**The Impact of Fostering Learner Autonomy through Implementing Cooperative Learning Strategies on Inferential Reading Comprehension Ability of Iranian EFL Learners**

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**Abstract**

The great shift of paradigm from teacher-centeredness to learner-centeredness has one major rationale in line with the definitions of autonomy, i.e., the capacity and willingness to act independently and in cooperation with others, so cooperation is looked upon as the manifestation of autonomy. In the present study, the researchers investigated the impact of training cooperative learning strategies in reading courses on inferential reading ability of EFL learners. The researchers used both quantitative and qualitative data collection methods to collect data. The instruments were test, questionnaire, and interview. Sixty intermediate EFL undergraduates aged between 23 and 31 were selected from the subject pool of 197 participants and randomly assigned to treatment and control groups. The treatment group (n=30) received Student Team Achievement Divisions (STADs) strategy training as one of the cooperative learning strategies. The instructional material for both groups was identical. The control group (n=30), however, experienced an individualistic approach as common in traditional reading courses. An autonomy questionnaire and an inferential reading comprehension test were administered at pre-test and post-test phases during the first semester of academic year 2016-2017. The treatment group was interviewed on their experience with cooperative learning. The analysis of the numeric data through descriptive statistics and one way ANOVA along with content analysis of the qualitative data confirmed that cooperative learning strategy training had positive influence on inferential reading comprehension ability of Iranian EFL undergraduates. This study also bears the implications of the findings for language instructors, learners and policy makers.

***Keywords:*** Learner Autonomy, Inferential Reading Comprehension, Cooperative Learning Strategies, STADs

**1. Introduction**

Language learning is a life-long endeavor which is not confined to language skills within the framework of educational settings. Learners should work within and beyond classroom settings in order to be equipped with language skills necessary to deal with life skills in the long run. Learners are trained to become more autonomous during their educational lives, so that they outperform the activities and responsibilities they accept in the societies. That is the main reason behind the emphasis on the notion of autonomy and autonomous behaviors to which a great deal of research has been devoted. In the same vein, there is a long-lasting paradigm shift in language teaching and learning domain, a paradigm shift from a passive traditional teacher-centeredness grammar-focused language learning experience towards a more learner-centeredness active communication especially in Asian countries such as Japan (Mitchell, 2017), Pakistan (Islam et al. 2013), China (Liu & Huang, 2011), and Iran (Papi, 2010) which confirm that the actual communication and understanding of language learners increased and language learners became motivated to act autonomously, while overcoming their anxiety to perform in society and in cooperation with others.

Each learner requires and adapts a unique manner or a special strategy in order to achieve the ultimate goal of their learning. Different strategies might be picked up while learning a language, yet some providing ultimate benefit, others rendering not effective. Brown (1980) asserts that learning strategies are the processes which may contribute directly to learning. Chamot (1987, cited in Hismanoglu, 2000) enriched the definition as the processes, techniques, approaches, and actions that learners take to facilitate their language learning, along the recall of information concerning linguistic and content domains.

Language learning strategies are classified diversely by various scholars. Oxford (1999) asserts that language learning strategies are pivoted around the development of communicative competence and she provides learning strategies with two main branches as direct and indirect, which she further subdivided them into six groups. Among Oxford’s system of classification, cooperation with peers is considered the instance of social strategies within the indirect strategies. Back into literature, O’Malley and Chamot (1990) classified the strategies under three main categories: Metacognitive, cognitive, and socio-affective. The third one is socio-effective category which embraces notions relating to others, such as cooperation with other learners and peers. These classifications are in line with the definition of learner autonomy proposed by Dam et al. (1990) as the capacity and willingness to act independently and in co-operation with others, as a socially responsible person. In the same vein, many scholars such as Allwright (1990), Holec (1981), and Little (1991) emphasize the role of cooperative series of action in learning process by theorizing that autonomous learners are those empowered to reflect on their own learning and are willing to learn in collaboration with others.

Within the research literature, there exists the dichotomy of independence and autonomy, each having its own advocates. Little (1990) asserts that learner autonomy emphasizes “interdependence” over and above “independence”, hence Dickinson (1994) associates autonomy with the notion of learning alone and interdependence with taking active charge of one’s learning. Dickinson (1994) further defines autonomy as “an ability to operate independently with the language and use it to communicate personal meanings in real, unpredictable situations” (p. 43). So the language learners should become capable of reading between the lines rather than reading the lines while completing their education in autonomous way.

Language learning is a comprehensive process embracing studying different aspects of a language. Among various skills to learn and master, reading skill seems as the most important skill for foreign language learners (Grabe, 1991). This might be viewed from the perspective that EFL learners must comprehend the passages in the foreign language, meanwhile getting to understand the relations dominating among the elements in the passages, the world and themselves and such process would enhance their understanding of the world (Tierney, 2005). In order to follow and stick to such approach in EFL context, EFL learners should be exposed to critical reading instances, the notion which has been the focus of attention by many researchers as Wallace (2003) and Correia (2006) who believed that through critical reading, EFL learners would have greater opportunities to choose and select what to read and how to read. These notions are in line with the aim and scope of fostering autonomy among learners. Of course the reading empowerment process begins at literal readings to find the main ideas and supporting details (Philips & Sotiriou, 1992), in which phase the EFL learners uptakes depend greatly on the knowledge of word meanings in context (Karlin, 1971), and then move gradually to maturation phase to encounter critical readings which are aimed at reading critically to identify inferences, assumptions, and implications (Ustunluoglu, 2004). So inferencing is in direct relation with criticality instances in reading, when EFL learners read between the lines besides reading the lines in the passages. In critical reading, EFL learners are objective toward the texts and gain a lot more than the normal understanding, instances which in no way interfere with their understanding of the texts literally (Milan, 1995). In better words, EFL learners have their uptakes of the texts in a normal pace, meanwhile using their critical thinking skills; they make inferences while reading (Thistlethwaite, 1990).

