

# Autonomous Learning in the Context of Computer-based Multimedia College English Teaching and Learning

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**Abstract**—The swift development of multimedia technology is further promoting the College English Teaching reform. College English autonomous learning model, based on a combination of student-centered teaching concept with multimedia technology, is one of the most important developing trends in the process of the reform. This paper discusses the difference of student's autonomous learning ability between new teaching model as stipulated in College English Curriculum Requirements and the traditional one. It investigates how multimedia technology provides the better autonomous learning environment for the learners and makes the computer-based multimedia College English Teaching Model facilitate the language learning more effectively.

**Index Terms**—autonomous learning, computer-based multimedia, CECR

## I. INTRODUCTION

This paper is to investigate the situation of autonomous learning under the model of computer-based multimedia college English teaching at Qingdao University of Science and Technology (hereinafter referred to as QUST). More specifically, the present study attempts to answer the question: What are the students' attitudes, motivation and their real performance under the new and the traditional teaching models towards autonomous learning? The College English Curriculum Requirements (hereinafter referred to as CECR) puts forward that the objective of College English is to develop students' ability to use English in an all-round way, especially in listening and speaking. In view of the marked increase in student enrolments and the relatively limited resources, colleges and universities should remold the existing unitary teacher-centered pattern of language teaching by introducing new teaching models with the help of multimedia and network technology. The new model should be built on modern information technology, particularly network, so that English language teaching will be free from the constraints of time or place and geared towards students' individualized and autonomous learning. This paper, investigating students' learning autonomy, attitudes, motivation, and strategies under the new model, is intended to assist teachers in designing class assignments and fulfilling their roles. It also can help students establish positive attitudes towards English learning. They can constantly update knowledge on the condition of multimedia and network technology.

## II. LITERATURE REVIEW

### A. Defining Autonomy

Developments in sociology and psychology have greatly influenced conceptions about language teaching and learning, especially about the role of the language learner in the process of learning. As a result, the language learner now occupies a more central place in the classroom. At the same time a deliberate attempt is being made to make learners more responsible for their own learning. This interest in the development of learner autonomy was not set in a theoretical framework until the late 1970s, when all these ideas found a synthesis in the ideas put forward by Holec (1981, p. 3). During the last two decades, autonomy has become one of the most widely discussed topics in the field of language learning.

Holec (1981, p. 3) defines learner autonomy as "the ability to take charge of one's own learning", which means an autonomous learner is himself or herself capable of making all these decisions concerning the learning with which he or she is or wishes to be involved:

- determining the objectives;
- defining the contents and progressions;
- selecting methods and techniques to be used;
- monitoring the procedure of acquisition (rhythm, time, place, etc.);
- evaluating what has been acquired.

This ability is "a potential capacity to act in a given situation—in our case, learning—and not the actual behavior of an individual in that situation" (Holec, 1981, p. 3). For Holec, learner autonomy is an ability, not an action. Some other authors define it in a similar way, such as Little (1991, p. 4), who defines it as "a capacity for detachment, critical

reflection, decision-making, and independent action”. Also for Nunan (1995, p. 145), the ability is crucial: “Learners who have reached a point where they are able to define their own goals and create their own learning opportunities have, by definition, become autonomous”.

Different elements play a more important role in the view of some other linguists. Dickinson (1995, p. 330) sees autonomy very much as an attitude to language learning. In his opinion, autonomous learners are ready to take responsibility for their own learning and show their willingness by setting their own goals, selecting their materials, deciding on their own methods, place, time and pace for study, monitoring their study and making proper evaluation. For Huttunen (1986, p. 95), the act of a certain type of learning is important: “A learner is fully autonomous when he is working individually or in a group, taking responsibility for the planning, monitoring and evaluating of his studies...”. Benson (1997, p. 1-2) summarizes five situations in which the word autonomy has been used in language education:

- for situations in which learners study entirely on their own;
- for a set of skills which can be learned and applied in self-direct learning;
- for an inborn capacity which is suppressed by institutional education;
- for the exercise of learners’ responsibility for their own learning;
- for the right of learners to determine their direction of learning.

