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STUDENTS' EXPERIENCE OF COLLABORATIVE LEARNING METHODS EMPLOYED IN HOSPITALITY FINANCIAL MANAGEMENT 1

Abstract:

As conventional teaching methods can no longer be used as the sole instruction approach in higher education, student-centred teaching methods should be employed. The primary objective of this study was to identify students' experience of collaborative learning methods applied in Hospitality Financial Management 1. A descriptive study using an existing questionnaire was used to collect data from 220 Tshwane University of Technology students. The questionnaire was distributed electronically using survey-monkey. Descriptive data-analysis techniques were used. In general, students expressed satisfaction with the collaborative learning experience as well as with the teaching aids employed. Most students disagreed that their group marks were lower than those they would have attained on their own. Equal numbers of respondents experienced either satisfaction or frustration during the collaborative learning experience.

Keywords:

student experience, collaborative learning, frustration, satisfaction

JEL Classification: I23

1 Introduction

Education has changed globally over the past decade therefore it is imperative to investigate which teaching methods promote quality education. Large classes represent an obstacle in conveying the message efficiently and ensuring that significant learning takes place. Conventional lecturing has become increasingly ineffectual because it is not suited to the rapid transfer and complicated nature of information. The complex and required profundity and advanced knowledge that the student is expected to master cannot be achieved through conventional teaching methods (Machemer & Crawford, 2007). Education received from teachers should equip students with the ability to cope with challenges and problems in the work environment. Effective instructional approaches are linked to student achievement (Loes et al., 2017). It is no longer sufficient for teachers to possess subject-matter knowledge only. Pedagogical-content knowledge and skills are just as important in the accomplishment of their subject's goals (Yilnaz, 2011). Research that focuses on learning in group settings is on the increase (Zhu, 2012). This is characterised by active learning techniques which urge the students to reflect on, evaluate, analyse, synthesise and communicate the information presented (Machemer & Crawford, 2007). Through student-centred learning, relevant skills such as co-operation, problem-solving and critical thinking are acquired (Taraman et al., 2017).

A pedagogical approach applying the socio-cultural philosophy that assists students to establish a shared perspective (convergence of knowledge), is known as collaborative learning (John-Steiner & Mahn, 1996). Collaborative learning can 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 collaboration (Westbrook, 2012). In collaborative learning students have to interact with learning tools and other students to express and conceptualise their viewpoints (John-Steiner & Mahn, 1996), exchange ideas, share perspectives and use previous experience to decide on the best solution to a problem (Dewiyanti et al., 2007). Discussion with group members is a form of "thinking out loud". When students speak they realise what they understand and what they are not sure about. Independent "thinking out loud" and discussions with peers develop reflective thinking skills of students (John-Steiner & Mahn, 1996). Collaborative learning refers to the synergy of the individual members within a group using discussion and joint knowledge construction (Moreno, Ovalle & Vicari, 2012)

Collaborative learning is deemed very important at all levels of learning (Zheng et al., 2014). During collaborative learning students interact with various information sources including electronic resources. Students have ample opportunity when studying with their peers to extend their knowledge, identify connections between facts and conduct self-directed knowledge collection and learning (Zhu, 2012). The goal of collaborative learning is to switch the classroom authority from the lecturer to the students. Students take

collective responsibility for their learning (Bruffee, 1995). In research conducted by Almajed et al. (2016) first-year students report that their collaborative learning group provides social and academic support. Collaborative learning has a positive impact on student achievement and student perceptions of both themselves (self-esteem) (Springer, Stanne & Donovan, 1999) and their relationship with others (Johnson, Johnson & Smith, 1998). Learning at introductory levels in first-year courses can be enhanced by applying collaborative learning as a method of instruction (Curran, Carlson & Celotta, 2013). According to Voogt and Roblin (2012) employing collaborative learning leads to the development of lifelong learners in the 21st century. In collaborative learning a community is created in which both teachers and students are participants in the learning process, working towards a common goal.