**2. Literature Review**

There have been various and sometimes contradictory findings regarding the effects of variables investigated in the present study as learner autonomy, cooperative learning strategies, strategy-based training, and learners’ performance (Butler, 2002; Chamot, 2004; Chan, 2003; Cotterall, 2000; Nguyen & Gu, 2013; Oxford, 1999; Schunk & Zimmerman, 2007; Wenden 1995; White, 1995). A review of some major studies is presented in this section. It is worth mentioning that the present study is the continuation of the previous studies conducted by other researchers embracing important features such as implementing strategies in various levels as elementary, intermediate and advanced (Tayler, Stevens, & Asher, 2006; Walters, 2006), or considering the major findings based on the duration of the intervention (Lee, 2007), practicing the strategies in implicit fashion (Aghaie & Zhang, 2012; Cohen & Weaver, 1998; Gu, 2007), embracing various language skills (Cohen, 2011; Harden, 2013), enacting strategies at local or public school and universities (Fan, 2010). Considering all the previously conducted researches, and bearing the idea that strategies’ fashion of practice might be explicit or implicit (Chamot & Rubin, 1994), the researchers in the present study chose to practice cooperative learning strategies explicitly in order to enhance EFL learners’ involvement in cooperating with other learners and peers and fostering their autonomy, meanwhile checking their inferencing in reading comprehension ability.

There has been a great shift of attention to academic population part to hold weekly tutorials and casual gatherings in order to criticize and give complements on their lectures and essays (Anderson, 2005). Such causal gatherings are rooted in classroom activities. It is so popular in the learner-centered settings where the emphasis is put on learners to maneuver over their understanding and the added knowledge they pick up during a course. Such suggestions were provided as the remedy to the widespread problem of lack of engagement on the learners’ part (Fritschner, 2000; Nunn 1996; Rocca, 2010). Lack of involvement considered a serious problem and is even witnessed in tutorials and casual course-refreshing gatherings (Biggs, 2003; Kember, 1997). Some scholars such as Race (2005) believe that there are several vital factors to be observed carefully in order to involve the practitioners in academic settings and educational engagements, one of which is called “doing”. Regarding the notion of “doing” proposed by Race (2005), there is no room left for the passive attendees or the disengaged ones in educational affairs, but on the contrary, the unfortunate act of rendering reluctant or passive is becoming widespread as well. As mentioned earlier, learner-centered teaching could be regarded as the proper remedy because the students are more involved in the process of learning. That is the practice rendered so popular in recent years (Baeten et al., 2010; Lea et.al., 2003). Along the same line, cooperative learning is another good practice dominated in recent years, but still suffering its own shortcomings. Machemer and Crawford (2007) assert that “while active learning is doing, cooperative learning is doing with others” (p.11). The notion of cooperative learning is so beneficial that the involved ones work in a group in order to enhance the learning outcomes of themselves along with the enhancement observed on other peers’ outcomes (Johnson & Johnson, 1989). The notion of cooperative learning is rooted in social interdependence theory, and the spirit of cooperative learning prevails once each member of a group feels that they share common identical goals and winning/losing goals individually is directly related to their own deeds and course of actions. Of course the positive interdependence embracing the cooperative learning settings is dominated once it helps enhance promotive interaction (Johnson et al., 2000). In better words, in such settings, the individuals motivate their peers and help each other in a way that smoothen others’ path in obtaining the desired results. In most cases, the individuals provide proper feedback to other peers and in rare cases, criticize and provide challenging comments on the rationale and logic of their peers, their deeds and actions. Therefore, such courses of promotive interactions are performed to fine mesh different points of view and in the long run, they are deemed to result in greater achievements (Johnson & Johnson, 1989, 2009).

Sophisticated stratified meta-analyses ascertained that higher academic achievements are manifested through cooperative learning modes rather than rivalry competitive fashions (Dansereau & Johnson, 1994; Millis & Cottel, 1998; Slavin, 1996; Springer et al., 1999; Roseth et al., 2008). Most data gathered and analyzed which assured the impact of practicing cooperative learning had been driven from the researches performed on primary and secondary schools. In recent years, the focus of attentions on scholars’ part has been targeted towards the higher education zone, the works of scholars such as Hammond et al., 2010; Hillyard et al., 2010; Cavanagh, 2011 are good instances. In higher education realm, the scholars came up with contradictory though amazing findings. While a small proportion of the researches reconfirmed that through cooperative learning practices, stronger commitments were witnessed by the individuals to fulfill the educational aims and goals, but there were strange findings as well, among which were the notions of rendering reluctant towards peers and refraining towards being dependent on peers, and the diversification of levels of ambitions which in turn resulted in variety of reflections towards cooperative learning (Hassanien, 2007; Kelly & Fetherston, 2008; Waite & Davis, 2006). In a study by Machemer and Crawford (2007), they found that only in rare cases where the participants related it to examinations, they valued cooperative learning a much higher degree on dominance, otherwise, they preferred other forms of active learning as a more valuable practice. Hillyard et al. (2010) came up with the conclusion that the participants’ perception of cooperation with peers, and their background sense of group-works along with sufficient clarification by the teachers in performing a task in group-work fashion could be regarded as the decisive factors in successful cooperative learning settings.

It is as if there exists a cumulative spirit of cooperative learning being in action where each participant’s belief is engaged in the total refusal or acceptance of the notion and that is why the results of the studies in higher education realm are so challenging and in some cases contradictory. In a study by Vreven and McFadden (2007), they concluded that the participants’ gains from cooperative learning in lectures were negligible, whereas Cavanagh (2011) exerted the notion of cooperative learning in a study and found great opportunities for engagement on the participants’ parts. So equipping the participants with the supportive spirit of cooperative learning and let them believe in the adds-on it would bring them are the key factors in a successful cooperative learning environment which is mostly regarded as the teachers’ responsibilities.

Cooperative Learning Strategies (CLS) are the set of techniques and strategies which aim at institutionalizing cooperation and team-work spirits among practitioners in order to enhance the efficacy of training and learning. There has been a remarkable shift from teacher-centered to learner-centered language learning settings through which the teachers provide more rooms for language learners to take charge of their own learning in individual perspective and also take charge of their peers’ learning in collaboration and teamwork perspective. It is through this way that learners take on the role of facilitators themselves instead of their teachers. As Silver (2010) asserts: “… teachers understand that by fostering the goodwill and cooperation of their students, they can create an effective learning environment”. This idea is in line with the notion raised by Dornye and Murphey (2003) who suggest teachers “give students positions of genuine authority [because] designating course responsibilities makes students fully functioning members of the class group” (p. 105). In better words, engaging the students in the process of their own learning could be best regarded as the main output of the cooperation in classroom settings.