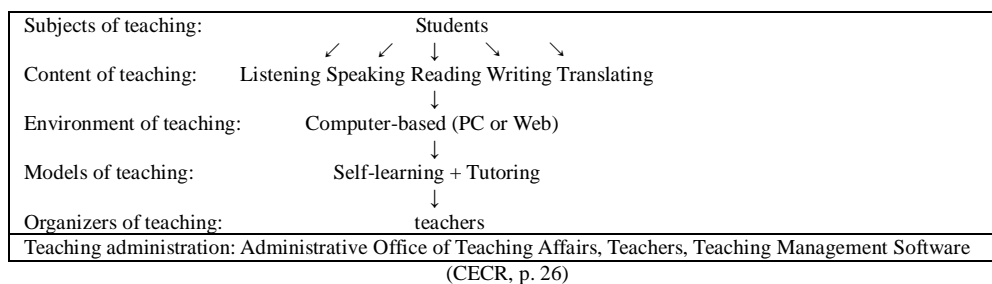
The discussed definitions either focus on autonomy as an ability or as a certain act of learning. Whichever aspect of autonomy is emphasized, we have to admit that there is no absolute autonomy in classroom education. It is hard for students to be totally independent of the teacher, of the other learners, or of the formally approved curricula. Learning, actually, is a process of social internalization, and it occurs within the social framework.

Even when learning seems to lack this social framework, as when a learner reads a textbook, the psychological process involved includes a covert, internalized version of social interaction.

The above definitions also seem to be incomplete. To have an ability to do something but not do it would hardly be useful. For example, a student can have the ability to take charge of his or her learning but still decide to be highly teacher-dependent and take no initiatives whatsoever. And this is often the case, perhaps because it is less energy-consuming, which could simply be the most efficient strategy. On the other hand, if autonomy is defined as a student taking responsibility without having the ability to do so, then for example any blind act of randomly choosing materials from a library shelf would be the ultimate autonomous deed.

#### B. Computer-based Multimedia College English Teaching Model

The new College English teaching model based on the computer is designed to help Chinese students achieve the objectives set by the CECR. The model places a premium on individualized teaching and independent learning and makes full use of the special function of computers in assisting learners with individualized and repeated language practice, especially with the training of listening and speaking abilities. Students can be assisted by computers in choosing the appropriate content of learning according to their specific needs, proficiency and schedule under the guidance of teachers, so that their all-round ability to use English can be improved and the best effects of learning achieved.



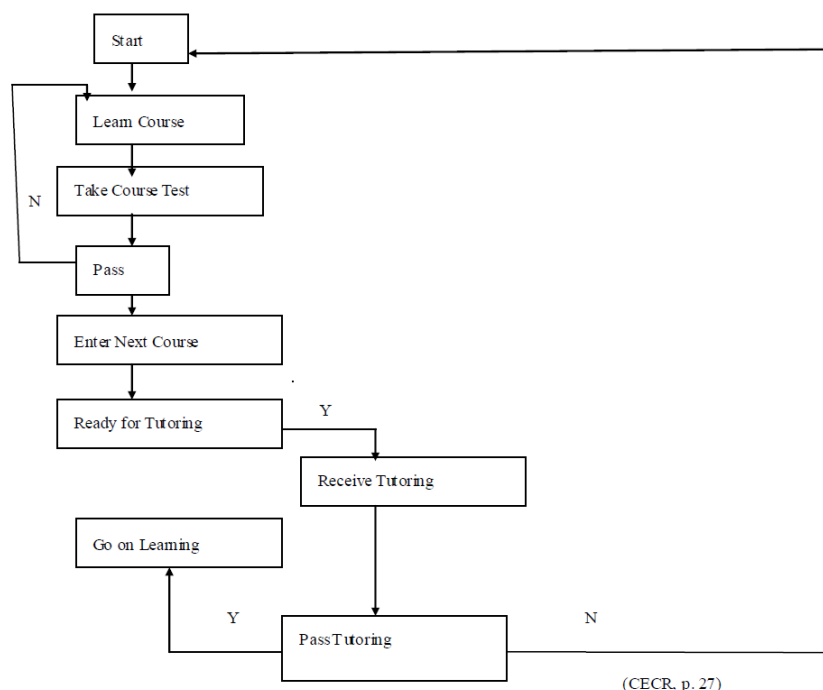


Figure: Process of computer-based English learning

### III. RESEARCH METHODS

#### A. Research Question and Subjects

The following studies intend to investigate the situation of autonomous learning under the model of computer-based multimedia college English teaching at Qingdao University of Science and Technology by adopting a survey method. More specifically, the present study attempts to answer the following question: What are the students' attitudes, motivation and their real performance under the new and the traditional teaching models towards autonomous learning?

