

# First Generation Learners' Experience of Collaborative Learning

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**Abstract**—Entering the higher education environment is problematic for most students, but even more so for first-generation learners who have more challenges to face. Due to changes in student characteristics and the need to accommodate a more diverse student body, conventional teaching methods have lost its favour. The primary objective of this study was to identify first-generation learners' perceptions of collaborative learning. A descriptive survey design was used and data were collected through questionnaires following a quantitative approach. Data were collected from 220 Hospitality Financial Management students registered at the Tshwane University of Technology. Descriptive data analysis was conducted. Most of the first-generation students had a positive attitude towards the collaborative learning exercise and perceived it to have contributed to their learning experience. They expressed a preference to work in a group. While the first-generation students had difficulty with the interaction aspects of the collaborative exercises, this could be attributed to the diversity of the group. Higher education institutions should establish ways to enrich the experience and increase success rate of first generation students.

**Index Terms**—first-generation learners, collaborative learning, higher education

## I. INTRODUCTION

The global tertiary environment has changed considerably over the last decade due to student populations becoming more diverse. Success and pass rates are under constant scrutiny at universities, as many universities receive a subsidy from government based on their pass rates.

Poor pass rates influence the subsidy of universities negatively therefore the pressure to increase pass rates is immense. This issue becomes even more complex once the challenges of first-generation learners are added to the mix. The number of first-generation learners on university campuses is on the increase [1]-[3] and their situation presents unique conditions and obstacles [4].

Access to higher education in Africa is not without barriers. People from disadvantaged social backgrounds in most African countries face a range of obstacles. In South Africa these obstacles include inadequate preparation in subjects such as mathematics and science, as well as a language competency that implies an inability

to understand the language of instruction at Higher Education institutions [5].

Conventional teaching has become less popular [6] as the younger generation seeks flexibility with regard to new experiences. They expect to move from project to project with a sense of urgency, which means that they care only about today with no concern for the future [7]. Due to the change in student characteristics it has become imperative to investigate different teaching techniques to determine which methods will ensure quality education. The higher education environment is seen as a crucial provider of human capital that has more generic competencies with the capability to solve problems, good interpersonal skills and the ability to communicate effectively. Due to high global competitiveness, business employers are putting more emphasis on generic student competencies during recruitment compared to specific knowledge in their chosen field. In the long term it is envisaged that candidates with generic student competencies will be more productive [8].

## II. LITERATURE REVIEW

### A. First-generation Students

First-generation students are defined either as students whose parents have no education after high school [9] or as students of parents who have not graduated from a tertiary institution [3], [10]. Kim [11] adds that these students are the first in their families to attend college. First-generation students are often termed as non-traditional students, minority students, low-income students or English second-language students [12].

Students, in general, find tertiary education difficult and struggle to adjust to the new environment when they embark on university education. First-generation learners may have additional disadvantages [3], such as low-income status [1], [13]-[15] serious financial problems [16]-[18], non-existent parental curricular involvement [15], inadequate preparation for higher education [10], [14] and limited support from families [19]. First-generation students are more likely to have to work to pay their tuition fees [3], [10], [15], [20] and are more likely to experience personal and family-related stress [15] that could lead to traumatic stress and even depression [3], [19].

First-generation students tend to be less engaged in educationally purposeful activities, have fewer

experiences on college campuses and attain lower levels of learning [11]. As they tend to have lower levels of a sense of belonging and satisfaction [3] they often need counselling to ensure academic functioning and adjustment to student life [21]. These students are less likely to complete a bachelor's degree [15], [18] or they take longer to complete the qualification [17]. While they often experience feelings of guilt for surpassing their family and friends, this could further influence their adjustment to university life [22].

Keeping the above factors in mind, it is easy to form the perception that these students should be 'found' and 'rescued'. However these students take action to ensure that their needs are met by Higher Education institutions if they are not attuned to their needs. All first-generation students should not be seen as previously disadvantaged. Higher education institutions should rather identify the vulnerable students and provide them with additional support to enable them to fit into the existing system [12].

