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A Randomized Trial on Investigating the Effectiveness of Pay-It-Forward Teaching as One Type of Voluntary Teaching, Assigned as a Complementary Project in an Upper-Intermediate Class, on Students' Language Proficiency and Their Attitudes Toward Voluntary Teaching

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Abstract In English teaching area, there has always been a debate on how to equip L2 English learners with adequate language skills to involve in fruitful discourse through English. Service-learning has been under exploration as a way to associate language use *in-the-wild* and in the classroom. Nevertheless, more investigation was needed to determine how to incorporate service-learning in the curriculum. One form of service-learning is *voluntary teaching*. The rationale for the present randomized trial is to investigate the effectiveness of a pay-it-forward teaching as one type of voluntary teaching, assigned as a complementary project in an upper-intermediate class, on students' language proficiency and their attitudes towards voluntary teaching. The total number of 73 participants took part in this study, including 38 people (30 females and 8 males) in the intervention group and 33 (23 females and 12 males) in the control group. Nonetheless, two participants in the control group did not complete their second language test. The outcomes of various assessment tools employed by this study indicated that the pay-it-forward teaching project could have positive impact on participants' language proficiency, confidence, and self-esteem while communicating in English outside the classroom.

Keywords Learning In-situ, Voluntary teaching, Pay-it-forward teaching, Online realm, Attitude towards learning, English proficiency

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1. Introduction

Service-Learning – Can It Be a Pedagogical Task to Be Included in the Curriculum or Not?

Nowadays, most Iranians of various ages are learning English at a fast pace. This is occurring mostly due to English being the international language and the pop culture of the world. In addition, given the abrupt advancement of technology in the current era and the fact that everyone can easily access cutting-edge technological devices, including cell-phones, tablets, and lap-tops, increasing number of students are willing to learn English as a lingua franca to be able to use technological devices more efficiently. Hence, L2 English learners have a variety of avenues to pick to learn and consolidate their command of English.

However, a remarkable number of L2 English learners are unable to use their language knowledge in communication (Zarrabi and Brown, 2015). It appears that the classroom tasks do not suffice to provide a real-life simulation to implement their English in practice. Service-learning is a term that was proposed in the late 1900s, when Maryland schools (1988 - 1989) included community service as perquisites for passing academic courses.

Yet, a definition of service-learning as transferring content knowledge to someone was not favorable for a number of researchers (e.g. Sigmon, 1979) as they called it *a utopian*

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vision and found it impractical. Nonetheless, the argument about whether to incorporate service-learning in pedagogy remained under debate.

The research reported in this article is my attempt to begin to address service-learning, from earlier times until the time it was initially incorporated into pedagogy. The aim of the present study is to explore the effects on English language proficiency and learning satisfaction among upper intermediate adult learners of English in Iran. The following chapter describes the structure of my study and the steps I took to pursue my general aim.

2. Literature Review

Introduction

The review of literature first focuses on the argument between language use 'in-the-wild' and in the classroom. Moreover, service-learning as a recommended way to contextualize language use with the purpose of accelerating and facilitating language learning will be scrutinized. And finally, more recent modifications of service-learning; for example, Task-Based Language Learning, will be studied to make connections between former research and the present study.

The Connection Between Classroom-Based Language Learning and Language Use "in-the-wild"

The theory of Conversation Analytic Research on Second Language Acquisition (CA-SLA) asserts that language learning intrinsically involves active, occasioned, and embodied participation in social activities (see Gardner and Wagner, 2004; Eskildsen and Wagner, 2013, 2015).

Lilja and Piirainen-Marsh (2019) is a recent study conducted on the teachers, in collaboration with the researchers, designing out-of-classroom activities for students. These activities involved participating in service encounters in a local network of businesses as a project. Over the course of the project, students video recorded their conversations and shared their experiences in the classroom afterwards.

The benefit of this study was that students did not merely focus on the linguistic aspect of the tasks, but rather on the way that it was used in an interactional context and raised learner autonomy since the main data for the study are derived from students' self-assessment of their own experiences.

It would also benefit the validity of the findings if the researchers incorporated quantitative data by employing some language tests prior to and post-intervention. Moreover, the context was specific to the business realm, and students were even preparing for the interactions before accomplishing the project, which could have caused students' interactions in-the-wild to be more like pre-prepared interactions rather than on the spot. But the present study, the focal point is to contribute to *learning in sit*u, according to which, learning is a process whereby people make sense to knowledge by putting their knowledge into practice (Waite and Pratt, 2015).

Rashid and Asghar (2016) is another study that strived to investigate the relationship between the technology usage of students as a way to enhance self-directed learning (SDL) and their attitudes towards learning and their academic performance. The sample was quite large, comprising of 761 female undergraduate students. Most of the participants were moderately using technology ($M = 5.72$, $SD = 1.58$).

A Questionnaire consisting of separate sections regarding the media and technology usage scale (MTUAS, Rosen et al., 2013), self-directed learning (SRSSDL, William, 2007), as well as Utrecht's work engagement scale (UWES-S, Schaufeli et al., 2006) was employed. The results illustrated that technology use was positively correlated with self-direction, students' engagement, and their sense of achievement ($p < 0.01$). Therefore, Rashid and Asghar (2016) concluded that certain types of technology use (for example, email or useful contexts in social media) can be helpful for students' academic achievement.

As for the present research project, technology use is of high importance as the classes are all virtual due to the Corona virus pandemic, which coincided with the time scale for the research, and email and learning management system (LMS) are the mediums that are mostly being used by all students, and according to Rashid and Asghar (2016), is a proper approach to keep track of students' work and make sure they are adequately engaged with the intervention over the semesters.

Service-Learning in Online Realm

A number of studies acknowledged that service-learning and the online classroom can be mutually beneficial; for example, Waldner et al. (2010) asserted that over the last decade, students are increasingly pursuing their education online. They defined e-service-learning (electronic service-learning) as "the instructional component, the service component, or both are conducted online" (p 3). However, service-eLearning has also been characterized as "an integrative pedagogy that engages learners through technology in civic inquiry, service, reflection and action" (Dailey-Hebert et al. 2008, p 1). The majority of studies that have been conducted in this area investigated one of the characterizations of service-learning, e-service-learning, or service-eLearning.

The current study seeks to explore a type of service-learning which is a mix of all three definitions; it is conducted in an online instructional context, and yet through a service component that students could accomplish either online or in-person depending on which approach they find more convenient for themselves. Below, other approaches to explore service-learning in various educational systems will be explored, which made it possible to design and employ different classroom tasks with relevance to community services.

The Appearance of Service-Learning through *Task-Based Language Learning* (TBLT) and *Community Service-Learning* (CSL) in Education

According to Harmer (2001), Task-Based Language Learning (TBLT) was popularized by Prabhu (1987) while working in Bangalore, India. Prabhu (1987) placed emphasis on assigning tasks that have clearly-defined non-linguistic outcomes. Nevertheless, there would still be a debate on whether such tasks can help to develop students' language proficiency. With regards to attitudes towards service-learning, some recent studies affirmed that sense of achievement and motivation are highly correlated (e.g. Han and Lu, 2018).

Han and Lu (2018) focused on the influence of achievement motivation and goal setting on learners' strategy use in language learning. The researchers built on Lee et al.'s (1989) *goal setting theory*, that is, a goal is seen as the *engine* to fire the action and also functions as a direction that learners can act upon and achieve success. The sample consisted of 230 third-year university students, 83 males and 110 females, and were all from non-English majors.

