Investigating a Systematic Approach to the Promotion of EFL Learners' Autonomy

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Abstract
Autonomy is the ability to take charge of one's own learning. However, this ability is not inborn and must be acquired by formal instruction (Holec, 1981). Therefore, to offer a systematic approach to the development of learner autonomy in language learning process, Benson (2001) argues that learner autonomy is described in terms of learners' control over the three dimensions of learning management, cognitive processes, and learning content. However, developing learner autonomy through systematic instruction has received little attention in EFL context. To bridge this gap, this study aims to provide experimental support for the impact of applying Benson's (2001) three-level model of learner autonomy on fostering autonomy among EFL learners. To this aim, the data were collected and analyzed from a group (N=40) of English as a foreign language learners, doing their bachelor's degree. The results indicated that autonomy subscale was greater after the completion of instructional intervention. Besides, further investigation provided evidence on the fact that autonomy is not an all-or-nothing concept as the learners reached "intervention level" of degrees to learner autonomy. In total, this study suggests that each dimension of autonomy in language learning should be developed separately, although many researchers often attach more importance to one level of control than others.

Keywords: autonomy; attention; cognitive processes; learning management; metacognitive strategy; reflection .

INTRODUCTION

Learner autonomy, as the ability to take responsibility for one's own learning, became popular in the 1960s but it appeared in the field of foreign language learning by Holec's (1981) contribution. Holec's publications in 1980 and 1981 were actually among the first works on the concept of learner autonomy in foreign language learning (Benson, 2006, 2008; Little, 1991). This, in fact, followed the emergence of learner-centered approaches, such as negotiated syllabuses, learning-strategy training, the project-based syllabus, and learner-based teaching (Breen & Candlin, 1980; Nunan, 1988; Oxford, 1990). All these approaches focus on the concept of individualization as autonomy concentrates on satisfying the needs of individual learners (Benson, 2001; Van Lier, 1998).

According to Benson (2008), student-centered educational reforms were proposed by Freire in 1970. Moreover, orientation toward the concept

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of autonomy corresponded to an ideological shift away from materialism towards an emphasis on the meaning and value of personal experience (Farrell & Jacobs, 2010; Gremmo & Riley, 1995). In fact, the development of functional approaches to grammar supported a shift to more communicative approaches to language teaching (Littlewood, 2004; Little, 2007; Savignon, 1997). There is a general consensus that autonomy can be fostered through instruction (Benson, 2001; Holec, 1980, 1981; Little, 1991).

As Benson (2001) points out, learners' control over learning falls under the three headings of learning management, cognitive processes involved in language learning, and the content of learning. Nevertheless, many researchers (Holec,1981; Little, 2001) often attach more importance to one level of control than others. Therefore, this study aimed to provide experimental support for the effect of Benson's three-level model of learner autonomy on fostering autonomy in EFL context. This study, also, sought to investigate the degree to which the learners can be autonomous through applying Benson's (2001) suggested model.

Literature Review Definitions of Learner Autonomy

Learners' cognitive, affective, metacognitive, and social factors are all central to the definitions of learner autonomy. Learner autonomy is defined as "the ability to take charge of one's own learning" (Holec, 1981, p.3). For Holec, autonomy is an ability that must be learned through formal instruction. Holec believes that it is through parallel operation of two processes that the learners gradually proceed from a position of dependence to independence. One of these processes is a gradual deconditioning process which will cause the learners to break from ideas such as the presence of only one ideal method or the supposition that the knowledge of the mother tongue is of no use for learning a second language. The second of Holec's processes consists of learning the knowledge needed to assume responsibility for learning.