### *B. Collaborative Learning*

Evidence suggests that students working in small groups outperform their counterparts in areas such as knowledge development, thinking skills, social skills and course satisfaction. Small-group learning could take the form of collaborative learning, co-operative learning, problem-based learning, team-based learning, peer instruction and peer tutoring [23].

Collaborative learning occurs when students work together in groups [23]. Collaborative learning can also be defined as "an instruction method in which students at various performance levels work together in small groups toward a common goal" with students learning from one another through interaction [24]. In collaborative learning students have to interact with learning tools and other students to express and conceptualise their viewpoints [25], exchange ideas, share perspectives and utilise previous experience to decide on the best solution to a problem [26]. Theorists such as Vygotski [27], [28] Kelly [29] and Polanyi [30] had inputs into collaborative learning. Collaborative learning was already employed at school level in the 1970s by Britton [31] and Barnes and Todd [32].

Traditionally higher education has been associated with discipline-specific knowledge [33] which can no longer be the main focus. Generic student competencies refer to college student qualities and capabilities involving complex cognitive processes such as analytical reasoning, critical thinking, problem-solving and effective communication skills [8]. In-class learning experiences have a significant influence on developing generic student competencies and student achievement [8]. Active learning, in-class interaction and in-class student-lecturer interaction develop students' communication skills [34], [35], higher-order thinking [34], learning skills, leadership, problem-solving [36] and teamwork [35].

The peer climate of co-operative learning enhances problem-solving skills as well as communication and interpersonal skills [37]. Co-operative learning among peers can be an alternative to lecturer-student interaction,

especially at universities where students are not willing to have meaningful out-of class interaction with lecturers [8].

## III. RESEARCH METHODOLOGY

### *A. Research Design*

For this study a descriptive survey design that followed a quantitative approach was used. An existing questionnaire, developed and tested by Capdeferro and Romero [38], was used to collect data. The first section of the questionnaire contained demographic information. The second section, which was adapted from the standardised questionnaire of Capdeferro and Romero [38], consisted of 6 questions relating to students' experience of collaborative learning. A 5-point Likert scale was used to score in this section. Attitude was determined in the third section using a 5-point Likert scale, with options ranging from strongly disagree to strongly agree. Nine questions on the Task were asked in Section 4; 4 questions on interaction in section 5; 3 on the process in section 6; 2 on the results in section 7; and 2 questions on frustration in section 8. This paper reports only on the results of the Attitude and Interaction sections. The questionnaire was self-administered. It was uploaded on survey-monkey with a link being emailed to participants. Students, who voluntarily completed it, submitted it anonymously by clicking the submit link. The advantages of this method are a quick response period and sufficient time for the participant to consider the answers [39]. The questionnaire tried to establish students' perceptions of the collaborative learning intervention exercise they had participated in. The population comprised Tshwane University of Technology (TUT) students who had registered for Hospitality Financial Management 1 in 2016. The purpose of the study was to determine the quality of the experience by Hospitality Financial Management 1 students who participated in collaborative learning classes. All the students that met the requirements were included in the study (n=220). A total of 207 completed questionnaires were returned.

Data were entered on Microsoft Excel and exported to SPSS. Descriptive data-analysis techniques were employed to analyse the results. Ethically correct behaviour was adhered to with all participants being treated with respect and dignity as well as courtesy, and their privacy was respected. Participation was voluntary. Confidentiality, privacy and anonymity of respondents were ensured through coding and the use of survey-monkey to collect data. The project received ethical clearance from the Central Ethics Committee of TUT.

## IV. RESULTS

Students' perceptions of their attitude during collaborative learning activities is presented in Table I

It is clear from the results in Table I that most students had a positive perception of the collaborative exercises. Most of the students (47.9%) either strongly disagreed (18.4%) or disagreed (29.5%) that they preferred to do class activities alone. The students were less divided

when they had to indicate whether they preferred doing homework activities alone. Students were positive about the extent to which group activities made an important contribution to their learning experience. Thirty-eight per cent agreed and 31.9% strongly agreed that it enhanced their learning experience. More students agreed (30.4%) and strongly agreed (34.3%) that they learned more when working in a group compared to those who disagreed (11.6%) and strongly disagreed (7.2%).

