

UDC 378.147:811

DOI <https://doi.org/10.32840/1992-5786.2021.74-3.39>

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ACHIEVING EFFECTIVE COLLABORATION OF TECHNICAL UNIVERSITY STUDENTS IN ESL CLASS

The article is devoted to investigation of the issues related to achieving effective collaboration and research technical university students' preferences concerning collaboration and working in groups. Effective collaboration in ESL class provides rich learning experience, which meets university students' needs. However, the ways of creating the environment favourable for students' collaboration, are still debatable. Therefore, it is particularly important to research preferences of technical university students concerning collaboration and working in groups.

In our research we distinguish between groups consisted of two students which we call "pairs", and groups of three, four or five students which we call "small groups", while large groups included from six to ten students and in most of cases students formed heterogeneous groups randomly. The results of the research showed that working in groups as the precondition for effective collaboration was chosen by the third of respondents; students' choices were divided between working in pairs (13%) and individually (13%). Therefore, working individually was as important for students as working in pairs. In addition, working in heterogeneous groups was preferable for students because they had more opportunities to talk and get peer help. Observing students in ESL class, we conclude that having choice, they propose working in pairs when they are more confident, but in case of challenging tasks they tend to give preferences to working in small groups, hoping that this work will be more productive. Besides, when students do the task working in a group, they become active listeners, sharing responsibility for decisions taken together and knowing that any of them will have to present the result. Students expressed the necessity to combine different ways of grouping in relation to the type of the task; therefore, 15% of respondents presented some variations of such combinations. Shared responsibility in taking substantive decisions, opportunities make choices, self-assessment, delayed error correction, scaffolding helps technical university students to become active listeners and achieve effective collaboration in ESL class.

Key words: *collaboration, grouping, university students, active listening, participation.*

Problem statement. English for university students, who major in IT, math and physics, is not just one of the subjects, which require getting enough points for examination. Many university graduates who are fluent in English become employers at foreign companies and have better career opportunities. Those undergraduates who apply for such positions have to prove their level of English at job interviews. In addition, university students have such opportunities related to academic mobility as getting double diplomas and taking part in exchange programs. Effective collaboration in ESL class provides rich learning experience, which meets university students' needs. However, the ways of creating the environment favourable for students' collaboration, are still debatable. Therefore, it is particularly important to research preferences of technical university students concerning collaboration and working in groups.

Analysis of recent research and publications. The issues related to collaborative and cooperative learning were central for many researches. They investigated various aspects of managing group work, using cooperative structures [1], implementing

cooperative learning at higher institutions [2], integrating cooperative learning in various settings [3; 4], cooperative learning, collaborative learning, and problem-based learning in comparison [5], exploiting collaborative groups effectively [6' 7].

Collaboration is one of the 21st century key skills, development of which should be encouraged in ESL class. Collaboration in general is defined as "the situation of two or more people working together to create or achieve the same thing" [8]. Collaboration in education may be defined as the process of doing tasks by several students who work together in order to solve a problem. However, students may be noisy and distracted, they may cheat; it may be difficult to assess individual input of each student. To ensure effective collaboration, four dimensions of collaboration should be considered: working in pairs or groups, sharing responsibility, making substantive decisions, and working interdependently [9].

Working in pairs or groups, university students discuss issues related to the topic of the lesson, solve problems working on a case study, creating presentations, which is possible either face-to-face or online. Sharing responsibility for students means

having the sense of ownership and accountability for what they created. Making substantive decisions, students agree about which information to include, how to perform the activity, or what the result of their work will look like. Working interdependently requires equal input of all the students who aim at the success of the whole group. The final product should be not a collection, but a system of individual contributions, which relate to each other [9].