**3. Research Objectives and Rationale**

Reading is “a complex combination of processes” (Grabe, 2004, p.14); complex in the sense that involves the “activation of prior knowledge, the evaluation of the text, and a monitoring of the reader’s own comprehension” (Alderson, 2000, p. 3). Of course the notion of reading in academic and educational settings is targeted at critical reading which the most significant purpose of it is to identify inferences, assumptions, and implications (Ustunluoglu, 2004). Also the notion of cooperation in educational settings is highlighted and designed to foster autonomy among practitioners for autonomy is defined as the capacity of learners to act individually and in cooperation with others. So, active involvement of the learners in cooperating with others in reading courses might enrich the outcomes of the courses in different phases as the selection and evaluation of the texts, meanwhile empowering learners in monitoring of one’s own and other peers’ comprehension. The present study was an investigation into the impact of training cooperative learning strategies as the manifestation of fostering autonomy among Iranian EFL learners on their inferential reading comprehension ability. In order to fulfill the idea proposed in the present paper, the researchers came up with the following research question:

*3.1. Research Question*

Does fostering learner autonomy through implementing cooperative learning strategy have significant impact on inferential reading comprehension ability of Iranian EFL learners?

**4. Methods**

*4.1. Sample, Participants, and Design*

The participants in this study were chosen from the subject pool of 197 EFL undergraduate aged between 23 and 31 majoring in English translation discipline at Islamic Azad University of Tehran. The researchers administered the Oxford English Placement Test (OPT) initially as the general English proficiency prior to the commencement of the treatment in order to observe homogeneity in selecting the two groups of treatment and control for the present study. Regarding scoring agenda in OPT it should be mentioned that each right answer was scored as plus one and there were no penalty or negative point for any wrong or unanswered items of the test. The overall score of the test was 100 and for selecting the intermediate subjects, the Oxford Score Band indicated that the total score obtained should fall between 70 and 85 out of 100 to be regarded as intermediate. The study sample was selected from the successful participants whose scores fell between one standard deviation above and minus (+/- 1 SD) of the mean in OPT. Sixty subjects were selected and randomly assigned into two groups of thirty as one experimental/treatment group (n=30) and one control group (n=30). It should be highlighted that the total of 15 male participants in the 197 subject pool could be regarded as the minority. After the administration of the OPT English proficiency test, almost all male subjects did not show up in the selection of participants. So it could be regarded as the delimitation to the present study that unexpectedly all the subjects in experimental and control groups were female university students majoring in English translation discipline. The researchers in the present research suggest that this study could be replicated in future by considering gender as the demographic factor to make sure of the generalizability of results and validity of the research.

*4.2. Design of the Study*

The present study enjoyed a mixed method design in which the qualitative and quantitative phases were embraced. In the quantitative phase, the researchers employed the descriptive research design to determine the inter-relationship of the dependent and independent variables. The present study which was an investigation of the effects of independent variable over dependent variable had investigated the impact of implementing cooperative learning strategies as independent variable on the inferential reading comprehension ability as the dependent variable. Of course the Student Team Achievement Divisions (STADs) as one of the cooperative learning strategies was implemented as the treatment, and fostering autonomy was observed as the manifestation of cooperation among Iranian EFL learners and was tested through Learner Autonomy Questionnaire in pretest and posttest phases. Meanwhile, cooperative learning strategy was tested through interview, and the inferential reading comprehension ability was tested through inferential reading comprehension test. Concerning the qualitative phase, it comprised of face-to-face semi-structured interview from volunteers in the study. Fortunately all the thirty participants in the treatment group volunteered to take part in the interview. The questions asked in the interview were in open-ended fashion. The present study was conducted during the first semester of the academic year 2016-2017.

*4.3. Instruments*

The methods for investigating the effects of instructional intervention could be questionnaire surveys, interviews, observation, and ethnography (Cheng, et.al 2011; Spratt 2005; Watanabe 2004). The researchers in the present study collected the required data via the instruments of the test, questionnaire, and interview.

**English language Proficiency Test**: The Oxford Placement Test (OPT) was found to be the suitable measurement at the pre-test phase to observe the homogeneity of the participants attending the intervention program in the present study. Concerning scoring agenda, the Oxford Placement Test (Solutions) (2007) was utilized in organizing the result of the OPT test score, accordingly, the intermediate range of scores in OPT Score Band were considered not to be less than 70 and not more than 87 out of 100. It is worth mentioning that the OPT was an accredited test of English language proficiency, hence the researchers in the present study conducted a pilot study on thirty English translation undergraduates to reassure the reliability of OPT. The reliability of the OPT was calculated through Cronbach’s alpha analysis, the result of which r = 0.82 showed that the OPT test was a reliable test to be administered as the pre-test in the present study.

**Reading Comprehension Test Battery**- The research-based inferential reading comprehension test in the present study was first administered by Cromley and Azevedo (2004) to check the ability of the EFL learners in drawing inferences through reading comprehension medium. The test battery (appendix) comprised of eight passages each followed by a four multiple choice questions. It was a standardized test but the researchers were recommended to run a pilot study to check and reassure the reliability issue prior to the treatment phase of the study. Fulfilling such purpose, the researchers ran a pilot study through administering the 32-item inferential reading comprehension test with a group of thirty English translation sophomores at the same level of language proficiency as intermediate level appropriate for the present study. The result of the pilot study underwent statistical analysis through which the Cronbach’s alpha internal consistency reliability was calculated as α=0.78 and concurrent validity with the inferential questions on the Gates-MacGinitie reading comprehension subtest as r = 0.71.

**Learner Autonomy Questionnaire**: The researchers in this research utilized the “Learner Autonomy Questionnaire” accredited by British Council developed by Simon Borg (2012), in order to delve into the hidden layer of the EFL learners’ opinions and attitudes for scholars believe that questionnaires are the most economical and efficient means of eliciting information (Denscombe, 2014). Concerning the validity index, it was revised by the two experts in Iran who were university professors in related field in order to eradicate the socio-cultural misconceptions and discrepancies, and regarding the reliability index, the researchers piloted the 37-item five-point Likert-scale learner autonomy questionnaire to a group of thirty English translation undergraduates. Through the statistics calculated to ascertain the unidimensionality of this scale, Cronbach alpha calculated as 0.81 which according to Bryman and Cramer (2005) indicated a good reliability and level of conceptual relatedness among items.

**Interview**: The researchers in this study utilized interview to cover greater possibility of maintaining the specific insights of EFL undergraduates which failed to grasp through other means and instruments (Bell, 2010). Also, as the semi-structured interviews provide more rooms for the interviewees to give out their views on the subject matters (Cohen et al. 2011), the researchers conducted semi-structured interviews in face-to-face fashion with thirty participants in the treatment group attending the intervention. The qualitative questions of the interview were adopted from the research conducted by Bryna Bobick (2009) through the Boyd Graduate Studies Research Center, University of Georgia which is accessible through the website: Http://www.ovpr.uga.edu/hso/. The researchers recognized the socially co-constructed nature of interviews (Mann, 2011) and for the sake of validity index; the interview questions were checked by the scholars and experts in the field to tune-in any probable misconceptions and fortunately minor modifications were deemed necessary. Also the researchers observed the reliability index and piloted the questions with another ten EFL sophomores in the same filed as English translation. For analyzing the data gathered through the interview, after the interview sessions, the responses and other interview data (after transcribed in full) were categorized through the process of qualitative thematic analysis (Newby, 2010) which involves reading the data carefully, identifying key issues, and organizing these issues into a set of broader categories. The schedule of interview questions provided a primary structure within which specific answers could be further categorized.