Three questionnaires were used, including Achievement Motivation Scale (AMS) of Gjesme and Nygaard (1994), a self-made goal-setting scale, and Oxford's (1990) Strategy Inventory for Language Learning (SILL). Also, a Chinese version of AMS was employed to refer specifically to an English learning context.

The results illustrated that achievement motivation was highly correlated with communication strategies, including social, affective, cognitive, and metacognitive strategies.

Drawing upon these findings, the present study also provides an intervention which will require students to apply a number of the aforementioned learning strategies. Yet, the current research seeks to explore the effects of the intervention on students' attitudes towards voluntary works to become active members of society, not merely their motivation for self-development.

3. Methodology

Introduction

In this chapter, I state the aims and objectives of the study, articulate the research questions addressed, and outline the methodology used to explore them. Finally, I outline ethical considerations about the operation of the research.

Aim

The overall aim of this study is to investigate the impact of pay-it-forward teaching as one type of voluntary teaching on students':

- English proficiency
- self-satisfaction as a result of learning success
- motivation for English learning, and future plans for contributing to community-building works, e.g. through voluntary teaching

Research Questions

This project adopted a parallel group randomized trial design to address the following questions:

RQ1: Does pay-it-forward teaching as a form of voluntary teaching affect students' English proficiency?

RQ2: Does helping another person with language learning affect students' attitudes towards voluntary projects, like cooperating with global NGOs' skill-based projects from home?

RQ3: What are students' more in-depth self-perceptions of the impact of pay-it-forward teaching on their language proficiency and attitudes towards voluntary works through English?

Hypotheses

The Null Hypothesis (HO)

Providing the intervention to participants makes no difference in their English language proficiency and attitudes towards voluntary teaching.

Alternative Hypotheses: Hypothesis 1(H1) & Hypothesis 2 (H2):

H1: The intervention is associated with changes in participants' English language proficiency.

H2: The intervention has mediating effects on students' attitudes towards voluntary teaching.

Research Design

Research methods are specific procedures for collecting and analyzing data. For this study, I have incorporated data in the form of words and numbers, i.e., both quantitative and qualitative data, to address the research questions. Accordingly, overall language tests on all units of Touchstone 4 book were provided for students on the platform of https://lms.safirmazandaran.com/. Also, I have made use of questionnaires pre- and post-intervention to assess of students' attitudes towards voluntary teaching, and focus groups to delve into students' progress in the pay-it-forward teaching project as one type of voluntary teaching. Students were asked to complete the pre-intervention questionnaire and the first language test at the beginning of the semester. Towards the end of the semester, students had to accomplish the post-intervention questionnaire and the second language test on the same platform.

To address RQ1 and RQ2, this project adopted a parallel group randomized trial design, with a 1:1 allocation ratio at the level of the individual participant. A randomized control trial (RCT) is a form of scientific experiment to assess whether a cause and effect relationship exists between an intervention and an outcome (Sibbald and Roland, 1998) and is used to evaluate the relative effects of alternative social and educational interventions (Mosteller and Boruch, 2002). Also, Hutchison and Styles (2010) declared that according to the National Foundation for Educational Research (NFER), a randomized trial "should be considered as the first choice to establish whether an intervention works" (p 7). Furthermore,

the Cabinet Office Behavioral Insights Team asserted this method to be the best way to investigate whether a policy is working or not (Haynes et al., 2012).

In the context of my study, an RCT can achieve sufficient control over the confounding factors (e.g. age and gender) to deliver a useful comparison of the intervention under investigation. Random allocation to comparison groups ensures that any differences in average characteristics between the groups at baseline are chance differences and not systematic differences. That is, comparison groups are unbiased approximations of each other. As for the present study, the participants are different with respect to age and gender factors. Plus, the number of female and male participants varies to a great extent (details on participants will be provided in the next section). Furthermore, individual differences may result in some participants accomplishing the intervention diligently while others carrying it out less attentively. These differences can influence the study outcomes. But random allocation results in groups with similar characteristics and enables *statistical control* over these influences, and as acknowledged by Torgerson and Torgerson (2008) "is the best approach to dealing with and controlling for selection bias, regression to the mean and temporal changes" (p 22).

Furthermore, to address RQ3, I used a focus group design. Focus groups can contribute to the already known knowledge around a specific area and can be used as a stand-alone method or as part of a mixed methods study, that is, a study including both qualitative and quantitative methods (Doody et al., 2013a; Then, 2000). In the context of my study, it is beneficial as it allows direct, intensive contact with individuals to provide more in-depth data, which enriches the quantitative data of the study (Dilorio et al., 1994; Kingry et al., 1990; Then, 2000). Furthermore, focus groups welcome diversity of opinions (Byers and Wilcox, 1988) and exchange of perceptions that may challenge individual's former opinions and encourage them to come to new understandings (Hillerbrandt, 1979; Krueger, 1994).