Working in pairs or groups is the very first stage without which collaboration is impossible. There are four main ways of student groupings: whole class, in groups, in pairs and individually. Each of these ways has its advantages and disadvantages. There are some situations when working with the whole class is inevitable, e.g. for presenting information, demonstrating, giving instructions, drilling, etc. This way of grouping also contributes to building the sense of belonging to a team [10, p. 43]. At the same time working with the whole class leads to ignoring individuals, does not encourage taking responsibility, it is not suitable for discussions [10, p. 236]. Each time teachers should consider various reasons peculiar for a certain educational environment and make choices. For instance, grouping depends on the number of students in the English class: large classes are better managed when teaching from the front, while mingling with students is more efficient in case of smaller classes [10, p. 43]. One of the examples may be a situation when it is important to agree on how to stop activity, how each student's input will be assessed, how and when feedback will be provided before getting started working in groups or pairs [10, p. 178].

Forming groups may be random choice or somebody's choice (when either students or teachers form groups). Each option has its drawbacks: students tend to choose their friends, which means that there are the same people within groups, teachers may be subjective, besides, students may question such practices. Therefore, to ensure that students have different groupmates during the class, random choice is preferable. In order to share ideas in groups, students should have time to collect their thoughts, do their own search for information, organise their ideas. Considering this necessity, students should have enough time for individual (solo) work in ESL class. Individual work provides more thinking time for students, they may work at their own pace, reflect on their experience and make their own choices [10, p. 44]. However, this kind of grouping does not help group solidarity and provides more work for teacher who has to assess individual contributions [10, p. 236].

The purpose of the article is to investigate the issues related to achieving effective collaboration of technical university students in ESL class, defining the ways of creating the environment favourable for students' collaboration in particular. We also aim to

research preferences of technical university students concerning collaboration and working in groups.

Material outline. This study was conducted at the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute". Forty-five university students majoring in information technology, mathematics and physics ranged between 18 and 22 completed the questionnaire on voluntary basis. The students who participated in the research, studied in large groups of 18–23, therefore, grouping was a necessity for ESL classes. The students reflected on their experience, answered questions about collaboration and working in groups in ESL class, provided comments to support their answers. The responses in Google Forms compiled data for reviewing and analyzing the results.

It is important to distinguish closely related terms "grouping", "students grouping", "group work" and their meanings used in scientific literature. In some educational settings, the term "student grouping" means forming groups of students for social inclusion and language acquisition besides a mainstream classroom for a certain period of time [11]. Indeed, grouping was a common practice of dividing students into groups according to their abilities and achievements back in the 19th century, allowing teachers to adjust their instruction to high and low-ability students [12]. "Group work" is mainly understood as mixture of cooperative, collaborative and problem based learning [5, p. 30–31]. We use the term "group work" as related to purposeful interactions among several students, and "grouping" as putting several students together to complete the task.

It is notable that there are different approaches to defining the number of students in one group. As a rule, the exact number of students per one group is not prescribed, usually there are recommendations to include from two to four students, sometimes five if required [5, p. 30–31]. In order to apply Kagan cooperative structures, there should be four students in one heterogeneous group (high, low/medium, high/medium, and low levels), as far as students take turns to work with their shoulder and face partners [1]. There are from five to seven students per a study group for a course on "Speech Communications", but for some assignments even more, up to eight or nine [13, p. 204–205]. In our research we distinguish between groups consisted of two students which we call "pairs", and groups of three, four or five students which we call "small groups", while large groups included from six to ten students, and in most of cases students formed groups randomly.

It should be noted that working in pairs or groups is the precondition for other dimensions of collaboration. Students answered questions about collaboration and preferable ways of grouping in ESL class, provided comments to support their answers. Responding to the prompt about a preferable way of grouping,

approximately third of respondents chose groups (34%), 13% opted for working in pairs, and 13% of students chose working individually. According to the responses, for 17% of the total number of participants any way of grouping was suitable. Students had to choose out of three ways of grouping (groups, pairs or individually), yet, they proposed their own combinations: 7% of students chose working in pairs or groups, 4% of students working in pairs or individually, 4% of students working in groups or individually. Altogether, 15% of students preferred various combinations of grouping. Some students mentioned that there were certain activities better to do individually; some activities were more suitable for pairs or groups. In fact, activity is cooperative when students are involved into working together to complete tasks like conducting a discussion, a survey, a role-play, finding information, writing a report [10, p. 43].