The subjects in the present study were selected through convenience sampling, which means that "the researcher takes advantage of an accessible situation which happens to fit the research context and purposes" (Punch, 1998, p. 105). In QUST, four classes of sophomores major in arts were chosen. Altogether there were 91 students participating in the survey and they were 53 girls and 38 boys. With the help of computer-based multimedia, 46 students did English autonomous learning once a week at a fixed time, and they were considered as Group1. The other 45 students, which were taught traditionally, were considered as Group2. They all have studied English for two years.

#### B. Data Collection Instruments

The questionnaire used in this study consists of two parts. The first 16 items are designed by Broady (1996) and the other 5 self-designed items based on Cotterall's (1999) questionnaire on learner beliefs. It altogether comprises 21 items to be answered using a Likert scale. The questions are divided into the following three parts:

Part A: beliefs on cooperative work and independent learning in such specific areas as vocabulary, grammar and receptive skills.

Part B: views concerning responsibility for selection of content and objectives setting.

Part C: attitudes towards external assessment, which provides a key to whether motivation is intrinsic or extrinsic.

After the administration and the initial analysis of the questionnaire data, a face-to-face interview was conducted, which centered on the items in the questionnaire. Six students participated in the interview, which was tape-recorded and notes were taken by the researcher at the same time.

SPSS (Statistical Package for the Social Science) 10.0 for Windows was employed as another instrument. The qualitative data of interview were analyzed by organizing, summarizing and synthesizing so as to arrive at the results and conclusions of the research.

### IV. RESULTS AND DISCUSSION

#### A. Beliefs on Language Learning Activities

TABLE I  
 RESPONSES TO ITEMS ON LANGUAGE LEARNING ACTIVITIES  
 (EXPRESSED AS PERCENTAGE OF RESPECTIVE POPULATION)

Item		5	4	3	2	1
A1 I enjoy project work where I can work with other students.	Group1	31.1	46.7	17.8	4.4	0
	Group2	15.2	34.8	21.7	26.1	2.2
A2 Grammar has to be explained by expert, and you can't learn it on your own.	Group1	6.7	13.3	33.3	33.3	13.3
	Group2	13.0	15.2	23.9	37.0	10.9
A3 It is important for the teacher to give students vocabulary to learn.	Group1	26.7	40.0	15.6	15.6	2.2
	Group2	28.3	41.3	15.2	10.9	4.3
A4 Reading and listening work is pointless in classes; it should be done outside the class.	Group1	9.4	35.6	10.6	36.6	7.8
	Group2	10.9	10.9	23.9	39.1	15.2
A5 Cassettes and videos are best used by individuals rather than in an English class.	Group1	8.9	20.0	20.0	44.4	6.7
	Group2	15.2	28.3	13.0	39.1	4.3

(5-strongly agree 4-agree 3-no views 2-disagree 1-strongly disagree)

Table I showed the subjects' responses to items concerning language learning activities. As the table showed, half of the subjects in Group2 enjoyed the cooperative work while the number in Group1 is 77.8%. This phenomenon could be an indication that the subjects under the computer-based multimedia teaching model much more favored autonomous learning, which presupposed that these students were not just more independent, but much more interdependent. Their views on autonomous learning in the area of grammar were quite similar. Nearly half of the subjects in respective groups disagreed with the statement that grammar had to be explained by expert and you couldn't learn it on your own. Regarding vocabulary, 66.7% of the subjects in Group1 agreed that it was important for the teacher to give students vocabulary to learn, and the number in Group2 was a little higher—69.6%. In the following interview, a student said, "Learning the vocabulary in our text books is not enough. We need to select some more from other sources. But I expect the teacher to list for us the vocabulary to learn, because they are clear what vocabulary is useful for us to pass the tests of Band 4 or Band 6." His view represented a part of the students' thought. Though they wanted to select new vocabulary by themselves, they did not know how to do it and were not sure whether their selection was appropriate or not, and finally they turned to the teacher for help.