The major qualitative question and the minor ones (adopted from the research conducted by Bryna Bobick (2009) were: “What is EFL learners’ perception of cooperative learning?” In this sense, the qualitative interview questions were designed as:

1. Did you receive training in cooperative learning? Was your group too big, too small, or just right?
2. In a few words briefly explain how was it a different experience in comparison with previous experiences you had in other courses not performed in cooperative fashion?
3. Did your group communicate well with each other? Or was there a lot of fighting?
4. Did you like this project? Why or why not?
5. How do you think cooperative learning influenced your inferences and performance in the course?
6. Did you prefer to pick up the assigned tasks or did you feel relaxed when there were pre-assigned tasks for your group?
7. Is there anything that your teacher needs to know as he makes revisions to the class? Any comments?

The above qualitative questions were the main questions asked from the interviewees and in some occasions, the researcher as the interviewer asked about the general feelings of the learners participated in the intervention program. The interviewees also elaborated on the strong and weak points they encountered during the treatment, or the ideas they came about while overcoming the problems they faced.

*4.4. Verification of Scales*

In order to sum up the reliability indices of the measurement tools utilized in the present research, the following table (Table-1) was systematically provided to indicate the results of the pilot studies conducted to verify the reliability of the instruments of the present study. Research authorities such as Kline (2000) believes that the criteria concerning internal consistency of .90 should be regarded as an excellent fit, from .90 to .70 as a good fit, and between .70 and .60 should be regarded as an acceptable fit.

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| Table 1: Reliability of Instruments (N=197) | | | |
|  | Oxford Placement Test (OPT) | Learner Autonomy Questionnaire | Inferential Reading Comprehension Test | |
| Alpha | .82 | .81 | .78 | |
| Mean | 16.41 | 22.15 | 25.93 | |
| SD | 7.81 | 6.18 | 5.34 | |
| # of items | 100 | 37 | 32 | |

Needless to highlight that all the calculated values for the three instruments utilized in this study (Cronbach’s alpha for Oxford Placement Test (OPT) as .82 and the value for Learner Autonomy Questionnaire as .81and the calculated alpha value for Inferential Reading Comprehension also calculated as .78) exceeded the threshold to be considered as good fit. This means that all the three instruments utilized in the pre-test and post-test phases of the present study were reliable.

Validity of the Instruments was also confirmed prior to the implementation of the treatment. The instruments were validated by content and face-to-face validity methods. For validity, the instruments were revised with the suggestions of the experts and scholars in the field.

**5. Procedure**

The whole process of conducting the research was fifteen sessions of the academic semester which lasted about two months. The first session was devoted to the administration of Oxford Placement Test (OPT) with 197 EFL undergraduates. Through the administration of the OPT, sixty intermediate subjects were selected out of the subject pool of 197 EFL university students majoring in English translation. The selection of intermediate EFL learners was elaborated in instrument section. They were randomly divided into two homogenous groups of experimental and control. The second and third sessions were devoted to the administration of the pre-tests as learner autonomy questionnaire and inferential reading comprehension test. The core treatment phase lasted for ten consecutive sessions for seven weeks and the fourteenth and fifteenth sessions as the post-test phase of the study were devoted to the administration of learner autonomy questionnaire and the inferential reading comprehension test, the same set of tests administered in the pre-test phase. As of the treatment phase, the experimental group received explicit instruction on one of the cooperative learning strategies as STADs (Student Teams-Achievement Divisions), hence the control group only received the common reading strategies such as skimming, scanning, doing inferences, reading for the main ideas, etc. in individualistic fashion prevalent in reading comprehension courses. As mentioned earlier, the tests involved in the present study had undergone piloting program prior to the commencement of the study in order to determine and reassure the reliability of the instruments.

*5.1. Procedure for treatment group receiving cooperative learning strategies*

The procedure exercised in the experimental group was one of the cooperative learning strategies abbreviated as STADs (Student Teams-Achievement Divisions), designed for instructional purposes. As the literature confirmed that learner autonomy could be fostered through cooperative learning strategies, the instructional roadmap designed for implementing STADs involved the following sections:

1. Introduction phase: Identification of topics, elaboration of concepts, subtopics and instructional aims and objectives (Introducing the cooperative learning instructional strategy along presenting brief remarks on them.).

2. Presentation phase: elaborating of theoretical base of reading such as skimming, scanning, etc. also the requirements of presenting reports.

3. Implementation phase: enacting the strategy and performing specific treatment (cooperative instruction).

4. Evaluation phase: general assessment of knowledge gain and consolidation of it.

**6. Treatment**

*6.1. Experimental Group*

The treatment group experienced STADs as one of the cooperative learning strategies. The treatment group of thirty EFL learners was divided into 6 sub-groups with five members per sub-group. The materials selected were the same as the control group, units of the book Active Skills for Reading 3, hence the presentation and the units’ sequences were arranged and presented in small sequence units for the purpose of leading the EFL learners from body of known concepts and ideas to unknown, from easy and simple tasks to more complex ones within the same unit of focus with leaving the learners free to adjust and work at their own pace, providing frequent responses even to minor or recurrent questions, as they moved along and progressed through the materials and providing prompt feedback about the adequacy of their responses in order for them to attain mastery. Each group was advised to choose a leader by themselves that could guide the group to maintain a given goal. The instructor walked around to pinpoint the misunderstandings and guide them back to the roadmap, also to ensure that they traced and followed the proper guidelines. The students were provided with the rules and regulations concerning the principles of cooperation and at times, they were encouraged and motivated enough to interact and among themselves and challenge their peers. The instructional guidelines and principles provided for the treatment group were as follows:

1. Members of each group should cooperate and participate in group.

2. Each group should appoint a group leader and an assistant.

3. A labor division must be formed in the group. That is, each individual as the group member must make contribution to the problems and drills of the materials being answered.