For the learning community to function properly the teacher has to be aware of and make provision for certain problems students identified and experienced in previous sessions during their participation in collaborative learning. Students reported on inappropriate student behaviour, heterogeneity in approach to learning, different motivational levels, a variety of aims, dominant personalities, deferring control of individual learning to group and personality clashes in groups (Almajed et al., 2016). The attitude of students towards the subject and their peers has been found to have a correlation with students' performance in the subject (Curran, Carlson & Celotta, 2013).

According to Vygotski's socio-cultural learning philosophy, the first phase of learning is a social process. This implies that learning takes place through interaction among individuals (interpersonal). The second phase takes place inside the learner where information is integrated into the individual's cognition (intrapersonal) (John-Steiner & Mahn, 1996). Another important concept in the socio-cultural learning philosophy is known as the zone of proximal development (ZPD) (John-Steiner & Mahn, 1996).

ZPD is the gap that exists between what a student is able to do independently and what a student is able to do in collaboration with peers. There are three phases in this transitional process starting from what a student can do independently to what a student can do in collaboration with peers. The phases occur in the student's ZPD (Shabani, 2016). During phase one, interpersonal interaction takes place among individuals with different levels of knowledge and expertise. During phase two the intrapersonal activities come into play. The student transforms and internalises the acquired knowledge and expertise. In phase three the student displays the ability to think and act independently using the acquired knowledge and expertise. Teachers and educators that implement the principles of socio-cultural learning play an important role in assisting students to arrive at a shared perspective (convergence of knowledge) through interaction with peers (Zheng et al., 2014).

The theory of behavioural economics could explain students' reluctance to change. People have a bias towards the current state of affairs that currently exists that goes

beyond reluctance to incur search costs. People often fail to make changes when the benefits of doing so exceed the costs. Prospect theory hypothesizes that people evaluate whether to make a change, using their current reference point. People will put more emphasis on losses than on gains. Therefore, when a person thinks about changing the current state of affairs he is likely to evaluate the loss resulting from the change to be greater than the gain (Hanoch, Barnes & Rice, 2017.

Pass rates and success rates are under constant scrutiny at universities as universities are financed partly by a government subsidy. Success rates are part of the equation according to which the subsidy is calculated. Poor pass rates negatively influence the subsidy of universities, therefore pass rates should be consistently high. Various requirements such as selection of students based on previous grades as well as motivation and induction programmes to facilitate social and academic integration have been implemented at universities to try to ensure high progression rates and low dropout rates (Torenbeek, Jansen & Suhre, 2013). Severiens, Meeuwisee and Born (2015) pose the important issue of how to retain as many students as possible while supporting them in such a way that they graduate within the prescribed period. Using collaborative learning techniques could improve the quality of student learning and ultimately, performance. One of the subjects in the first-year programme is Financial Management. This subject has a low pass rate for a number of reasons. Students who study the National Diploma in Hospitality Management often have inadequate mathematical ability. Financial management is the only subject that requires mathematical calculations in the Hospitality course. Many students have not done any Financial Management or related subjects at school level. In the past formal lecturing was the method used to teach this subject. It was decided to implement collaborative learning to determine if student performance will not improve

The teaching methods that were put into practice to expose the Financial Management 1 students to collaborative learning were carefully planned to achieve the learning outcomes and satisfy assessment criteria. The lecturer used a lesson plan to structure the teaching activities followed during contact sessions. Each lesson plan comprises the following phases: Introduction, Core and summary, Consolidation, Check learning, Feedback and Self-directed learning.