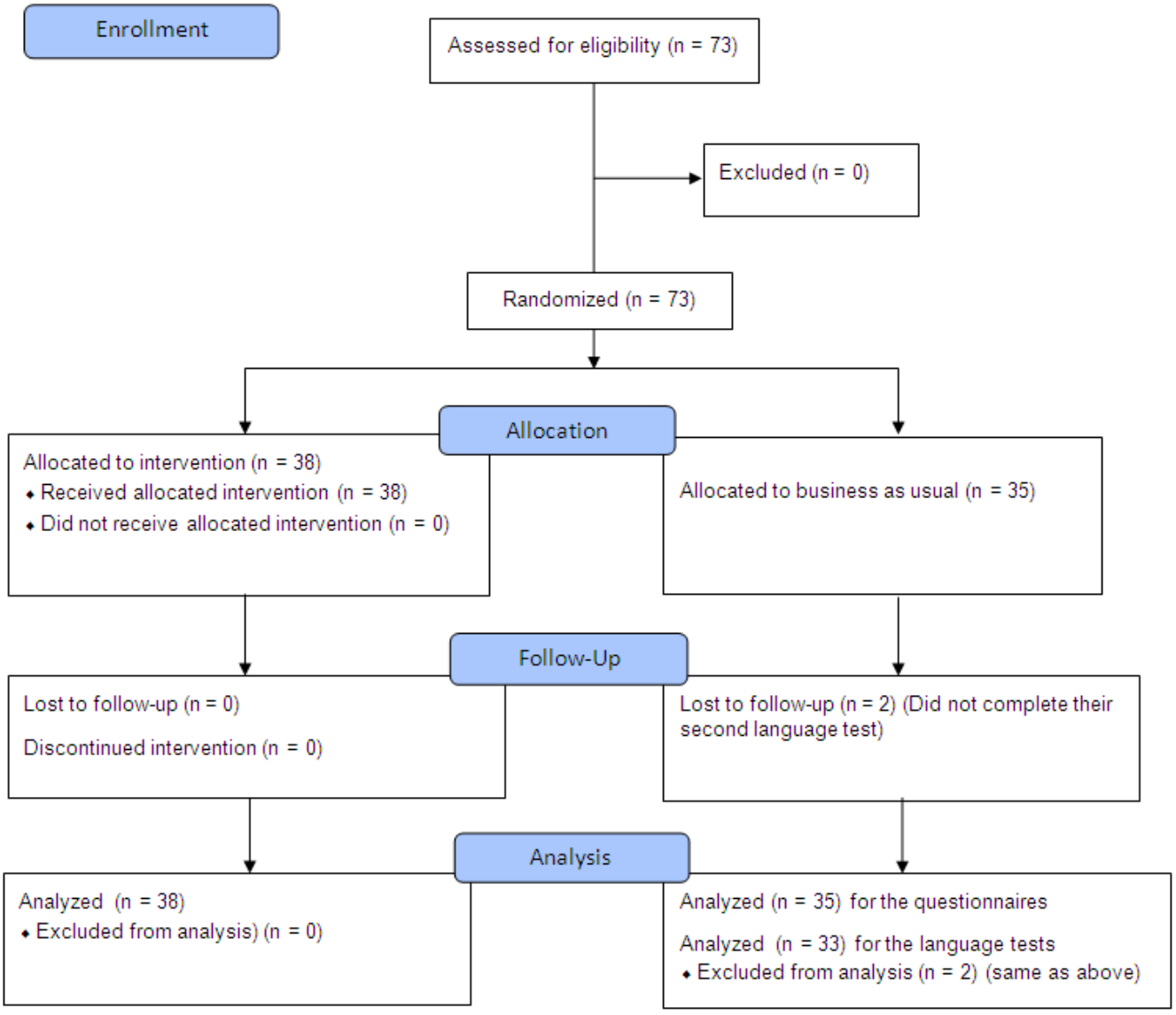

Figure 3.1. CONSORT 2010 Flow Diagram

Each semester, up to 5 people took part in the focus groups. Participants were requested to stay for 10 to 15 minutes after the class, and answer a few questions pertaining to the project they fulfilled throughout the term. Participants were recorded during focus groups – as they were informed in the consent form (See Appendix 5 for a number of transcriptions). Moreover, significant quotes from the transcriptions of focus groups, encompassing key words in favor or against the intervention, are incorporated into the discussion section of this paper.

Research Setting

This research was conducted in Iran, with Iranian students of English, whose first language is Farsi, and are learning English as a second language in Safir English Language Academy. Safir English Language Academy was founded in Tehran on May 9th, 1999. With 106 branches nationwide, it is one of the largest language institutes in Iran. Also, Safir's web-based enterprise resource planning (ERP) system provides users with a unified platform for registering at any branch, reserving placement tests, checking exam scores, reading educational material online, etc. (see https://gosafir.com/en/). Students of various levels of English proficiency attend this language academy.

Given the outbreak of the Corona virus pandemic in 2020, the language academy has established a learning management system (LMS), which assists online classes being held in Adobe Connect application—a suite of software for remote training, web conferencing, presentation, and desktop sharing. All classes under observation for this research were selected among online classes to control all conditions except for the pay-it-forward teaching project.

Participants

This study was conducted through 5 consecutive semesters, each lasted for almost 4 weeks. Every semester, data were collected from three or four Touchstone 4 classes. A cohort of four Touchstone 4 classes, each consisted of between 5 and 13 students, was selected through collaboration with the administrator of Safir English Language Academy. Below you can find the CONSORT Flow diagram (Schulz et al., 2010) of the progress through the phases of a parallel randomized trial of two groups.

Randomization

The project took place over five four-week semesters at the language school. At the start of each semester, people who had enrolled in the course were randomly allocated to comparison groups using the list randomizer at https://www.random.org/lists/. The names of all enrolled students were entered into the list randomizer, which then presented them in a randomly generated order. I took the top half of the list and assigned these participants to the pay-it-forward teaching group, and assigned the bottom half to business-as-usual group. Allocation was not concealed. I repeated this process for each new cohort of students at the start of each new semester.

Over the course of semesters, participants in both groups attended the same online classes, in which I taught the units of Touchstone 4 book. As the only difference between groups was the take home task (i.e. the contents of the taught classes was intended to be identical for both groups), so the potential for confounding based on classroom conditions or teacher effects were accounted for.

The Interventions

The Pay-It-Forward Teaching Group

Participants in the pay-it-forward teaching group were asked to choose a person from their family or friends, whose English proficiency was at the same level or lower than theirs to be the recipient of the pay-it-forward teaching. At the end of every third taught session, the participant was asked to re-teach the focuses of those lessons, this time taking the role of teacher, at home with their nominated family member or friend taking the role of the student. To elaborate more on this, students were using LMS online platform (as formerly explained) for their online classes in which I uploaded the teaching materials, including the teaching PowerPoint slides, relevant videos, etc. after each session. Students were free to use the teaching materials, the course book, or any other teaching aids, to do their project over the semester. Each semester consisted of 15 sessions. Consequently, students in the pay-it-forward teaching group got involved with service-learning 5 times during the semester.

The Business-as-Usual Group

The business-as-usual group did exactly the same lessons with me in class. However, instead of pay-it-forward teaching, they were asked to write an essay or record a speech regarding the topics assigned to them using the target language. Two units of Touchstone 4 were taught each semester. Therefore, participants in the business-as-usual group were assigned two projects, one for each unit.

Assessment

The results of the language tests were assessed via IBM SPSS. The Mean scores of both the intervention and the control group pre- and post-intervention were compared. Also, students' responses to the pre- and post-intervention questionnaires were analyzed through bar charts to demonstrate any changes in the results and compare the extent of improvement or disimprovement between the two groups.

Focus Groups

Focus groups were conducted in students' L1 (i.e. Farsi) and were recorded and transcribed. Then the key points which indicated some changes in students' attitudes towards voluntary teaching were highlighted and translated into English to be reported as quotes or summaries in the study. The data collected from the focus groups contributed to the findings of pre- and post-intervention questionnaires.

Ethical Considerations

Prior to implementing the research, a CUREC for had

been completed and submitted to the Departmental Research Ethics Committee (DREC) in accordance with the procedures laid down by the University for ethical approval of all research involving human participants. On the basis of the information provided to DREC, the proposed research was judged as meeting appropriate ethical standards, and accordingly, approval was granted. See Appendix 8 for the related ethics documents.

4. Results

Introduction

In this chapter, I will present the results of the English language tests, pre- and post-intervention questionnaires, focus groups, and follow-up email correspondences.

Descriptive Statistics

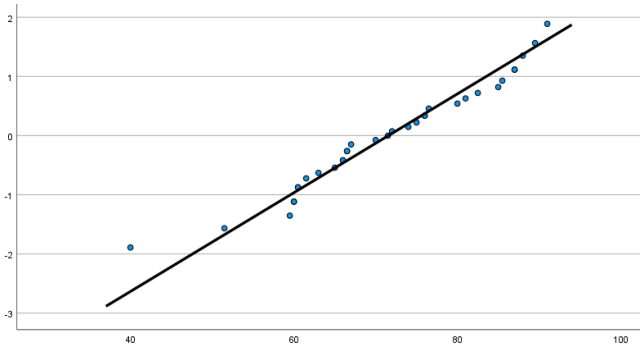

Figure 4.1. Normal Distribution of the Pay-It-Forward Teaching Group's Prior-Intervention Language Test Scores

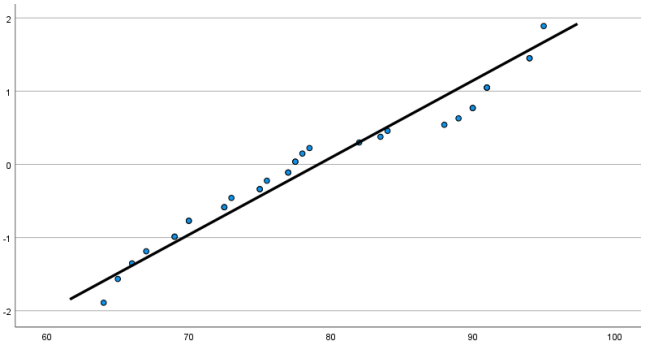

Figure 4.2. Normal Distribution of the Pay-It-Forward Teaching Group's Post-Intervention Language Test Scores

The total number of participants was 73. They were aged between 18 and 36. There were 53 women and 20 men. Table 4.1 presents the breakdown of these characteristics by intervention group and the mean scores on the pre-intervention English test.