4. Each member of the group must be capable of providing explanation for any part of the texts or tasks at hand.

*6.2. Control Group*

The thirty participants in the control group were exposed to the traditional teacher-centered reading comprehension strategy training for ten sessions, through which one unit of the book “Active Skills for Reading 3” by Neil J.Anderson (2014) was covered per session. It might be felt redundant but worth mentioning that the procedures followed in control group remained constant through all ten sessions of the treatment, the common procedures exercised in traditional reading comprehension courses. Strategy trainings as previewing a pre-reading task, skimming for the main idea, scanning for specific information, making inferences, identifying the underlying theme, identifying the major and minor elements and people, and the ones like these. The teacher taught reading comprehension strategies by explanation, writing key vocabulary on the board for the EFL learners while they followed the passages in their textbooks. Intermittent question-and-answer sessions with occasional elaborations and sometimes demonstrations by the teacher were embedded in the course. All the students were seated on their individual seats and their verbal participation in the lesson was so limited.

*6.3. Precautions Regarding the Treatment Phase of the Study*

The following precautions were taken into account during the treatment and control sessions of the study:

1. The same set of materials and research packages were used throughout the present study in order to eradicate any mismatches having occurred due to instrumentation.

2. Attendance of the learners in both groups was observed throughout the teaching sessions.

3. The treatment and control group subjects were provided with equal time of treatment and observations.

4. In both classes the students only worked on the chosen reading selections and their comprehension questions, and they were not required to do all the reading exercises, activities or tasks either preceded or followed by the reading texts.

5. To prevent the learners from remembering the questions of the pre-test and post-test of the inferential reading comprehension test battery (8 passages and total of 32 items), the passages and the test items in the pre-test were scrambled and reordered in the post-test.

After the completion of the treatment for ten consecutive sessions, the fourteenth and fifteenth sessions were assigned to the administration of the post-tests. In the fourteenth session all the subjects of the study, whether grouped in the treatment group or the control group, took the learner autonomy questionnaire. And the final session, i.e. the fifteenth session was devoted to the administration of the last post-test as the inferential reading comprehension test which both groups took.

**7. Data analysis and Results**

To answer the research question contending whether fostering learner autonomy through instructional intervention and strategy training, namely as STADs (one of the cooperative learning strategies), had any significant impact on inferential reading comprehension ability of Iran EFL undergraduates, both quantitative and qualitative data were gathered through the instruments of test, questionnaire and interview. The data collected through quantitative observations of the experimental and control groups were analyzed through descriptive statistics and one way analysis of variance (ANOVA) to indicate a numeric summary of occurrence of the observed behaviors and the obtained scores in both groups, also to examine whether they differed significantly.

To analyze the qualitative data collected through interview, constant content analyses were employed as proposed by Glaser and Strauss (1967).The analyses is performed through the process of repetitive shifting through the data to highlight recurrent similarities and patterns of reference in the collected data. The Analyses of such recurrent similarities and repetitive patterns lead to an evolving coding system. More scientifically, the units of analysis and coding schemes are developed and defined through the process of the recurrent schemes in content analysis. These codes are then molded into categorical themes/labels. Patton (2002) believes that such procedure is designed to help researchers in “developing some manageable classification or coding scheme” as “the first step of analysis” (p. 463). When the saturation of the data around the coded schemes is observed to have coherence, then the researchers come up with conclusions based on the justifications on analyzed data.

The data collected were analyzed and the findings presented were based on the research question and the hypothesis formulated. Regarding the data obtained during the process of conducting the present study, the data collected in both pre-test and post-test phases of the research has undergone the statistical analysis using the SPSS17 software and the descriptive statistics which follow.

*7.1. Normality Assumption*

The normality of the data was measured by calculating the ratios of Skewness and Kurtosis over their respective standard errors. Based on the results displayed in Table 2, it could be claimed that the data collected in pre-test and post-test phases of administering Learner Autonomy questionnaire enjoyed normal distribution. The ratios were all lower than the absolute value of 1.96.

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| Table 2: Testing Normality Assumption | | | | | | | | |
| Group | | N | Skewness | | | Kurtosis | | |
|  |  |  | Ratio |  |  | Ratio |
| Experimental  Control | Pre-LA | 30 |  |  | 1.19 |  |  | -1.18 |
| Post-LA | 30 |  |  | 0.29 |  |  | -1.22 |
| Pre-LA | 30 |  |  | -0.07 |  |  | 1.23 |
| Post-LA | 30 |  |  | -1.19 |  |  | 0.53 |

*7.2. Learner Autonomy Questionnaire*

Regarding the research question in the present study, the researchers administered the learner autonomy questionnaire at the pre-test and post-test phases of the study and statistical analysis was performed. Here in this report, the researchers sufficed to present the comparison table of means for a general interpretation as the experimental group receiving explicit strategy training on one of the cooperative learning strategies outperformed in their post-test in comparison to the control group not receiving the strategy training in the treatment phase.

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| Table 3: Comparison of Learner Autonomy (LA) on Pre-test and Post-test | | | | | | |
| Group | | N | Mean |  |  | SD |
| Experimental  Control | Pre- Learner Autonomy | 30 | 68.23 |  |  | 11.481 |
| Post- Learner Autonomy | 30 | 89.61 |  |  | 4.836 |
| Pre- Learner Autonomy | 30 | 63.48 |  |  | 13.042 |
| Post- Learner Autonomy | 30 | 65.72 |  |  | 10.152 |

Table 3 best depicts the compared means which is an indication of the impact of the treatment. The result was in line with the results of other studies by scholars as Cavanagh (2011) and Dornye and Murphey (2003) which confirmed that cooperative strategies enhanced the learner autonomy of EFL learners.