Typical activities present in the introduction phase were an imaginary line activity, quizzes, name games, tall stories, doing activities while blindfolded and positive bombardment. Reasons for these activities include getting students acquainted with group members, breaking the ice and sustaining a positive attitude and confidence for the remainder of the contact session. The core session during which students were exposed to new learning material included some of the following activities: Debating; Discussion; Writing flash card; Drawing posters, Writing memos and reports, Observing demonstrations, Determining equations to use for calculations, Solving problems,

developing management interventions and undertaking field trips. During the consolidation phase groups were given the opportunity to comment on work presented by other groups. In addition, group leaders presented reports and answered questions; students asked for clarification of questions on model answers and groups formulated questions or problems for the teacher to answer (role reversal). Students solved problems individually and presented these to the group for assessment, built jigsaw puzzles and participated in specialist group activities. During the check-learning phase some of the activities implemented were: Talking, listening and learning; elevated speech; comparing model answers to group answers to problems; and reporting aha (realization) moments. Students explained to group members what they had learnt in their own words and posted notes in categories. Student feedback included 10-finger feedback, recall of learning, recording own definitions in learning diary, analyzing the errors that the group had made during earlier phases; an answer garden and one-minute summaries. In self-directed learning the students were asked to complete exercises in their workbooks to do group tasks and assignments as well as to update their learning diaries.

2 METHODOLOGY

A descriptive study using quantitative research methodology was chosen for this research study. The biggest advantage of using a quantitative approach is that primary data can be collected from large numbers of participants in a short period of time (Cohen, Manion & Morrison, 2002). When a study is aimed at providing insight into what participants feel about an experience, what it means to them or what their perceptions are of the experience, a descriptive study is deemed most suitable (Coldwell & Herbst, 2004).

An existing questionnaire developed and tested by Capdeferro and Romero (2012) was used to collect the data. The first section of the questionnaire contained demographic information. The second section, which was adapted from the standardized questionnaire of Capdeferro and Romero (2012), consisted of 6 questions relating to students' experience of collaborative learning. A 5-point Likert scale was used in this section. Attitude was determined in the third section using a 5-point Likert scale, 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 sections dealing with students' experience, results and frustration.

The questionnaire was administered using a self-completion method. 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 (Brace, 2010). The questionnaire tried to establish students' perception of the

collaborative learning intervention they had participated in. The biographical section sought information on the sex and age of the participants. The participants were required to indicate how many hours they spent the study of the subject.

The population comprised Tshwane University of Technology (TUT) students that were registered for Hospitality Financial Management 1 in 2016. The purpose of the study was to determine the type of experience of Hospitality Financial Management 1 students who participated in collaborative learning classes. This purpose clearly defines the target group. A census was used as all the students that met the requirements were included in the study (n=220). A total of 207 completed questionnaires were returned...

A pilot study was conducted to identify weaknesses in the design of the questionnaire. Subjects for the pilot study were drawn from the accessible population (Cooper & Schindler, 2003). The sample size for the pilot study was 15. After having adapted the questionnaire and finalized the distribution process, the questionnaire was distributed electronically using survey-monkey.

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 respected. Participation was voluntary. Confidentiality, privacy and anonymity of respondents were ensured by the use of coding and survey-monkey to collect data. The project received ethical clearance from the Central Ethics Committee of TUT.

3 RESULTS

At 62.8% women were in the majority when compared to males at 36.7%. The highest percentage (62.8%) of participants were in the age category 20-24, with 29.08% being from 16 - 19, which could be expected as all the participants were registered for a first-year subject. Most of the students (45.4%) spent between 1 and 2 hours per week on study for Financial Management 1. A large percentage (21.3%) spent between 3-5 hours and 19.8% between 6-10 hours weekly. It is a concern that almost half of the respondents spent between 1 and 2 hours per week studying for a subject which is experienced as being difficult by most students. This could be one of the reasons for the high failure rate in this subject. It is generally accepted that time spent by students on study will lead to improved academic achievement (Plant et al., 2005; Torenbeek, Jansen & Hofman, 2010; Dolton, Marcenaro & Navarro, 2001; George et al., 2008). Guillaume and Khachikian (2011) and Torenbeek, Jansen and Suhre (2013) did not establish a positive correlation between time spent on study and grades achieved. It should be kept in mind that good grades are also dependent on aptitude (Carrol, 1963).

It could also be that students overestimated the time spent on study. They might have listened to music while studying or been distracted by phones and social media activities.