TABLE I. STUDENTS' PERCEPTIONS OF THEIR ATTITUDE DURING COLLABORATIVE LEARNING ACTIVITIES

Description		Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I prefer to do class activities alone.	n	38	61	37	30	24
	%	18.4	29.5	17.9	14.5	11.6
I prefer to do homework activities alone.	n	27	60	29	43	31
	%	13	29	14	20.8	15
I prefer to do all learning/studying activities alone.	n	31	67	30	37	24
	%	15	32.4	14.5	17.9	11.6
The activities carried out in the group made an important contribution to my learning experience.	n	11	10	24	79	66
	%	5.3	4.8	11.6	38.2	31.9
I learn more when working in a group than when I work alone.	n	15	24	17	63	71
	%	7.2	11.6	8.2	30.4	34.3

The results on students' perceptions of interaction during collaborative learning is presented in Table II.

TABLE II. STUDENTS' PERCEPTIONS REGARDING INTERACTION DURING COLLABORATIVE LEARNING

Description		Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Not everyone in my group knew how to communicate ideas and opinions clearly.	n	8	29	38	81	31
	%	3.9	14	18.4	39.1	15.0
It bothers me when group members do not respond to my communication.	n	6	14	14	88	65
	%	2.9	6.8	6.8	42.5	31.4
It is hard to maintain smooth and continual contact with members of my group.	n	16	50	34	65	22
	%	7.7	24.2	16.4	31.4	10.6
The language used in electronic communications leads to misunderstandings.	n	31	77	31	31	16
	%	15	37.2	15	15	7.7

Most students either agreed (39%) or strongly agreed (15%) that not everyone in their group knew how to communicate ideas and opinions clearly. It bothered most students (42.5% and 31.4%) when group members did not respond to their communication. Most students either agreed (31.4%) or strongly agreed (10.6%) that it was hard to maintain smooth and continual contact with members of their group. The language used in electronic communications did not seem to present a problem to most students.

#### A. Discussion of Results

The results showed that most of the students had a positive perception of the collaborative exercises which were mainly group activities. The literature shows that first-generation learners prefer to participate in learning communities [3], [40]. During the collaborative exercises constant mentoring was done by the lecturer as well as by a student assistant. Payne [41] documents that first-generation learners benefit from constant mentoring while Owens *et al.* [42] report that active engagement with role models improves first-generation learning. Diverse teaching methods such as those used during this collaborative learning process assists learners in developing self-efficacy and self-perception [19] as well as improving learning [42].

Students did not experience interaction as positively as their attitude reveals. Most students had difficulty with communication and making contact. These could be attributed to the diversity of the students in the group activities of the collaborative learning exercises. Students from different language and cultural backgrounds have difficulty understanding and communicating with one another. According to Mdepa and Tshiwula [5] a diverse student body is one in which a number of different cultures are represented and students from any of the 11 different South African official languages are included. It is crucial to gain an understanding of how to harness student diversity in terms of access, participation and social cohesion.

#### V. CONCLUSION AND RECOMMENDATIONS

Lecturers at universities should try to gain a better understanding of the barriers and problems faced by first-generation students. This will improve retention of first-generation students, achieve higher graduation rates as well as ensuring the development and preparation of well-equipped students who have the skills required by industry. This is especially true for South African higher education institutions where access to higher education for a diverse student population should be facilitated. Universities should engage with first-generation learners to determine ways not only to support these students, but also to determine the best teaching methods and practices to assist students from diverse backgrounds. Creative approaches such as participation in collaborative learning should be used to motivate first-generation students who should be mentored. This will ensure that graduates have the necessary generic competency skills which will improve their employability.

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