*7.3. Pre-test of Inferential Reading Comprehension Ability*

A one-way ANOVA was run to compare the experimental and control groups on the pretest of inferential reading comprehension ability in order to prove that they were homogenous in terms of their inferential reading ability prior to the main study and implementing treatment. Before discussing the results it should be mentioned that the assumption of homogeneity of variances of the groups was met (Levene’s F (1, 58) = 3.64, p = .015) (Table 4); however, as noted by Bachman (2005), Pallant (2011) and Field (2013), one-way ANOVA is robust against the violation of this assumption when sample sizes are equal, as is the case in this study.

|  |  |  |  |
| --- | --- | --- | --- |
| Table 4: Test of Homogeneity of Variances; Pretest of Inferential Reading Comprehension Ability | | | |
| Levene Statistic | df1 | df2 | Sig. |
| 3.643 | 1 | 58 | .015 |

Based on the results obtained, it is claimed that both groups in the present study as experimental (mean=105.65) and the control (mean=107.16) groups had close means on the pretest of inferential reading comprehension ability. This means that both groups were the same regarding their inferential reading ability prior to implementing the treatment. The results of the one-way ANOVA (F (1, 58) = 1.29, p = .271, ω2 = .008 representing a weak effect size) (Table 5) indicated that there were not any significant differences between the two groups’ means on the pre-test of inferential reading comprehension ability. Thus it could be claimed that they were homogenous in terms of their ability in inferential reading comprehension prior to the administration of the treatment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Table 5: One-Way ANOVA; Pretest of Inferential Reading Comprehension Ability by Groups | | | | | |
|  | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 27.892 | 1 | 258.329 | 1.293 | .271 |
| Within Groups | 188.110 | 58 | 186.197 |  |  |
| Total | 121.992 | 59 |  |  |  |

*7.4. Post-test of Inferential Reading Comprehension Ability*

Concerning the impact of the treatment on the EFL learners’ inferential reading comprehension ability, a one-way ANOVA was run to compare the experimental and control groups on the post-test phase in inferential reading comprehension ability in order to probe the null-hypothesis. Before discussing the results it should be mentioned that the assumption of homogeneity of variances of the groups was met (Levene’s F (1, 58) = .879, p = .451) (Table 6). This means that both groups were the same at the post-test phase of the study after the implementation of the treatment regarding their inferential reading comprehension ability.

|  |  |  |  |
| --- | --- | --- | --- |
| Table 6: Test of Homogeneity of Variances; Post-test of Inferential Reading Comprehension Ability | | | |
| Levene Statistic | df1 | df2 | Sig. |
| .879 | 1 | 58 | .451 |

Based on the results obtained through statistical analysis of the data gathered, it should be indicated that the experimental group mean (M = 137.93) and the control group mean (M = 102.50) were obtained. This means that the experimental group outperformed the control group after the treatment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Table 7: One-Way ANOVA; Post-test of Inferential Reading Comprehension Ability | | | | | |
|  | Sum of Squares | Df | Mean Square | F | Sig. |
| Between Groups | 21.487 | 1 | 903.149 | 193.274 | .0005 |
| Within Groups | 245.713 | 58 | 48.068 |  |  |
| Total | 395.822 | 59 |  |  |  |

The results of the one-way ANOVA (F (1, 58) = 193.27, p = .262, ω2 = .871 representing a large effect size) (Table 7) indicated that there were significant differences between the two groups’ means on the post-test of inferential reading comprehension ability. Thus it is claimed that in line with the findings of other researchers regarding the impact of cooperative learning strategies and fostering autonomy on the inferential reading ability of foreign language learners (Oxford, 1999; Chamot, 2004; Nguyen & Gu, 2013; Butler, 2002; Chan, 2003; Schunk & Zimmerman, 2007), implementing STADs (Student Team Achievement Divisions) as one of the cooperative learning strategies had significant impact on EFL learners’ inferential reading comprehension ability, i.e. through training cooperative learning strategies, Iranian EFL undergraduates became more autonomous and their inferential reading comprehension ability (inferencing ability) enhanced to a significant degree.

**8. Discussion**

*8.1. Discussion regarding the quantitative phase*

This study investigated the impact of implementing cooperative learning strategies as the manifestation of fostering learner autonomy on EFL learners’ inferential reading comprehension ability. The results and the findings showed that there was significant difference in the inferential reading comprehension ability of EFL undergraduates who were taught reading comprehension skill using SATDs as one of the cooperative learning strategies, compared to those experienced the traditional teacher-centered common method of reading instruction in control group.

As long as the instructional strategy dominant in Iran is the traditional lecture-based method from early the beginning of the students’ education in school years (Papi, 2010), the participants in the treatment group experienced an instructional reform at the beginning of the treatment sessions which soon was coped with by the participants as they experienced a stress-free intervention program. The evidence documented in the relating literature confirmed that in classes where cooperative instructional approach is practiced for teaching, participants gradually take responsibility for each other's learning just because they sacrifice their own performance in order to elevate the group performance. The better supportive attitude displayed by the students in the cooperative learning settings might have been achieved just because positive reinforcement, feedback, and support come from students’ peers in the group (Ajaja & Eravwoke, 2010). This accompanied by the high level of students' participation in learning activities. All the students in the cooperative group performed specific assigned roles in solving problems which were presented in the classroom to the benefit of all members of the group. The findings of the present study were in line with the findings of Aluko (2004, 2008) indicating that cooperative learning strategy through instructional intervention was found to be more effective on enhancing better performance of the learners. Scholars believe when properly and carefully implemented, cooperative learning activities engage the participants in their own learning processes and seek to improve their critical thinking, reasoning, inferencing and problem solving skills (Aluko, 2008).

*8.2. Discussion regarding the findings in qualitative phase*

As mentioned earlier, the present study benefited the qualitative data collection instrument as well in order to delve into the hidden underlying layers of the concepts involved. The thirty participants in the experimental group volunteered to be interviewed. They were informed that their voices would be recorded and kept confidential. After the interview sessions, all the audio files were transcribed and the data gathered went through thematic analysis and constant content analyses. There were pros and cons viewpoints raised on the notion of cooperative learning strategies practiced by the participants in the experimental group. The researchers found the findings very interesting as they were to some extents contradictory and challenging. That is exactly where the dilemma prevails, just because the application of cooperative learning strategies being considered very risky and challenging in Iran EFL context by authorities and experts in the field (Papi, 2010). Here the researchers deemed it essential to encapsulate the major findings in the discussion as follows:

***First qualitative finding:*** Regarding the positive points raised by the participants, nearly all of them agreed that through the application of cooperative learning strategies, they felt more engaged and active in the class during the course. Some extracts are provided here:

…….. in this course, we learn a lot and we learn differently a lot. Our classmates were all friendly and supportive.

………. this class was the first time I had no stress when attending the reading course. It was very challenging and also very fun for me.

……. when we faced a misunderstanding or a problem, very quickly we could ask our team or other students in our class. This way I think we learned a lot and we learned very soon.

………. our teacher helped us during the tasks and activities, this made us happy to have our teacher in our back and to have his support.

…….. there were situations that we did not understand or could not follow the tasks, but the moment out friends said something from our past experience or her own experience, then we understood all of the task and we all performed better.

Most of them confirmed that they were more involved and they gained more in the discussions and elaborations provided by peers. In other words, they felt that they would have better understanding of the texts and tasks and in turn, they were more empowered in dealing with the ideas raised throughout the course. Another positive point of view raised by most of the participants was that they could make the most of the issues from the experiences of their peers as they had brought them to the class. Such close interrelation with peers as they shared their personal experiences raised the appreciation of the participants and they regarded them as new experience with peers.