Given the RCT design of the study, participants were tested for normal distribution in terms of their test scores, using IBM SPSS. Two participants in the business-as-usual group were lost to follow up and did not complete the post-test. These participants' data were excluded from the analyses. For this reason, normal distribution of the pre- and post-intervention test scores were measured for 71 participants. Figures 4.1 – 4.4 indicate that the data from test scores were normally distributed as the points on the normal Q-Q plots fell approximately on the straight diagonal lines for both groups prior- and post-intervention.

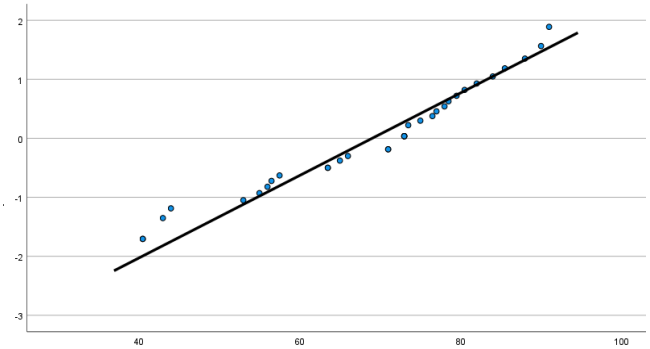

Figure 4.3. Normal Distribution of the Business-as-Usual Group's Prior-Intervention Language Test Scores

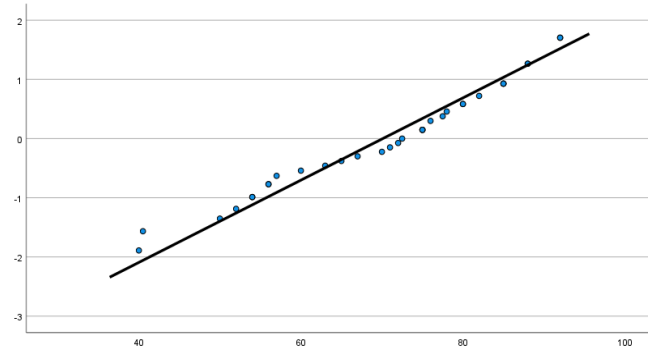

Figure 4.4. Normal Distribution of the Business-as-Usual Group's Post-Intervention Language Test Scores

Independent *T*-Test Results

The findings in this section contribute to answering research question 1 regarding the effects of pay-it-forward teaching project on students' language proficiency. The data satisfied assumptions of having two independent samples, normally distributed data and the two samples having comparable variance (Field, 2009).

The outcome measure compared was the average difference between pre- and post-intervention tests for each group, i.e. the extent of change in their English proficiency before and after participating in the project. An independent *t*-test was performed. According to the results, the 38 participants who received the intervention (M = 7.210, SD = 8.633) compared to the 33 participants in the control group (M = .030, SD = 9.850) demonstrated statistically significantly better improvement in their English proficiency (p = 0.002), see Table 4.1 and Figure 4.5.

From these data, we can conclude that pay-it-forward teaching is highly statistically significantly more likely to result in better development in English language proficiency compared to usual practice.

Table 4.1. Descriptive and Comparative Statistics of the *T*-Test Results of the Pay-It-Forward Teaching and Business-as-Usual Groups' Test Scores Pre- and Post-Intervention

	Number of Women	Number of Men	Mean Age	Mean Scores	Mean Scores Post-Intervention	Difference Between the Pre- and Post-Test Scores	*P*-value
Pay-It-Forward Teaching	30	8	M = 24.15 SD = 5.51	M = 71.07 SD = 12.41	M = 78.28 SD = 9.36	M = 7.21 SD = 8.63	0.002
Business-as-Usual	23	12	M = 25.78 SD = 5.73	M = 68.94 SD = 14.16	M = 68.97 SD = 14.39	M = 0.03 SD = 9.85	

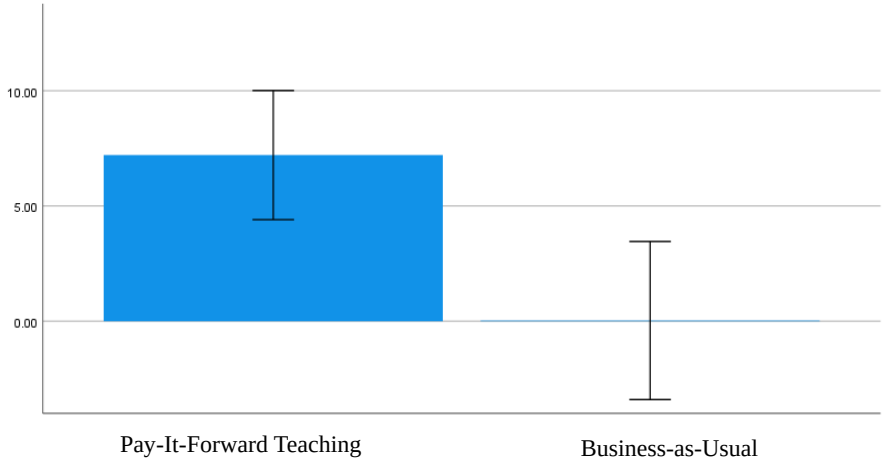

Figure 4.5. The Comparison of the Difference in the Scores of the Pre- and Post-Intervention Language Tests Between the Two Groups

Report and Analysis of the Pre-Intervention and the Post-Intervention Questionnaires' Results

The results presented in this section address Research Question 2 regarding the impact of the intervention on students' attitudes towards voluntary teaching. The questionnaires provided at the beginning and the end of semesters included 10 statements to which participants had to respond based on a 5-point Likert-scale. The summary of responses for both groups are provided in Figures 4.6 to 4.9.

Below is the key for questionnaire. The details regarding students' responses to each question will be discussed in the following sections.

Key for Questionnaires:

1. I have a clear understanding of what it means to learn.
2. Real life practice can help to improve my English proficiency.
3. Explaining the grammar and vocabulary to someone else can help me check my learning.
4. I am good at explaining things to my family or friends.
5. I am also good at explaining things to someone I do not know well; for example, my classmate.
6. I would like to teach English to someone in need as a voluntary job.
7. Explaining a topic we study in English class to another person can help me improve my language skills, like speaking and writing.
8. Learning English enables us to start communicating with people in other countries.
9. I would volunteer to join global NGOs for online teaching to help children, teenager, or adults who cannot afford English classes.
10. I would like to contribute to international NGOs through communicating with people in need in English as a social worker.

