize the effective work of your team. The role of a leader may include the following:

1. To announce the main points of the plan for today's class (see Plan).
2. To ask other members of the team if everything is clear (and to ask from time to time to be sure that everyone understands what is at issue).
3. (optional) To appoint a member of the group who will monitor the time and talk about when to move on to the next item of the plan (this role is Checker).
4. (optional) To assign a member of the group who will record the main ideas of the group came as a result of the discussion of the lecture questions (this role is Writer).
Note: you can choose to *not* assign anyone to these roles, but in this case you should personally perform these functions, because you are responsible for the result.
5. To provide an opportunity for each member of the group to speak out.
6. To make a brief summary after completing each item of the plan.
7. To assign (or select in the process of group discussion) a team member who will briefly present the group's answers to the questions in the next class.
8. After the class, write your impressions of the leader's role (overall assessment of your state, what was successful, what difficulties you encountered) - this information will be required for you when writing an essay analyzing your leadership role.

Figure 1. Description of the leader's role provided to students before virtual team meetings.

- 2) According to the Kolb's (1984) learning cycle, having a concrete experience should be followed by reflection on that experience. We asked the students to describe their leadership experience. Because each student had the opportunity to perform the leader's role in several classes, at the end of the course, we asked students to write the essay "My

Leadership Experience" to reflect on their leadership experience throughout the course (see reflecting on experiences).

Increasing All Team Members' Responsibility for Group Discussions and Outcomes

Problem. The "Global Leadership" course includes weekly lectures aimed at introducing students to the main topics in the study of leadership (i.e., Tuesday classes) as well as weekly class meetings in which students work in small virtual teams (i.e., Thursday classes). Based on our observations from previous years, students do not always use the group's potential for expanding their understanding of the lecture content during subsequent team discussions. They are responsible for producing the collaborative project which is evaluated and graded. However, students may feel less responsibility to discuss lecture material during team discussions, as the discussion is driven only by the individual team characteristics.

Goal. The aim of increasing all team members' responsibility for group discussions and outcomes was to promote active team discussion of leadership issues and increase team members' responsibility for group outcomes.

Practices. Teachers prepared two to five questions based on the content of each lecture for team discussion. These questions were designed to encourage students to analyze their interaction experience and team communication and reflect on the possible application of this experience for their own lives. Students received these questions after each lecture. At the beginning of each lecture, all teams presented answers to questions from the previous lecture.

Planning Teamwork

Problem. Teachers of "Global Leadership" and "Global Understanding" can agree that every year several students face difficulties in completing collaborative projects on time. This conclusion is supported by the results of a survey completed by students enrolled in "Global Leadership" in 2016 (7 USPU students and 14 ECU students) and 2017 (6 USPU students and 15 ECU students). Two survey questions were related to the collaborative project timeline:

“When was work on the collaborative project launched?” The response options included: a. almost immediately after we met; b. about in the middle of the period of our interaction; c. shortly before the date of the presentation of projects. In addition, they were asked: “When was work on the collaborative project completed?” The response options included: a. a few days (or earlier) before the date of project presentations; b. on the eve of the date of the presentation of projects; c. we did not have time to finish the entire project to date of project presentations. Table 1 shows the number and proportion of responses from students who started and completed the collaborative project “at the last minute”. The results indicate that some students have insufficient time management and planning skills when working on the collaborative project so it is necessary for students to develop better planning skills. Some students acquire these skills on their own while others need to be trained in planning their activities.

Table 1
Student Responses to Questions on the Collaborative Project Timeline

Academic Year	“The work on a joint project was <u>launched shortly before the date</u> of the presentation of projects”	“The work on the project was <u>completed on the eve of the date</u> of the presentation of projects”
Spring 2016 (n = 21)	3 (14.29%)	11 (52.38%)
Spring 2017 (n = 21)	6 (28.57%)	11 (52.38%)

Table 1

Goal. The aim of planning teamwork is to help students organize their collaborative work and complete it on time.

Practices. As mentioned previously, for successful completion of the first stage of Kolb's (1984) learning cycle, it is necessary to create a base for acquiring concrete experience. We provided students with a teamwork plan for each class: 1) define a topic for a group project

which all members of the team agree with; 2) make a plan for a teamwork on the collaborative project; and 3) make initial PowerPoint presentation slides.

Reflecting on Experiences

Problem. Reflection on experience is a necessary stage of the learning process (Kolb, 1984). However, students do not always analyze their experience, because the process takes time and effort.

Goal: The aim of reflecting on experiences is to motivate students to reflect on their experience of interpersonal interaction and leadership in the intercultural team.

Practices. The plan for reflecting on experiences was implemented through two practices.