The purpose of items A4, A5 was to investigate the subjects' view on what language activities should be considered much more important in English class. Item A4 received 44.5% in Group1 and 54.3% in Group2 for disagreement with the statement that reading and listening work was pointless in class and it should be done outside the class. The data signified that subjects of Group2 were more adaptable to the reading and listening activities in class. While no less than half of the subjects who were under the computer-based multimedia adapted to this kind of activities. There were 28.9% of the subjects in Group1 and 43.5% in Group2 expressed agreement with the statement that cassettes and videos were best used by individuals rather than in an English class. This indicated that the subjects in Group2 believed that reading, listening, and the usage of cassettes and videos were much more beneficial in class than that of Group1 and the subjects in Group2 also felt that practically all learning activities had better be carried out in class—leaving little for autonomous learning. It also indicated that the subjects in Group1 much more voluntary to take responsibility for learning activities on their own. This result was confirmed by the answer obtained from the interview. For example, one student from Group2 said, "My major has occupied almost all of my time after class. I like to practice reading and listening in English class with the supervision of the teacher, who provides us with appropriate material. I know that spoken English and listening is very important for my job-finding in the future, but I always feel depressed when I listen the recorder or try to communicate with others in English, then I give it up and just make the practice in English class." One student from Group1 said, "I can get much appropriate studying material from the multimedia. When I take part in the autonomous learning class, I choose a piece of elementary text to read. If I pronounce the words correctly, I will get to the secondary phase. If not, the computer the wrongly-pronounced words for me and ask for the right reading. I like this software very much, which raise me the interest of reading and listening. Studying English is just like playing electronic games."

#### B. Views Concerning Responsibility for Selection of Content and Objectives Setting

TABLE II  
RESPONSES TO ITEMS ON SELECTION OF CONTENT AND OBJECTIVES SETTING  
(EXPRESSED AS PERCENTAGE OF RESPECTIVE POPULATION)

Item		5	4	3	2	1
B1 The teacher should be the one to decide on course content for English classes.	Group1	6.7	31.1	22.2	31.1	8.9
	Group2	17.4	23.9	37.0	19.6	0
B2 I know exactly the kind of material I like to work on for English classes.	Group1	2.2	46.7	37.8	11.1	2.2
	Group2	13.0	41.3	34.8	10.9	0
B3 I feel I have a good idea of my English proficiency.	Group1	2.2	48.9	40.0	6.7	2.2
	Group2	6.5	34.8	47.8	10.9	0
B4 If I have a problem with English, I am confident I can solve it.	Group1	8.9	44.4	33.3	11.1	2.2
	Group2	8.7	23.9	43.5	21.7	2.2
B5 I feel I can define my own objective in English learning.	Group1	4.4	62.2	24.4	6.7	2.2
	Group2	21.7	41.3	26.1	10.9	0
B6 I feel I know what's best for my English learning.	Group1	6.7	62.2	20.0	8.9	2.2
	Group2	17.4	37.0	34.8	10.9	0
B7 I feel confident about my level of English.	Group1	11.1	28.9	40.0	15.6	4.4
	Group2	13.0	37.0	21.7	21.7	6.5

(5-strongly agree 4-agree 3-no views 2-disagree 1-strongly disagree)

The above items concerned the responsibility for selection of content, objectives setting and autonomy. 37.8% of the subjects in Group1 and 41.3% of the subjects in Group2 agreed with the statement that the teacher should be the one to decide on course for English classes, but 40% of the subjects in Group1 and 19.6% of the subjects in Group2 expressed the disagreement for that statement. As to Item B2, 54.3% of the subjects in Group1 agreed that they knew exactly the kind of material they would like to work on for English classes, and the number of Group2 was 48.9%, which was a little lower than that of Group1. The two sets of numbers indicated that the learners of Group1 was more easily to choose the material for English classes on their own and they were more independent in English learning than the learners of Group2. The subjects' views from each group were reflected clearly through the interview. A student from Group1 said, "I know exactly what kind of material I like to work on for English classes, so we should play a part in the selection of content." However, a student who disagreed with the two items said, "The teachers have been teaching English for years. So they know exactly what is appropriate for us. I like the content that the teacher chooses for us to make the selection." Item B3 concerned the learners' evaluation. As we could see in the table, 51.1% of the subjects in Group1 thought they had a good idea of their English proficiency, while the number in Group2 was 41.3%. 40% of the subjects in Group1 and 47.8% of the subjects in Group2 felt uncertain on this statement. Half of the subjects in Group1 were able to give a general idea of their English level and two fifths of the subjects were not sure. In Group2, the subjects who were uncertain about the assessment of their own language work were more than the one who could. This, then, indicated that the learner autonomy of the subjects in Group1 was more than that of Group2 if self-assessment were to be invited.