Table 4.2. Descriptive statistics of the *T*-Test Results for the Changes in Mean Scores of Pre- and Post-Intervention Questionnaires Within and Between the Two Groups

	Mean Scores Pre- and Post-Intervention			
	Pre-Intervention	Post-Intervention	Difference in Mean Scores	*P*-value
Pay-It-Forward Teaching	0.870 (SD = 0.482)	1.341 (SD = 0.270)	0.472 (SD = 0.294)	< 0.001
Business-as-Usual	1.011 (SD = 0.553)	0.871 (SD = 0.397)	-0.141 (SD = 0.311)	0.186

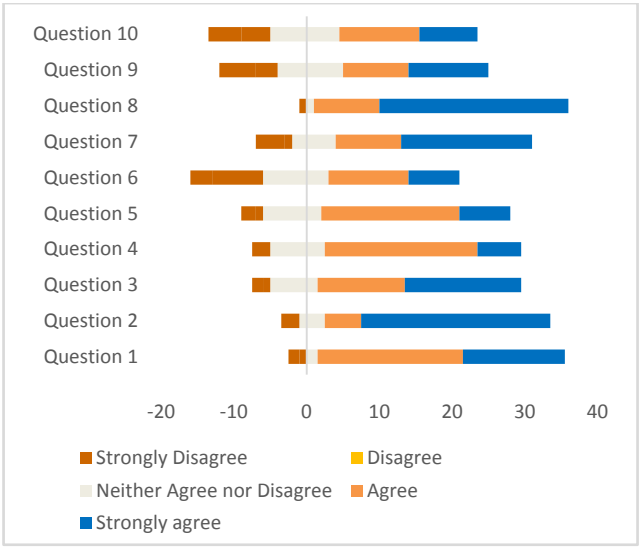

Figure 4.6. Pay-It-Forward Teaching Group's Attitudes Towards Voluntary Teaching: Before the Intervention

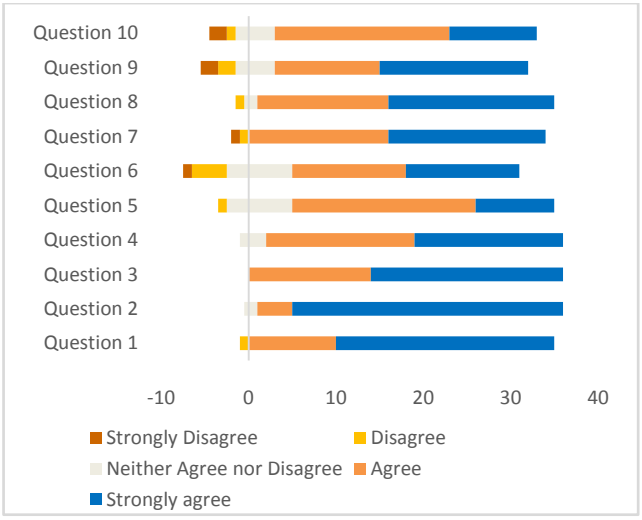

Figure 4.7. Pay-It-Forward Teaching Group's Attitudes Towards Voluntary Teaching: After the Intervention

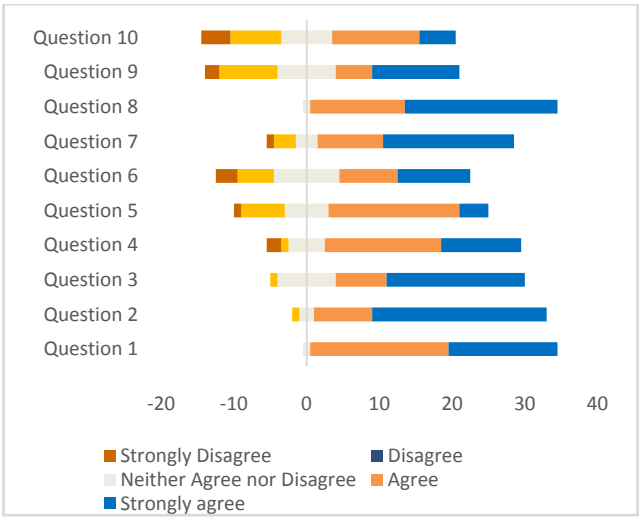

Figure 4.8. Business-as-Usual Group's Attitudes Towards Voluntary Teaching: Before the Intervention

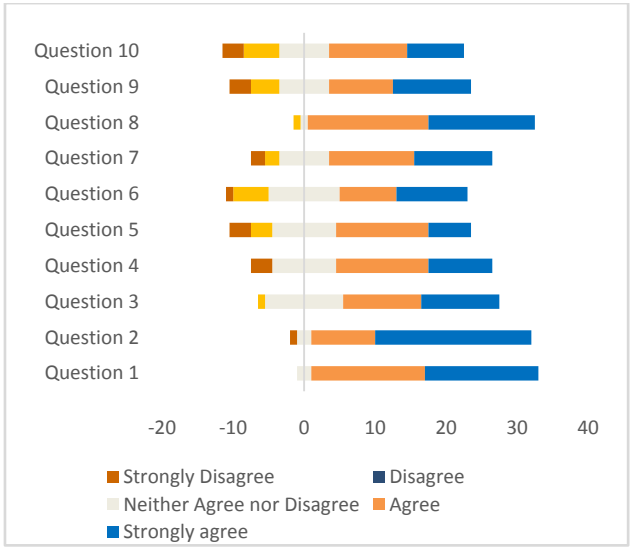

Figure 4.9. Business-as-Usual Group's Attitudes Towards Voluntary Teaching: After the Intervention

Figures 4.6 and 4.7 represent the responses of the pay-it-forward teaching group to the pre- and post-intervention attitudes questionnaire. Figures 4.8 and 4.9 illustrate the responses of the business-as-usual group. In the next sections, descriptive and comparative reports of the Figures will be provided.

On the whole, the difference in mean score between the beginning and end of the semester for the pay-it-forward teaching group was statistically significantly different ($p < 0.001$). See table 4.2. The difference in mean score for the business-as-usual group was not statistically significantly different ($p = 0.186$). Hence, the pay-it-forward teaching intervention was responsible for the change in attitudes and we can conclude that engaging in pay-it-forward teaching as one kind of voluntary teaching improves attitudes towards voluntary teaching whereas not entering in voluntary teaching by a pay-it-forward teaching project has no detectable effect on attitudes. Below, more details of changes in attitudes in different questions will be discussed.

With regards to question 1, the mean score of responses changes from 1.184 (SD = 0.800) to 1.657 (SD = 0.627), which indicates that the pay-it-forward teaching group had more positive viewpoints about whether they have a clear understanding of what it means to learn post-intervention. Figure 4.7 also illustrates the improvements in responses.

The business-as-usual group did not make major improvements (see Figures 4.8 and 4.9) and the mean score of students' responses remained the same (i.e. M = 1.400, SD = 0.553 pre-intervention and M = 1.400, SD = 0.603 post-intervention).

Questions 2, 3, and 7 investigated students' willingness to use their English language knowledge in real-life activities (e.g. explaining the vocabulary and grammar to someone). Table 4.3 demonstrates that the mean scores of pay-it-forward teaching group developed but the business-as-usual group had some disimprovements, which indicates the skeptical attitudes of business-as-usual group

towards applying their English language knowledge in a real-life context.