Table 1: Likelihood of recommending collaborative learning and positive attitude towards the subject

Description	Highly unlikely	Unlikely	Unsure	Likely	Highly likely
How likely is it that you will recommend participation in collaborative learning to a friend?	3 1.4%	9 4.3%	30 14.5%	92 44.4%	59 28.5%
How likely is that your participation in the collaborative learning experience has created a positive attitude towards the subject you are studying?	1 0.5%	11 5.3%	25 12.1%	93 44.9%	63 30.4%

The highest percentage (44.4) of respondents indicate that they are likely to recommend participation in collaborative learning to a friend. Of respondents, 28.5% are highly likely to recommend it to a friend. This indicates that the students perceive collaborative learning activities as positive and worthwhile. Students will only recommend collaborative learning if they have a positive experience. A positive attitude towards an activity should improve class attendance which in turn could improve student performance at the end as documented by various researchers such as Plant et al (2005) and Dolton, Marcenaro and Navarro (2001). In the classroom teachers are able to communicate their enthusiasm for the course and content to the students face to face (Schmidt et al., 2009).

The participation in the collaborative learning experience is either likely (44.9%) or highly likely (30.4%) to create a positive attitude towards the subject Financial Management 1. In theory collaborative learning strategies are effective methods to teach undergraduate science, technology, engineering and mathematics education (Curra, Carlson & Celotta, 2013). Financial Management 1 is a compulsory subject in all three years for National Diploma students or in four years for students studying towards a B-Tech degree. Many of these students have never done any Financial Management or related subjects at school level, while a large number have poor mathematical ability. In addition to a lack of academic readiness for post-school mathematics is a math-related phobia, a negative attitude towards the content as well as a lack of interest in the subject (Gal, Ginsburg & Schau, 1997). Owing to these reasons first-year students often have a negative

perception towards the subject. It would be encouraging if students could adopt a more positive attitude towards Financial Management 1. There is agreement that attitude towards a specific subject correlates with course performance (Finney & Schraw, 2003) therefore it is imperative that first year students cultivate a positive attitude towards this subject.

Table 2: Satisfaction with learning experience and teaching aids

Description	Dissatisfied	Unsure	Satisfied	Highly satisfied
How satisfied are you with the collaborative learning experience you were exposed to?	15 7.2%	27 13%	107 51.7%	43 20.8%
How satisfied are you with the resources/ teaching aids made available to you during the collaborative experience?	6 2.9%	17 8.2%	112 54.1%	58 28%

In general, students expressed satisfaction on the collaborative learning experience, as well as on the teaching aids. Of 207 respondents, 51.7% were satisfied and 20.8% highly satisfied with the collaborative learning experience. Similar responses of 54.1% (satisfied) and 28% (highly satisfied) were evident in response to the question of satisfaction with the resources and teaching aids. Student satisfaction is often taken into account when determining whether a course is successful. Kitchen and McDougall (1998) report that students are satisfied with their collaborative learning experience. Jung et al. (2002) report that students are more satisfied with collaborative learning when compared to task-oriented interaction with their teacher.

Table 3: Performance and frustration during the collaborative learning sessions.

Description	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
In general, collaborative group marks were lower than those I would have obtained on my own.	29 14.0%	65 31.4%	36 17.4%	39 18.8%	17 8.2%
I experienced frustration during my collaborative learning experience.	11 5.3%	65 31.4%	34 16.4%	53 25.6%	22 10.6%
The frustration I experienced as a result of participating in a collaborative group had a negative impact on my performance.	42 20.3%	64 30.9%	21 10.1%	42 20.3%	16 7.7%
I was eager to participate in the collaborative learning experience.	11 5.3%	23 11.1%	41 19.8%	92 44.4%	23 11.1%

Table 3 indicated that students either strongly disagreed (14%) or disagreed (31.4%) that their group marks were lower than those they would have obtained on their own. Quite a substantial percentage of students (17.4%) were undecided as to whether their group marks were lower than their individual marks would have been. Increased marks as a result of collaborative learning are reported by various researchers such as Curran, Carlson and Celotta (2013), Ghani (2009), Perkins and Saris (2001) and Barkley, Cross and Majro (2005). Higher marks can be the result of higher-order thinking skills, increased comprehension, retention and transferability of learning (Machemer & Crawford (2007), as well as improvement in students' attitude (Tsao, 2006). Collaborative learning is of particular benefit to students who might have been identified as at-risk students (Curran, Carlson & Celotta, 2013). Students who participated in the collaborative learning experience perceived the course and discipline as less difficult compared to those students who had not participated (Tsao, 2006; Curran, Carlson & Celotta, 2013).