A little more than half of the students in Group1 expressed the agreement with the statement that they had confidence in their ability to solve their problems, while the number in Group2 was only one third. This indicated that the students under the computer-based multimedia teaching model felt more confident about their problem-solving abilities. As for Item B5, a fairly large proportion of the subjects in each group held that they could define their own objectives in English learning, and the numbers were 66.6% and 63% respectively. More than two thirds of the subjects in Group1 thought they knew what was best for their own English learning, and the percentage of Group2 was 54.4%. As to the selection of content, objective setting and evaluation, the responses to the first six items showed that the subjects in Group1 had superior performance than that of Group2. However, the last item received a contradictory response to the other six items, 40% of the subjects in Group1 felt confident about their level of English, which was 10% less than that of Group2. This suggested that the students with new teaching model had stronger autonomy in English learning but less confident about their level of English. The teacher, who took charge of the autonomous learning class said, "Most of the students in my class held positive attitude about English autonomous learning. With the help of computer and multimedia, they practise more and more and make some progress in English learning. But their English foundation is really worse, and there are only two class hours once a week, which is very limited. Maybe this is one reason that some of the students show no confidence about their level of English."

### C. Attitudes towards External Assessment

TABLE III  
RESPONSES TO ITEMS ON EXTERNAL ASSESSMENT  
(EXPRESSED AS PERCENTAGE OF RESPECTIVE POPULATION)

Item		5	4	3	2	1
C1 I only work on an exercise if I have to hand it in.	Group1	8.9	15.6	28.9	40.0	6.7
	Group2	13.0	26.1	23.9	32.6	4.3
C2 All exercises should be marked by a teacher.	Group1	15.6	17.8	17.8	40.0	8.9
	Group2	8.7	10.9	30.4	43.5	6.5
C3 Exams are what motivate me to work hard in English learning.	Group1	26.4	24.0	8.9	29.3	11.3
	Group2	15.0	43.3	17.4	13.2	11.0
C4 An exercise is only worth doing if it is marked by a teacher.	Group1	6.7	11.1	15.6	48.9	17.8
	Group2	6.5	10.9	28.3	41.3	13.0

(5-strongly agree 4-agree 3-no views 2-disagree 1-strongly disagree)

Table III reported the results of responses to the four items concerning the attitudes the subjects took towards external assessment. It showed that 46.7% of the subjects in Group1 and 36.9% of the subjects in Group2 rejected the idea that the exercise was only worth doing if it had to be handed in. There was also a rejection by 50% of both groups of the statement that all the exercises should be marked by a teacher. And 54.4% of Group1 and 58.3% of Group2 agreed that exams were what motivate them to work hard in English learning. Meanwhile, 66.7% of Group1 and 54.3% of Group2 rejected the idea that exercise was only worth doing if it was to be marked by the teacher. The responses to Item C1, C2 and C4 seemed to be encouraging: many students of both groups thought external assessment was not the main reason for them to do exercises. The subjects with new teaching model showed a higher degree of intrinsic motivation than the students under traditional teaching. However, Item C3 produced a contradictory result, with over half of each group reckoning the exam as a motivation for them to work hard. The percentages were 54.4% and 58.3% respectively. This obvious contradiction could be explained by the fact that English teaching in China had for long been test-oriented, even with the use of multimedia. For many, if not all the students, the aim of learning English was to pass exams in order to go to college or to find a rewarding job after graduation. A student told the researcher in the interview, "In high school, I learned English in order to pass the entrance examination. Now I am learning English in order to pass the tests of Band 4 and Band 6 so that I can get the certificate that can help me find a good job after graduation. It is the exam that has been motivating me to learn English." Although in some areas of English learning, the students of both groups demonstrated a certain degree of autonomy, on the whole, it was the external assessment that had motivated them to make efforts to learn.