Questions 4 and 5 check students' self-perception on their ability to explain something (like classroom lessons) to someone. Question 4 seeks to explore student's perceptions of how well they can explain a content knowledge (like their English lessons) to family or friends. And question 5 investigates whether they feel they are good at explaining things to someone they do not know well (for example, a classmate). Indeed, question 5 is included to affirm whether the project could enhance students' attitudes towards voluntary teaching so as to perform beyond their comfort zone in future. Table 4.4 illustrates the changes in mean scores of the two groups for questions 4 and 5.

Table 4.3. Descriptive statistics of the *T*-Test Results for the Changes in Mean Scores of the Two Groups for Questions 2, 3, and 7

The Mean Scores of Pay-It-Forward Teaching Group					
Question 2		Question 3		Question 7	
pre	post	pre	post	pre	post
M = 1.473	M = 1.842	M = 1.00	M = 1.631	M = 1.052	M = 1.368
SD = 0.861	SD = 0.436	SD = 1.138	SD = 0.488	SD = 1.113	SD = 0.851
improvement: 0.369		improvement: 0.631		improvement: 0.316	

The Mean Scores of Business-as-Usual Group					
Question 2		Question 3		Question 7	
pre	post	pre	post	pre	post
M = 1.571	M = 1.485	M = 1.257	M = 0.914	M = 1.685	M = 0.828
SD = 0.739	SD = 0.853	SD = 0.918	SD = 0.886	SD = 3.716	SD = 1.124
improvement: - 0.086		improvement: - 0.343		improvement: - 0.857	

Table 4.4. Descriptive statistics of the *T*-Test Results for the Changes in Mean Scores of the Two Groups for Questions 4 and 5

The Mean Scores of				The Mean Scores of			
Pay-It-Forward Teaching Group				Business-as-Usual Group			
Question 4		Question 5		Question 4		Question 5	
pre	post	pre	post	pre	post	pre	post
M = 0.710	M = 1.421	M = 0.657	M = 1.078	M = 0.942	M = 0.714	M = 0.514	M = 0.428
SD = 0.927	SD = 0.598	SD = 1.046	SD = 0.712	SD = 1.055	SD = 1.126	SD = 1.010	SD = 1.170
improvement: 0.711		improvement: 0.421		improvement: - 0.228		improvement: - 0.086	

Table 4.5. Descriptive statistics of the *T*-Test Results for the Changes in Mean Scores of the Two Groups for Questions 6, 9 and 10

The Mean Scores of Pay-It-Forward Teaching Group					
Question 6		Question 9		Question 10	
pre	post	pre	post	pre	post
M = 0.131	M = 0.973	M = 0.500	M = 1.131	M = 0.368	M = 1.026
SD = 1.398	SD = 1.102	SD = 1.310	SD = 1.119	SD = 1.261	SD = 0.999
improvement: 0.842		improvement: 0.631		improvement: 0.658	

The Mean Scores of Business-as-Usual Group					
Question 6		Question 9		Question 10	
pre	post	pre	post	pre	post
M = 0.485	M = 0.600	M = 0.485	M = 0.600	M = 0.200	M = 0.428
SD = 1.291	SD = 1.142	SD = 1.336	SD = 1.287	SD = 1.255	SD = 1.266
improvement: 0.115		improvement: 0.115		improvement: 0.228	

Table 4.6. Descriptive statistics of the *T*-Test Results for The Mean Scores of the Two Testing Groups for Questions 7 and 8

The Mean Scores the Two Testing Groups for Question 7				The Mean Scores the Two Testing Groups for Question 8			
Pay-It-Forward Teaching		Business-as-Usual		Pay-It-Forward Teaching		Business-as-Usual	
pre	post	pre	post	pre	post	pre	post
M = 1.052	M = 1.368	M = 1.685	M = 0.828	M = 1.631	M = 1.473	M = 1.571	M = 1.314
SD = 1.113	SD = 0.851	SD = 3.716	SD = 1.124	SD = 0.589	SD = 0.687	SD = 0.557	SD = 0.718
improvement: 0.316		improvement: - 0.857		improvement: - 0.158		improvement: - 0.257	

According to Table 4.4, the pay-it-forward teaching group felt more confident about their abilities to explain the lessons in English to someone close to them (like a friend or family) or they only acquaint with (like a classmate) as their mean scores improved substantially. But the business-as-usual group did not feel adequately confident to teach the lessons to someone as their mean scores decreased in both questions post-intervention.

Questions 6, 9, and 10 explored students' attitudes towards participating in voluntary teaching (e.g. using their English knowledge to teach to someone or work as a social worker for global NGOs). The changes in students' mean scores of the two groups revealed some improvements for both groups. Although the improvements in the mean scores of the pay-it-forward teaching group were more remarkable (see Table 4.5), the business-as-usual group also demonstrated positive attitudes towards teaching English as a voluntary work.

Questions 7 and 8 were designed to evaluate students' assessment of the impact of the pay-it-forward teaching project on their language proficiency. The changes in students' mean scores for both questions are indicated in Table 4.6.

As for question 7, the mean score of the pay-it-forward teaching group improved notably but the mean score of the business-as-usual group decreased a great deal. Question 8 is relevant to the former one but seeks to measure students' attitudes towards voluntary teaching in broader contexts by having them assess their need to develop their social skills through their knowledge of English language to communicate with people in other countries. Table 4.6 illustrates that the mean scores of both groups' responses to question 8 declined in the second language test. This can be due to the fact that they did not communicate with L2 English speakers of other countries. So they are suspicious whether their English language knowledge is sufficient to communicate internationally or not.

The Qualitative Analysis of Focus Groups

In order to expand and provide more detail about the findings of the attitudes questionnaire, pre- and post-intervention, 28 participants in the pay-it-forward teaching group were asked to participate in a 15 to 20-minute focus group discussion. Three main questions formed the focus of the discussions:

1. What is your genera impression on this project?
2. How do you evaluate the impact of this project on your language proficiency?
3. If you are given a chance in future to take part in voluntary teaching, do you think you are willing and capable to accept and fulfill this responsibility?

According to my observations as the teacher and the researcher, the majority of participants were advocates of the pay-it-forward teaching project and believed that it could facilitate their learning. Indeed, a number of participants reported that it was "hard at first" (n = 7) or they had "a bit of stress" (n = 3) because they assumed they could not explain very well or they felt their knowledge of vocabulary was not sufficient, which impeded them from speaking fluently. One person remarked, "I was afraid he might ask questions I could not answer." Another person declared, "I was not generally in favor of this project at first." However, over the course of the semesters, substantial improvements in attitudes towards voluntary teaching were observed. A great deal of participants acknowledged that the project raised their "self-confidence" while speaking in English as they could observe some improvements in their language skills.

Students affirmed that to perform well in teaching sessions, they were bound to "review" the lessons and put more effort in to master them. This strategy assisted students to "practice the lessons more," "understand the lessons better," and find out their "flaws." All participants reported that the pay-it-forward teaching project was very effective on their language proficiency. Some people said they were gradually able to speak more fluently, which boosted their confidence. Some examples of quotes include, "my stress decreased," "more words come to my mind," and "I can speak more easily."

Most students had clear-cut ideas about the impact of the pay-it-forward teaching project on their command of English. One student said, "as we went further, I saw that my mastery of both grammar and vocabulary was increasing." Especially, two students who planned to become teachers in future, found it very helpful as it gave them "a very brief view" of the path they are going to take towards becoming English teachers.