- 1) To facilitate the process of reflection, we included the essays "Our team" and "My leadership experience" in the course plan (see encouraging and supporting interpersonal relationships and providing leadership experience within teams teaching strategies).
- 2) At the end of the semester, students completed a survey to summarize their experiences gained in "Global Leadership". The questionnaire included questions grouped into the following sections: 1) general information about team composition; 2) use of computers as a means of communication (CMC); 3) interaction between team members; 4) satisfaction with work within a team; 5) relationships between group members; and 6) social loafing (the extent of participation in the collaborative project).

Discussion of the Results

In this section, we briefly consider our preliminary results and difficulties encountered when applying the described teaching strategies.

Forming Teams

After students completed the survey on project topics selection, we received a list of three preferences for 12 ECU students and 7 USPU students. We then organized students from

both universities with at least one matching topic into small teams. This was a complicated task but we were able to create six teams. To assess the effectiveness of this strategy, we considered the question: how many teams have chosen the final theme for the collaborative project that coincides with the initial preferences of the team members? The results in Table 2 demonstrate that final topics for five out of six groups coincide with the initial preferences of the team members.

Table 2.

Correspondence between Final Topics of Collaborative Projects and Preliminary Preferences of the Team Members

Team	Preliminary Preferences Coinciding with Final Project Topic	Final Project Topics
1 ($n = 4$)	3 – Cultural competence through education 1 – Problems in public education	Cultural competence through education
2 ($n = 3$)	2 – no overlap with the final topic 1 – replaced another student; did not choose topics	Gender inequality in the workplace
3 ($n = 3$)	2 – Social media and its growing influence 1 – Internet addiction among adolescents	Social media addiction in adolescence
4 ($n = 3$)	2 – Problems in public education	Differences in educational opportunity
5 ($n = 3$)	2 – Substance abuse and mental illness	Substance abuse
6 ($n = 3$)	2 – Problems in public education 1 – Cultural competence through education	Problems in public education

Table 2

Encouraging and Supporting Interpersonal Relationships

The effectiveness of this strategy is related to the general issue of changes in teams over time (i.e., small group development) through the process of collaboration. This is beyond the scope of this paper and will be the subject of future research.

Providing Leadership Experience within the Team

As described in the teaching strategies section, we asked students to be the leader of their team and with the option to agree or refuse to lead their group. Note the cultural differences: proposals by the teacher are considered to be compulsory by Russian students, which is due to the peculiarities of the Russian mentality. Therefore, it is possible that Russian students agreed to perform the role of leader more often than the US students. Additionally, it was required for all students to perform the role of leader at least once to complete the essay “My Leadership Experience” for course credit (See reflecting on experiences).

Increasing All Team Members’ Responsibility for Group Discussions and Outcomes

Before each lecture, teams presented their perspectives on issues from the previous lecture. We expected that only one student (appointed to the role of Speaker) would present. However, almost all members of the team presented their own points of view. We believe that students’ participation is an indicator of their involvement in the teamwork.

Planning Teamwork

A challenge we encountered in applying the strategy of planning teamwork was the significant time invested in developing a plan for each class which involved preparing a list of tasks and formulating team goals. The plan was given to the leader of each team before the virtual team meeting to help him or her organize the teamwork and reach the learning goals on time. An indicator of the effectiveness of this strategy is the change in students’ responses to survey questions about the timeline of their work on the collaborative projects.

During the 2018 semester, none of the students selected the response “The work on a joint project was launched shortly before the date of the presentation of projects” (Figure 2). Instead, 44.44% of students answered “almost immediately after we met” and 55.56% responded “about in the middle of the period of our interaction”. Responses to the question “When was work on the collaborative project completed?” did not confirm the same trend

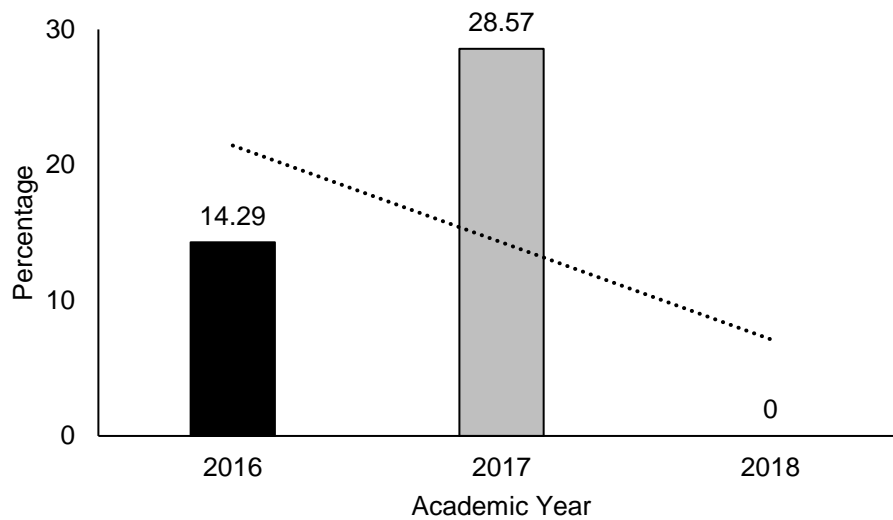


Figure 2. The response rate for “The work on the joint project was launched shortly before the date of the presentation of projects” by academic year.