The comments of the students, participated in the research, confirm the conclusions of other researches about the main advantage of group work and pair work in large classes, which is an opportunity for each student to participate (student – student/students); it could be practically impossible when teacher interacts with the whole class (teacher – student/students) [10, p. 13]. Another advantage of group work and pair work is greater independence, as students are free to take learning decisions without the pressure of teachers and other students [10, p. 43]. Students may express their own opinion, generate interesting ideas, putting heads together and solve problems more easily [10, p. 236]. At the same time the teacher can focus on those who need more scaffolding [10, p. 44].

The results of our research are also in line with those obtained by a number of other researches about the fact that one more advantage of group work and pair work is peer help, when students support each other, explaining things or sharing ideas. Observing students in ESL class, we conclude that having choice, they propose working in pairs when they are more confident that they know the answers, or the topic is familiar to them. In case of challenging tasks, they tend to give preferences to working in small groups, hoping that this work will be more productive. The research of the impact of student grouping on achievement for English language learners indicated the effectiveness of heterogeneous grouping [11, p. 555]. In situations when tasks may be a bit more challenging for low-ability students, there are some high or medium-ability students, who can provide explanations and suggest answers. However, it is very important to do that in a supportive manner for students not to feel inferior [10, p. 177]. Some students may prefer another grouping; as a result, there may be disruptions [10, p. 236].

In order for group work and pair work be productive, students should develop active listening

skills, which are related to listening for meaning, being patient and non-judgmental [14, p. 4]. There are three main degrees of active listening: repeating, paraphrasing and reflecting. Perceiving, paying attention and remembering are necessary for all of them; active listeners need thinking and reasoning for paraphrasing and reflecting. Repeating the information using the same words and expressions as a speaker marks the initial degree of active listening, namely repeating. Rendering the information using similar words and expression as a speaker relates to a higher degree of active listening, paraphrasing. Rendering the information using other words and sentence structure characterizes the highest stage, reflecting, which is possible only when you understand the true meaning of the spoken message [14, p. 5].

Group work and pair work also allow students to influence the shape of the lessons suggesting their areas besides the subject of the lesson. Being proactive, able to shift the focus of the lesson, students can see the result immediately, which motivates others to take actions as well [15, p. 18]. Considering our experience, we see that each time students have an opportunity to choose the topic; they talk about issues, which influence their lives, like time management, lifestyle, addiction to social networks, coronavirus, etc. Talking about their real life, problems turns students into active listeners, which could be explained by the fact that most of them share the same problems, and somebody else's experience may be helpful for each of them. Besides, when students do the task working in a group, they become more active listeners, because they share responsibility for decisions taken together knowing that any of them will have to present the result.

Another way of motivating students to be more active is to assess not just grammatical accuracy, but initiative as well – score points each time they suggest a new topic to discuss [15, p. 18]. For example, basing 20 percent of the grade on participation in discussion, measuring students' participation not by the amount of time they speak or show what they know. Contributions resulted in processing information presented by others are the most valued: making comments which encourage others to share more information, indicate the most valuable information learnt from others, add new perspectives on the issue, link various contributions made by other participants, suggest new topics to examine, summarize or paraphrase what others mentioned [16, p. 40–41]. In case of online classes, students share their comments via chat in Zoom or Google Meet, a unique opportunity for those who have technical problems and cannot use their microphones. Asking students to assess their performance in terms of accuracy and participation is also effective, but students should

be aware of the rubrics before the lesson starts. In our research, students positively accepted the necessity of assessing their own work in class and in addition to the points, provided explanations like “I have maximum points for today’s class, because I completed my home assignment, was active in discussion and participated in a role-play”.