Other striking reports include, "I feel I speak more clearly," "this trial and error was very interesting for me," "I had to explain different aspects of the lesson; for example, different functions of a grammatical structure," "I had to flashback to the previous grammars and vocabulary, so I could distinguish different structures better."

The null hypothesis stated that the intervention has no impact on students' English language proficiency. As for alternative hypotheses, a two tailed experimental hypothesis was used, i.e. there will be a difference in students' English language proficiency, but it was not specified which elements of English proficiency I expected to change.

Yet, in contrary to the null hypothesis, a number of participants specifically affirmed that the project helped their grammar more (n = 8). Nonetheless, there were also participants who claimed that pay-it-forward teaching could only enhance their speaking other than grammatical accuracy (n = 5). Overall, the greater number of participants who engaged in focus groups (n = 25) believed that the intervention had positive effects on their language, including grammar, speaking skills, and vocabulary.

In addition, concerning the last question mentioned above, almost all students engaged in focus groups (n = 24) were in favor of it owing to their sociolinguistic backgrounds of voluntary works in general. Indeed, Iran is a religious country in which voluntary work as a help to others is highly appreciated. Some students stated that they had never thought that teaching could also be regarded as a help they can give to others. But when they were told that the project seeks for evaluating the impact of pay-it-forward teaching on both linguistic and sociolinguistic aspects of language learning, they started thinking highly of what they did over the course of the semesters.

Only four participants were not intrigued by pay-it-forward teaching due to various reasons: two people declared that they do not like teaching in general, no matter if it be a voluntary job or a profession. Another person said he is afraid he cannot find "the right person" who is willing to learn. Of course, he stated, "if someone confirms that you can teach in this level, yes I like it…I like it very much."

With regards to working as a national or international social worker through online platforms or in-person, even the four participants who were against pay-it-forward teaching, found this idea reciprocally helpful as the L2 English learner is given a chance to converse with another L2 English learner or a native English speaker. On the other hand, the adults, children or families would benefit from the empathy they will be provided with by a third-person with non-judgmental mindset. Accordingly, one person stated, "when you teach this in a much bigger place, in a bigger and wider community, I find it very interesting."

According to these reports, the majority of participants in the focus groups believed that the intervention had positive effects on the system of language, that is, grammar. It also enhanced their speaking skills, and expanded their vocabulary. Therefore, it is possible that the intervention could also affect listening and writing skills. Indeed, the present study seeks for exploring the impact of pay-it-forward teaching as a sort of voluntary teaching on students' overall language proficiency through numerical data from language tests and students' self-assessment. Therefore, a follow-up study can employ tests specifically designed to measure other language skills (i.e., listening, writing, and reading) separately for more accurate observations of the extent to which pay-it-forward teaching might affect language skills. There were only a few participants who were not advocates of pay-it-forward teaching, as discussed above.

Process Evaluation

To understand what the challenges and affordances associated with conducting the pay-it-forward teaching intervention were, focus group participants were asked about how they approached conducting their pay-it-forward teaching project. Almost all students reported that they used both the slides provided by me and their course book in the first session of teaching. Quite a number students declared that they considered pay-it-forward teaching to be hard at the beginning, but the slides helped them not to feel confused about what and how to explain the lessons. Some of them stated that they tended to imitate teacher's methods for teaching grammar and vocabulary.

The majority of students said that it gradually became "easier" for them to teach. In addition to using the slides and the course book, a number of students began searching for YouTube tutorials and English teaching channels. Also, some others tried to use game-like activities to make their teaching sessions funnier.

Furthermore, a plenty of students were "more comfortable", "more confident" and "predominant" in their teaching sessions. Also, contrary to the first sessions, a number of participants felt "less stressed-out" as they made progress in teaching. Only one participant claimed that the project had no impact on her confidence, but it had positive impact on her pronunciation and grammar as she had to do more research about structures and new words to be able to teach them well.

Moreover, two of the participants believed that they made no progress in finding better words to explain the lessons. Yet, they found it easier to explain the lessons in the next teaching sessions. Another participant stated that teaching, especially the grammar, was very difficult for her as she thinks it requires certain skills to transfer the knowledge well, and she does not have those skills. Yet, her student believed that her teaching became moderately better after the second session and she sounded "more fluent" and "teacher-like" in the last teaching sessions.

Relatedly, the other participants corresponded that their students also believed they were more fluent in their explanations, and as a result, both the teachers and the students could benefit more from the teaching sessions.

5. Discussion

Introduction

In this chapter, I will review the context and aims of my investigation. Also, I will summarize the findings detailed above and relate them to the study's research questions. The results will be assessed to determine whether they concur or differ from what the literature conveys about the topic of my

dissertation. I will then elucidate what the current study's findings add to our understanding of service-learning. And accordingly, will recommend the implications for future practice of language schools and academies, the wider science education community and possible areas for further research.

Context and Aim: Revisited

The catalyst for this investigation was my observation of classroom environments in which producing the target language was the only focal point. Indeed, students were apparently successful in meeting the objectives of each classroom sessions' target language. But there was a common complaint among students, that is, how to use the language in conducting a real communicative context. Moreover, according to my own observations, students feel perplexed on what structures or words to employ when they are not instructed by the teacher, or the tasks do not address what target language is demanded to be used in a certain activity.

Furthermore, former studies have found out that many EFL learners use English outside the classroom mainly for listening and reading but not for speaking because they are afraid of making mistakes and using the language incorrectly while speaking (e.g. Hyland, 2004; Barker, 2004). Hence, tasks were needed to help students gain better results (Waite, 2011) as well as involving students in real-life activities outside the classroom to expand the students' learning environment (Guo, 2011). Hence, drawing upon the notion of language use *in-the-wild* proposed by Hutchins (1995), and considering the debate that still exited on how to associate classroom-based learning with social interactions outside the classroom (Blum-Kulka and Snow, 2004; Adams, 2019), the present study strived to employ pay-it-forward teaching as an approach to link between inside and outside classroom language use by having students use their English knowledge in a real-world practice. Students were provided with teaching materials but did not receive any training on how to teach the lessons.

6. Findings

Proficiency

In response to the first research question regarding the impact of pay-it-forward teaching project on students' language proficiency, participants in the pay-it-forward teaching group proved to have made statistically significantly greater progress in their English proficiency compared with the business-as-usual group. Also, the intervention proved to have enhanced learners' autonomy as it provoked students to not merely focus on the linguistic aspect of pay-it-forward teaching, but rather on the way that it was used in an interactional context (also see Lilja and Piirainen-Marsh, 2019). Unlike previous similar studies, this study incorporated both subjective and objective analyses to assess students' progress during the study. Indeed, the language tests brought about quantitative data for numerical assessment, and students' self-assessment as well as my own observations as a teacher added qualitative data to the study, which contributes to Sigmon's (1979) plea for statistical for outcomes research related to service-learning. Also, students were not asked to prepare for their interactions outside classroom. Thus, the intervention did not just simulate in class lessons, but called for participants to use their English knowledge in real-life situations, that is, *learning in situ* (Waite and Pratt, 2015). This gave rise to authentic interactions between L2 English speakers (Speck and Hoppe, 2004; Song and Hill, 2007; Broadbent and Poon, 2015; Rashid and Asghar, 2016).