Responses were more equally distributed when levels of frustration were measured. Of respondents 36.7% disagreed and strongly disagreed that they experienced frustration during the collaborative learning experience with 36.2% agreeing and strongly agreeing that they experienced frustration during the collaborative experience. Frustration that can be defined as a negative emotion aroused upon encountering an obstacle in the achievement of a task (Mandler, 1975) and is related to goal attainment (Lazar et al., 2004). It is a common phenomenon that students experience high levels of frustration during collaborative learning (Capdeferro & Romero, 2012; Do & Schallert, 2004). Challenges in collaborative learning can be attributed to poor motivation which can

include misunderstanding the topic, difficulty in communication with peers, disagreement among members and withdrawal of group members (Liu, Joy & Griffith, 2010; Capdeferro & Romero, 2012). The absence of individual accountability is another challenge which can include "not contributing much and a lack of time" (Liu, Joy & Griffith, 2010). A third challenge can be negative interdependence of group members which can be ascribed to poor group management, imbalance in commitment to the task and inequalities in students' abilities (Capdeferro & Romero, 2012). Students can also become frustrated due to imbalance of commitment to the task and the common learning goals (Muuro et al., 2014).

Although a large number of students experienced frustration during the collaborative experience, most of the students (51.2%) did not think that it had had a negative impact on their performance. Most students (55.5%) were eager to participate in the collaborative experience regardless of the level of frustration that they had experienced in the process. Only 16.4% of students were not eager to participate in the collaborative experience.

4 CONCLUSION AND RECOMMENDATIONS

The current study examined the experience of students in Financial Management 1 of collaborative learning. From the results it is clear that students had a positive perception of collaborative learning. The student-centred learning method was experienced by most students as a meaningful learning experience. The performance of the students who took part in the collaborative activities were better than those students who had not participated in previous years.

Shifting classroom activity from the teacher to the student implies that the student's level of responsibility for learning is increased. Traditional teaching methods during which lecturers try to cover as much information as possible during one session is not the optimal teaching method for all course material. Small group activities compel students to take part in discussions and problem-solving. A learning environment in which students experience a feeling of success when they master a certain task, could make them feel more motivated, more willing to study and improve their self-confidence and worth. Academic achievement and positive student attitude are equally important in the student learning process.

Because students' attitude has been found to correlate with course performance, educators need to be concerned about the attitude with which each student enters the classroom, the expected trajectory of this attitude and how ultimately to minimise the impact of a negative attitude. If students are willing to engage with the class and course material on a personal and individual level, this could improve their attitude, their

expectations of their own competence and consequently their levels of achievement and performance.

Incorporation of a collaborative learning method should not be an isolated activity in one subject. It should be employed in other subjects and in other years to cement the learning that took place in first-year. All learning should not necessarily take place in a group environment.

First-year students should be orientated on what is expected of them during the tertiary study period. During this orientation their previous levels of knowledge and experience should be determined to try to pitch the new information at a level accessible to most students. They should be introduced to the new learning environment which has proved to be effective in achieving academic success. Orientation is also the ideal time to motivate students to acquire self–discipline and to take responsibility for their own learning and success.

Teaching can never be limited to one approach such as collaborative learning, but should constantly be varied to keep students motivated and interested. Collaborative learning will not solve all the problems in Financial Management 1, but it was been proved to have a positive impact on the learning of students. Teachers should be cognisant of different teaching methods and make an effort to understand and identify relevant teaching techniques.

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