## V. CONCLUSION

From the above analysis and comparison we could come to the conclusion about the learner's real performance. First of all, there was not significant difference in their responses to items in Part A (language learning activities), Part B (selection of content, objective setting and autonomy), and Part C (attitudes towards external assessment). Subjects from both groups in the present study displayed a similar profile of their real performance. However, there were indeed some concrete differences existed in the responses. The subjects under the computer-based multimedia teaching model were much more autonomous on their real learning performance. Most of them enjoyed the cooperative work, adapted to reading and listening activities outside the class and were voluntary to take responsibilities for their learning activities; most of them easily to choose the material for English class, to define their own objectives and evaluate their level of English. Although both of the two groups got similar data on some items, such as Item A3, Item B2, Item B5, and Item C3, the percentage showed that the performance of the subjects in Group 1 was always better than that of Group 2, which indicated that the students with new teaching model had higher autonomy and with the help of computer-based multimedia, the students preferred the autonomous learning class to the traditional class.

With the help of computer-based multimedia, the students of Group 1 who had undergone the autonomous learning program based on computer-based multimedia College English Teaching Model showed better performance than the traditional one in the process of autonomous learning. It indicated that their two-year autonomous learning was effective, although the class was compulsory. However, we could not claim that the new computer-based multimedia teaching model had a significantly better effect than the traditional model from the results.

## APPENDIX

This questionnaire is being conducted for the study on autonomous learning in the context of computer-based multimedia college English teaching and learning. The goal of this questionnaire is to map the beliefs, views and attitudes of students on autonomous learning. This questionnaire will take 10 minutes to complete.

1. Sex: (please tick) Female  Male
2. Age: \_\_\_\_\_
3. Major: \_\_\_\_\_

Read the following sentences and tick according to the actual situation.	strongly agree	agree	no views	disagree	strongly disagree
A1 I enjoy project work where I can work with other students.					
A2 Grammar has to be explained by expert, and you can't learn it on your own.					
A3 It is important for the teacher to give students vocabulary to learn.					
A4 Reading and listening work is pointless in classes; it should be done outside the class.					
A5 Cassettes and videos are best used by individuals rather than in an English class.					
B1 The teacher should be the one to decide on course content for English classes.					
B2 I know exactly the kind of material I like to work on for English classes.					
B3 I feel I have a good idea of my English proficiency.					
B4 If I have a problem with English, I am confident I can solve it.					
B5 I feel I can define my own objective in English learning.					
B6 I feel I know what's best for my English learning.					
B7 I feel confident about my level of English.					
C1 I only work on an exercise if I have to hand it in.					
C2 All exercises should be marked by a teacher.					
C3 Exams are what motivate me to work hard in English learning.					
C4 An exercise is only worth doing if it is marked by a teacher.					

## REFERENCES

- [1] Benson, P. (1997). The philosophy and politics of learner autonomy. In P. Benson and P. Voller (Eds.), *Autonomy and independence in language learning*. London: Longman.
- [2] Broady, E. (1996). Learner attitudes towards self-direction. In E. Broady and M. Kenning (Eds.), *Promoting learner autonomy in Language teaching university* (pp.215-235). London: Association for French Language Studies.
- [3] Broady, E., & Kenning, M-M. (Eds.). (1996). *Promoting Learner Autonomy in University Language Teaching*. London: Association of French Teachers/Centre for Information on Language Teaching and Research.
- [4] Cotterall, S. (1995). Readiness for autonomy: investigating learner beliefs. *System*, 23, 195-205.
- [5] Dickinson, L. (1995). Autonomy and motivation: A literature review, *System*, 23(2), 165-174.
- [6] Holec, H. (1981). *Autonomy in foreign language learning*. Oxford: Pergamon.
- [7] Higher School University Foreign Language Education Committee. (2004). *College English Curriculum Requirement*. Beijing: Foreign Language Teaching and Research Press.
- [8] Huttunen, I. (1986). *Towards learner autonomy in foreign language learning in senior secondary school*. Oulou, Finland: University of Oulou.
- [9] Little, D. (1991). *Learning autonomy 1: Definition, Issues and Problems*. Dublin: Authentic.
- [10] Nunan, D. (1995). Closing the gap between learning and instruction. *TESOL Quarterly*, 29(2), 133-158.
- [11] Punch, F.(1998). *Introduction to social research: quantitative and qualitative approaches*. London: Thousand Oaks, Calif.

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