A number of the participants in the pay-it-forward teaching group reported to have imitated the teacher while teaching vocabulary or grammatical structures. However, they were freely deciding how to present the lessons to someone else. Thus, the intervention did not merely simulate real-life practices, but it actually put students in a real-life situation to transfer their knowledge to another L2 English speaker. The intervention had an objective, that is, to stimulate participants to make their counterpart understood, but it was not directly mentioned by the researcher. Rather, participants themselves reached this goal as they subconsciously intended to be high-achievers while performing in front of another L2 English speaker. Thus, the current study was an initiative to create an authentic link between inside and outside classroom language use with no explicit instruction provided for participants on how to accomplish the project prior-intervention.

Attitudes

To address the second and third research questions about students' attitudes towards voluntary teaching and more in-depth self-perceptions of students on their progress during the intervention, the findings of pre- and post-intervention questionnaires, as well as focus groups and follow-up email correspondence suggested that all students believed that using English for the communicative practices involved with service-learning will improve their language proficiency. Also, a great deal of students, in the intervention and the control group, were in favor of either teaching to someone as a voluntary job or communicating with international L2 English speakers as a social worker. Little difference in attitudes towards these voluntary jobs was witnessed in the control group, whereas some intervention group members altered their opinion from negative to positive or very positive attitudes after doing the project, i.e., pay-it-forward teaching. Therefore, the act of engaging in pay-it-forward teaching appears to have an affirmative impact on students' attitudes towards voluntary teaching as a service-learning task, as students began feeling empathy towards other human beings (Sleurs, 2008). Also, participants in the pay-it-forward teaching group started planning for their teaching sessions to imitate teacher's techniques while teaching in classroom. In this way, they strived to take the best advantage of their language skills so that they could run

successful teaching sessions. In other words, participants enhanced their systems-thinking competence, referred to as a central component to achieve sustainability in literacy (Croften, 2000; De Haan, 2006; Sterling and Thomas, 2006; Sipos et al., 2008; Sleurs, 2008). Additionally, participants became more confident about their knowledge, worried less while communicating with someone in English, and improved their own language skills as a result of being bound to review the lessons before their teaching sessions.

The research findings are also in alignment with Conversation Analytic Research on Second Language Acquisition (CA-SLA) approach, embracing both verbal and non-verbal conduct, in real-life practices to reinforce social interaction (see Gardner and Wagner, 2004; Eskildsen and Wagner, 2013, 2015).

Implications for Future Practice

This study involved participants of 18 - 35 year-olds. Despite being occupied with many other responsibilities, most participants in the intervention group were absolutely engaged with the project and sent their reports regularly. According to Dornyei's (2005) research on *Individual Differences* in Second Language Acquisition (SLA), motivation is defined as a *fluctuating* attribute; it may evolve over the course of learning.

Furthermore, Ellis (1997) mentioned that motivation is not merely related to success in SLA, defined as aptitude. Rather, it involves factors that affect the degree of efforts the learner would make in L2 acquisition. Indeed, motivation in higher levels, leads to learners' conscious involvement in different learning strategies, including "selective attention" or "questioning for clarification," which potentially lasts in learners' eventual success (Ellis, 1997: 77). The pay-it-forward teaching project also required conscious involvement of participants and considering the success of the intervention group in their language tests as well as Ellis (1997) and Dornyei (2005)'s assertions, we can conclude that pay-it-forward teaching could enhance students' motivation towards learning.

The time-consuming issue with Community Service Learning (CSL), which remained under debate as to how service-learning can be consolidated in the curriculum, was also responded to by the current study. The present study calls for collaboration of Community Service Learning (CSL) and Task-Based Learning (TBL) through integration of some of their features. In other words, it sought to design and employ a task to foster processes of negotiation and modification of the target language (Richards and Rodgers, 2001), as well as enabling participants to critically reflect on their work outside the classroom (Whitaker and Berner, 2004; Barry, 2015).

In addition, according to Dewey's (1971) theory, engaging in service-learning can help to foster problem-solving ability in students to be engrossed in societal issues and find practical solutions as full-functioning members of society (see Speck and Hoppe, 2004). When service-learning is performed in the form of pay-it-forward teaching –whether it be online or in-person– this study suggests that it can produce twofold advantages; first, service-learning as a way of transferring knowledge would accelerate and facilitate students' learning. Second, pay-it-forward teaching encourages students to use technology like email or useful contexts in social media, which has formerly proved to be helpful for students' academic achievement (Rashid and Asghar, 2016) and was also witnessed by the current study's focus groups' findings.

Additionally, conforming to *socio-cultural theory*, the present research aims to make learners to construct knowledge in collaborative activities through dialectic interaction. Task-type is also important to provide learners with varied opportunities to produce modified output (Pica et al., 1989; Swain and Lapkin, 1998; Swain 2000).

With respect to the effect of pay-it-forward teaching on language proficiency, the results of test scores indicated significant differences between the two experimental groups. Thus, the null hypothesis is rejected and the experimental hypothesis retained. It appears that teaching English to someone else can improve students' own language proficiency. Consequently, the pedagogical implications of this study are to recommend that teachers in similar situations to the one in which this study was conducted consider making pay-it-forward teaching part of their curriculum.

According to students' reports in email correspondence and in the focus groups, during the teaching sessions, they interacted with their partners quite productively as they started negotiating the lessons and shared their knowledge of the language skills. Relatedly, the participants in the pay-it-forward teaching group reported that they could also solve their own misunderstandings of classroom lessons when they attempted to explain the lessons to someone else.

Moreover, in countries like Iran where English is considered as a business language, L2 English learners have little chance of applying their English knowledge in business communication. Relatedly, many students complain that they are not learning English properly or are not sure about their language proficiency. The pay-it-forward teaching project intermingled *target tasks* and *pedagogical tasks*, defined by Nunan (2004), which can help to do something outside the classroom and in the real world, but with linguistic outcomes and by usage of the target language learned in the classroom.

With respect to the *goal setting theory*, that is, a goal is seen as the engine to fire the action (Lee et al., 1989), having authentic tasks on their own does not appear to suffice. Rather, they have to include specified objectives and be perfectly structured to bring about the desired outcomes. A pay-it-forward teaching project, as defined and elaborated by this study, can boost students' morale by encouraging them to perform as spirited and assiduous members of society. Students are required to put their theoretical knowledge into practice so that they can assure that they are adequately competent to help to enhance the world's increasing knowledge.

7. Conclusions

This study strived to investigate the impact of pay-it-forward teaching on students' language proficiency based on objective analysis of quantitative data from language tests, as well as students' attitudes towards voluntary teaching through the subjective assessments of students and me (as the teacher and the researcher). The study benefited from various research instruments, consisting of pre- and post-tests for language proficiency, prior- and post-intervention questionnaires, focus groups, and email-correspondence. The results of the proficiency test indicated that students in the intervention group improved to a statistically significantly greater extent than the control group. Furthermore, the intervention group began thinking highly of pay-it-forward teaching after accomplishing it. But the control group's impressions did not change remarkably.

Nonetheless, with regards to Dornyei's (2005) definition of motivation as a fluctuating attribute, perhaps the results of the present research could vary if it was conducted on a different age group. Hence, it would be beneficial if future studies to conduct the same intervention on younger (teenagers) or older learners (middle-aged learners) at upper-intermediate level to investigate whether individual differences between younger and older learners could also be an effective factor on the success of the pay-it-forward teaching project.

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