One of the potential problems related to group work is that mistakes are not corrected during the activities. At the same time, making mistakes is inevitable part of the learning process, and the solution is providing more opportunities for grammar practice and real communication [17, p. 137]. Delayed error correction after students present the results of group work may solve this problem as far as teacher’s monitoring includes taking notes of mistakes students make while doing an activity. Besides, common conversation starters, chunks to use in order to solve misunderstanding, conduct negotiations, provide scaffolding for those students who lack confidence and need additional support [17, p. 137]. The language which students need when they think critically, e.g. to express critical judgements, disagreement, present arguments, other functional phrases which may vary across subject areas, should be constantly revisited [17, p. 139]. The chunks of the language are easier to use and even shy or low-level students participate in group work more actively.

Conclusions. Investigation of the issues related to achieving effective collaboration and researching technical university students’ preferences concerning collaboration and working in groups showed that working groups as the precondition for effective collaboration was chosen by the third of respondents; students’ choices were divided between working in pairs (13%) and individually (13%). Therefore, working individually was as important for students as working in pairs. In addition, working in heterogeneous groups was preferable for students because they had more opportunities to talk and get peer help. Observing students in ESL class, we conclude that having choice, they propose working in pairs when they are more confident, but in case of challenging tasks they tend to give preferences to working in small groups, hoping that this work will be more productive. Besides, when students do the task working in a group they become active listeners, sharing responsibility for decisions taken together and knowing that any of them will have to present the result. Students expressed the necessity to combine different ways of grouping in relation to the type of the task; therefore, 15% of respondents presented some variations of such combinations. Shared responsibility in taking substantive decisions, opportunities to make choices, self-assessment, delayed error correction, scaffolding helps technical university students to become active listeners and achieve effective collaboration in ESL class.

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Чугай О. Ю., Коваленко О. О. Досягнення ефективної співпраці студентів технічних університетів на заняттях з англійської мови

Стаття присвячена дослідженню питань, пов'язаних із досягненням ефективної співпраці, та дослідженню уподобань студентів технічних університетів щодо співпраці та роботи в групах. Ефективна співпраця на занятті з англійської мови професійного спрямування забезпечує багатий досвід навчання, який відповідає потребам студентів університетів. Однак шляхи створення середовища, сприятливого для співпраці студентів, усе ще залишаються дискусійними. Тому особливо важливо дослідити переваги студентів технічних університетів щодо співпраці та роботи в групах.

У нашому дослідженні ми розрізняємо групи, що складаються з двох студентів, які ми називаємо «парами», та групи з трьох, чотирьох чи п'яти студентів, які ми називаємо «малі групи», тоді як великі групи включають від шести до десяти студентів. Здебільшого студенти формували неоднорідні групи за принципом випадковості. Результати дослідження показали, що роботу у групах як передумову ефективної співпраці було вибрано третьою респондентів; вибір студентів розподілявся між роботою в парах (13%) та індивідуально (13%). Отже, індивідуальна робота була для студентів такою ж важливою, як і робота в парах. Крім того, робота в неоднорідних групах була кращою для студентів, оскільки вони мали більше можливостей висловитись та отримати допомогу інших. Спостерігаючи за студентами під час занять, ми дійшли висновку, що, маючи вибір, вони пропонують працювати в парах, коли вони більш впевнені у собі, але у разі складних завдань вони, як правило, надають перевагу роботі в малих групах, сподіваючись, що ця робота буде більш продуктивною. Крім того, коли студенти виконують завдання, працюючи в групі, вони стають активними слухачами, розділяючи відповідальність за прийняті спільні рішення і знаючи, що хтось із них повинен буде представляти результат спільної роботи. Студенти висловили необхідність поєднувати різні способи групування відповідно до типу завдання, таким чином, 15% респондентів представили деякі варіанти таких комбінацій. Спільна відповідальність за прийняття суттєвих рішень, можливості для студентів робити вибір, самооцінювання, аналіз помилок після виконання завдання, використання мовних кліше допомагає студентам технічних університетів стати активними слухачами та досягти ефективної співпраці на заняттях з англійської мови.

Ключові слова: співпраця, групування, студенти університету, активне слухання, участь.