***Second qualitative finding:*** Concerning the negative points, some participants believed that within accomplishing cooperative learning strategies, some peers evaded the tasks and were unprepared for the class.

…….. you know, some of our classmates are very lazy and always show off that they can get good marks without working and studying too much. They do not cooperate in the activity which is put to all of us. This is too bad.

……. my classmate came to class unprepared and thought that if the teacher asked to do a group activity, she could simply chose the simple parts or by the parts similar to previous tasks or common in parts. Their actions were not fair. I didn’t like them.

……. regarding the tasks assigned to our group for example, I saw that other groups came to the class and they were not prepared, just because our group was assigned to do that.

In simple words, they believed that given a group was assigned to cover part of the text or task, other peers didn’t sense any obligation to thoroughly delve into that part or attended the session unprepared. In this vein, when the number of unprepared participants accumulated, then the discussions didn’t lead anywhere or their quality decreased to a noticeable degree.

***Third qualitative finding:*** Of other negative points, they proposed the notion of redundancy and repetition. Once a particular task was fulfilled and a discussion was conducted, it seemed that another group just started from the scratch and sounded a very superficial and mechanical repetition of pre-discussed ideas and points in progress.

…….. there were some texts regarding taboo thing such as having boyfriends or smoking at teen age. So we could not speak at all in the class and we just elaborated the items elaborated inside the book. They were very little but the class climate were then frozen in those situations

………… some of our classmate just repeated the idea that we elaborated and discussed in our group. It was very boring and nothing was added. Just repeating the play again. Wasting our time.

Such repetition of group discussions was sometimes regarded as the confinement exerted to the topic which was a noble one or too specific. That was also sometimes regarded as the capability of maturation of the topic was so limited due to the simplicity dominating the level and range of the discussion being conducted. Regardless of what the causes could have been, the trend of reaching the same conclusion or stream of discussions over and over again was regarded as a weak point which in the long run made participants lose their sense of involvement in the discussions or make them lose the dynamicity sense of the class.

***Fourth qualitative finding:*** Some participants believed that such less-controlled fashion of being involved in the discussions by the peers often exacerbated the situation and impeded the normal pace of clarification, just because peers popped up different viewpoints not applicable to the situations at hand which in turn added on the confusion rather than smoothening the clarification process.

…….. there was a big problem with some of my classmate that they understood the task not properly and next session, they elaborated a different experience to the class. When we were listening, the teacher cut my friends’ voice and said she was wrong, or the text or task meant different. This happened a lot during the course.

…….. personal experience come from personal points of view. Some friends could not elaborate their experience and confused us. We could not decide whether it was bad or good. Then our teacher corrected her and this action take the time of our class.

In other words, what some peers brought to the class was that of personal points of view or exceptions which in turn led to more confusion in the subject matter being discussed. Some participants found them confusing as there was less command on the teacher’s part to guide the discussions back on the right track.

***Fifth qualitative finding:*** To some participants, the delay time existing in between the discussions conducted by the peers and the right answers provided by the teacher was so challenging that in some rare cases resulted in the losing track of the general concepts being discussed or pinpointing some areas of interest which were not the focus of attention and concentration.

…….. sometimes the idea in the text was new and we ask questions from our teacher. He told us the very quick definition, he wanted to save the time of the class, but his quick definition brought another question in the mind of another student. Questions after questions were asked and the teacher was hard to control the class and the questions of the students.

……… there were situations that one of my friends asked some points and the teacher answered her. Suddenly another friend asked the same question differently. The data that we got by the questions were very much and we did nt know what to do with them.

In a nutshell, if the teacher shed more control over the trend of the discussions being held by the peers in a more spot-checking fashion, there seemed to be more involvement on the participants’ part. The participants were provided with a pile of new information and experiences through their exposure to discussions and peers’ experiences; hence the uptake were kept de-active or postponed until the teacher confirmed the validity of the data in order for the data to be activated and dominated in the minds of the individuals.

***Sixth qualitative finding:*** Some interviewees raised the notion of fear domination throughout the sessions of discussions by peers noting that there existed a sense of fear sweeping in the lengthy discussions in such a way that they should have missed some important points just because the string of information being postulated by the peers and the role of the teacher were weakened and in some rare cases were ignored.

…….. there were also situations that we all liked them, such as marriage and sports. We work in group to challenge another group and we were very active in that session. We saw that our teacher do not like it because we are showing of that we can discuss matters in English just because we had a lot to say in farsi. The teacher did not stop us because he knew that in some sessions we kept silent and did not cooperate because we did not like the topic.

All in all these ideas created the sense of uncertainty among participants that all they performed were considered as barking up the wrong trees. In some cases, the teacher kept silent at the expense of not losing the ideas raised by the groups, whereas the ideas raised might have made the subject matters land on another planet with a sun of a different color.

***Seventh qualitative finding:*** The interviewees made a noticeable remark indicating that depending on the level of difficulty of the topics being discussed, the complexity of the discussions became so challenging. The difficult topics could have been discussed from different points of view, depending on the previous experience of the group members and peers dominating the groups.

…….. I remember that one of the topics was living in another culture. It was very difficult. The teacher saw that we did not have any trip to foreign counties, so he changed it to different cultures in our own country. Then we all began to participate.

…….. our team was five and all of us were university students. Then we had no experience of working at night shifts which was the topic of discussion. We could not talk very much. But after the class we knew a lot about night shift working and its good and bad effects.

…… most of the students in our class were single, almost all of us. When the topic was regarding the family problem due to inflation, we hardly could find interesting points and we had hard times because the topic was older than our age.

The presentations were conducted to spotlight certain concepts by a particular group; however the uptakes were different and sometimes contradictory rooting in the complexity of the topic. Once the discussions were conducted in certain levels, there would be the threat of existing unclear debates and questions in the minds of the members of other groups and peers being fossilized and remained untouched due to the complexity of the topics dealt with at hand. The teacher found it disappointing to evade complex topics; hence the gradual shift of attention from easy to complex topics may deem useful. Of course such gradual shift of attention may take a long time and due to the limitation existed in the time span of the present study, such course of actions was ignored in some cases.

Concerning the seven qualitative findings discussed above, the researchers sum up them this way that most EFL learners who experienced cooperative learning strategies found it very useful and effective on enhancing their inferential reading comprehension ability. They believed that group work and cooperation were very supportive and experiencing a stress-free environment in learning a foreign language could be very beneficial and their uptakes and participation were noticeable. The researchers found that through the cooperation and collaboration of EFL learners with peers, the outcomes of the reading courses and the depth of inferences were very high and effective per se.