(Figure 3). This finding requires further investigation into the reasons why students continue to wait until the last minute to finish the project despite our implementation of the planning teamwork strategy.

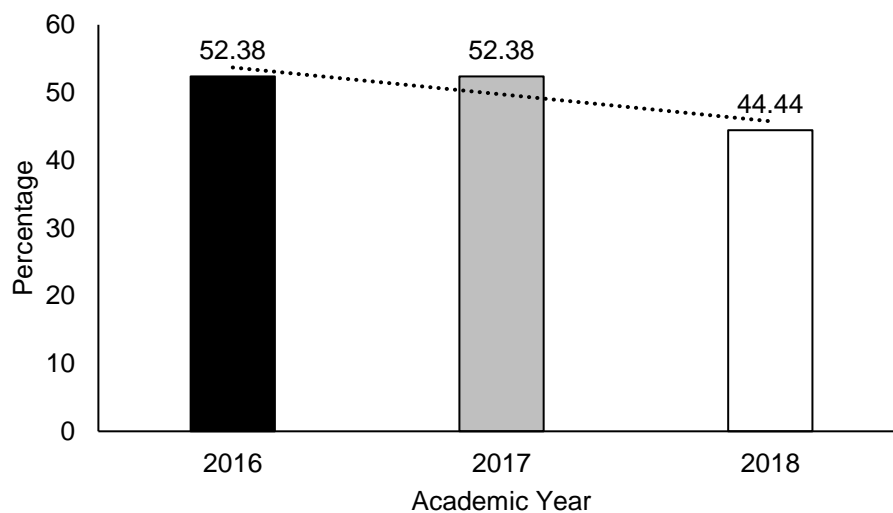


Figure 3. The response rate for “The work on the project was completed on the eve of the date of the presentation of projects” by academic year.

Reflecting on Experience

Students completed reflection essays on “Our Team” and “My Leadership Experience” as discussed above. They also completed a survey summarizing their experiences. Analysis of the content of essays and survey responses is beyond the scope of this paper but will be addressed in the future.

Conclusion

The teaching strategies described in this paper may be of interest to those who organize students’ collaborative virtual learning, including teams with intercultural composition. Our data are preliminary, so we do not have a sample large enough to confirm the effectiveness of these strategies. Additionally, we continue to search for reliable empirical indicators for each strategy and the data describe only two groups of students – American (ECU) and Russian (USPU). Future expansion of "Global Leadership" may result in a more diverse composition of teams. Both "Global Leadership" and "Global Understanding" provide ample opportunities for studying intercultural cooperation in virtual groups.

References

- Davidson, N., Major, C. H., & Michaelsen, L. K. (2014). Small-group learning in higher education—cooperative, collaborative, problem-based, and team-based learning: an introduction by the guest editors. *Journal on Excellence in College Teaching*, 25, 1-6.
- Global Partners in Education (GPE) (n.d.) Retrieved from <http://thegpe.org/>.
- Jones, R. G. (2016). *Communication in the real world: an introduction to communication studies*. Minnesota, US: University of Minnesota Libraries Publishing.
- Kolb, D. A. (1984). *Experiential learning: experience as the source of learning and development*. New Jersey, US: Prentice-Hall.
- Oyster, C. K. (2000). *Groups: a user's guide*. McGraw-Hill.
- Rieckmann, M. (2017). *Education for sustainable development goals: learning objectives*. Paris, France: United Nations Educational, Scientific and Cultural Organization (UNESCO) Publishing. Retrieved from <http://creativecommons.org/licenses/by-sa/3.0/igo/>.
- Springer, L., Stanne, M. E., & Donovan, S. S. (1999). Effects of small-group learning on undergraduates in science, mathematics, engineering, and technology: A meta-analysis. *Review of Educational Research*, 69, 21-51.
- Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin*, 63, 384-399.
- University of Michigan Center for Research on Learning and Teaching (UMCLRT) (2016). *Strategies for developing students' group work skills in the laboratory class*. Retrieved from http://www.crlt.umich.edu/gsis/p7_9.