**9. Conclusion and Implications**

In the EFL context of Iran, where exposures to authentic real-life settings of English language-use contexts are rare, the command and mastery of EFL learners on English literacy and the linguistic competencies are best judged through the proper understanding of the written documents before EFL learners. What they digest from a passage of information is beyond the rough memorization of structures and lexicons, and even beyond the notion of pragmatics. It is mastery in reading between the lines, and thoughtfulness. It is having the command on thinking the way natives do in real-life contexts and make inferences as natives do. Having a thoughtful angle of view towards the chunks of information is not an incidental phenomenon. It is tailored, achieved, and dominated through proper practice. Learning to cooperate with peers is a proper remedy for that. Here in this paper, the researchers came to the conclusion that fostering autonomy through implementing the cooperative learning strategies, EFL learners in Iran are empowered to delve into the passages before them, in such a way that they are capable of getting the rationale laid in between the lines and in the long run, capable of making proper inferences when facing unpredictable problems in life.

The present study reconfirmed that fostering autonomy through implementing cooperative learning strategy enhanced EFL learners’ participations and performances to a significant degree; meanwhile there was no proper instrument to measure the students’ changes in their approaches to learning. This could be a starting point for further research. In the constructivist’s vein, any form of dialogue and argument or engagement are considered valuable learning opportunities and the vantage points on the practitioners’ parts (Pritchard & Woollard, 2010), and from such point of pondering, the present study was partially successful. Meanwhile, the findings of the present study reconfirmed that any change in the trend of instruction is not enough to suppress a surface accustomed approach and enhance a deep approach towards learning. In better words, practitioner’s learning behaviors would in no way be affected through cooperative practices without their change in their motives which are considered as the vital element affecting the quality of their approaches to learning (Biggs & Tang, 2011). There could also be more studies and further researches on the elements affecting deep structures in changes of approaches to learning. There has always existed the dilemma of such construct as some scholars such as Race (2005) believes that cooperative learning might in turn have reinforced the “doing” without having significant impact on their “wanting”. In better words, practitioners might have found much interest and more involvement in actively conducting the discussions, but at the same time, this does not necessarily mean to indicate that through the implementation of cooperative learning strategies, their cognitive activities have been enhanced to a noticeable degree (Meyer, 2009). There is much room for the researchers to delve into the point of discrepancy from different perspectives. Of course, implementing cooperative learning strategies with university undergraduates majoring in English translation discipline could have a major delimitation as this study was conducted on English translation discipline. Researchers could conduct further researches the same as the present study with the university undergraduates of other disciplines rather than English translation.

The findings of the present study could be a good point of departure for stake holders, policy makers and materials developers to insert and accommodate some points of inferences within the curriculum. Also the teachers and learners in EFL context of Iran could utilize the procedures followed in the present study in order to make the most of their reading courses and through more involvement change their view of the world and make inferences as natives do.

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**Appendix A**

Sample inferential reading comprehension test

**Inference and Strategy Use measure**

Please read the passage and choose the one best answer for each question and fill in the corresponding circle on the answer sheet. PLEASE DO NOT WRITE ON THE TEST

So far as I know, picking a four-leaf clover was her only superstition, or anyway, the only one she ever acted on. And it was always used for the same purpose, which was to get my father’s patients to pay their bills.

Very few of the patients paid promptly, and a good many never paid at all. Some sent in small checks, once every few months. A few remarkable and probably well-off patients paid immediately, the whole bill at once, and when this happened my father came upstairs after office hours greatly cheered.

1. In the second sentence, what does “it” refer to?

A. the clover

B. his father’s bill

C. picking a four-leaf clover

D. his father’s patient

2. In the last sentence, why was his father “greatly cheered”?

E. because someone paid their bill on time

F. because his mother found a four-leaf clover

G. because someone paid in cash

H. because someone finished paying on layaway

3. Which of the following is most likely to follow this passage?

I. An explanation of why the author’s mother picked a four-leaf clover

J. How much the average doctor bill was at the time

K. What the family spent the money on when patients paid on time

L. Why the author’s father was happy

4. Which of the following would be most useful to know in order to understand the passage?

M. The author is writing about the Great Depression

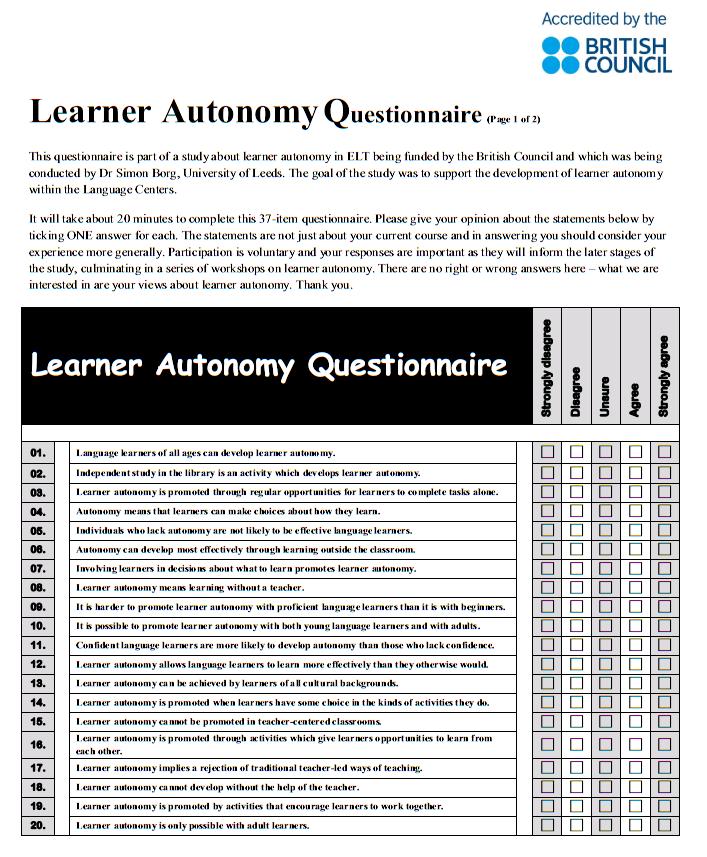
N. “Her” refers to the author’s mother

O. Rich people pay their bills on time

P. Doctors are happy when patients pay their bills

CONTINUED ON NEXT PAGE

**Appendix B**

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