In Little's (1995) definition, autonomy is the ability for detachment, critical thinking, decision-making, and independent actions. Hence, this definition involves awareness as Little emphasizes learners' critical thinking on their learning process. Therefore, considering cognitive perspective into account, learner autonomy can be defined as the ability to take charge of one's own learning with some degree of awareness. However, as it is illustrated in Table 1, due to the lack of theoretical debate on autonomy in linguistics and SLA research, the following definitions are suggested in language teaching and learning:

Table 1
Definitions of Learner Autonomy

Author	Definitions of Learner Autonomy
Holec (1981)	"autonomy is the ability to take charge of one's own learning. This ability is not inborn but must be acquired either by natural means or as most often happens by formal learning, in a systematic, deliberate way (p. 3)."
Little (1991)	"autonomy is a capacity for detachment, critical reflection, decision making and independent action (p. 4)."
Kenny (1993)	"autonomy is not just a matter of permitting choice in learning situations, or making pupils responsible for the activities they undertake, but of allowing and encouraging learners, through processes deliberately set up for the purpose, to begin to express who they are, what they think, and what they would like to do, in terms of work they initiate and define for themselves (p. 440)."
Cotterall (1995a)	"autonomy is the extent to which learners demonstrate the ability to use a set of tactics for taking control of their learning (p. 195)."

Therefore, there is a great consensus that learner autonomy is a state that is required to be nurtured and fostered through instruction (Benson, 2001, 2003; Cotterall, 1995b, 2006; Dam, 1995; Little, 1995).

Benson's (2001) Model of Learner Autonomy

Benson's (2001) model of learner autonomy derives from both Holec's (1981) and Little's (1991) descriptions of learner autonomy. Learner autonomy is defined as "the ability to take charge of one's own learning" (Holec, 1981, p. 3). For Holec, this ability includes the decisions concerning all aspects of learning. Holec believes that learners can hold responsibility for determining objectives, defining the contents and progressions, selecting methods, and monitoring the procedure of acquisition. Although Holec did not refer to cognitive factors involved in the development of autonomy, he was aware of them as he referred to decision making abilities in autonomous learning. Moreover, Little (1991) defines learner autonomy in terms of control over the cognitive processes involved in self-management of learning. Hence, Benson (2001) believes that the description of learner autonomy in language learning involves the significance of the three levels of learning management, cognitive processes, and learning content.
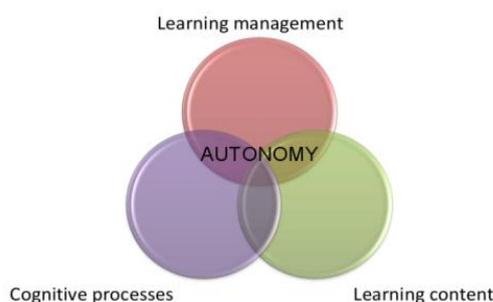

Figure 1. Benson's (2001) Model of Learner Autonomy

As it is illustrated in Figure 1, these three levels of control are interdependent. Effective learning management depends on the control of the cognitive processes involved in learning which necessarily has consequences for the self-management of learning, and control over cognitive processes should involve decisions concerning the content of learning (Benson, 2001).

Control over Learning Management: Learning management is identified as one level at which control can be exercised over learning. According to Benson (2001), control over learning management can be described in terms of behaviors that learners use to manage the planning, organization, and evaluation of their learning. Therefore, it is at the level of learning management that control over learning is directly observable, and research on the behaviors involved in autonomous language learning has to a large extent drawn upon research on learning strategies.

Learners should use certain learning strategies to manage their learning effectively. Benson (2001) believes that even the taxonomies of learning strategies can be applied when we begin to describe the behaviors involved in autonomous learning. Besides, strategy instruction is based on this assumption that if learners are conscious about the selection, use, and evaluation of their learning strategies, they will be more successful language learners by being more autonomous (Cohen, 2007; Hsiao & Oxford, 2002). Cognitive/direct strategies involve direct operations on the language to be learned, so they do not have any applications to developing autonomy; however, metcognitive, social, and affective strategies have more to do with autonomy (Oxford, 1990; O'Malley & Chamot, 1990). To put it more simply, metacognitive strategies involve planning for learning, monitoring the learning task, and evaluating how well one has learned. These behaviors are closely linked to the concept of autonomy (Benson, 2001).

Control over Cognitive Processes:

Benson(2001) believes that control over cognitive processes is the second aspect of autonomy. Control over cognitive processes is viewed as a matter of the psychology of learning rather than directly observable learning behaviors. As it is il

lustrated in Figure 2, Benson (2001) believes that the psychology of autonomous learning involves attention, reflection, and metacognitive knowledge.
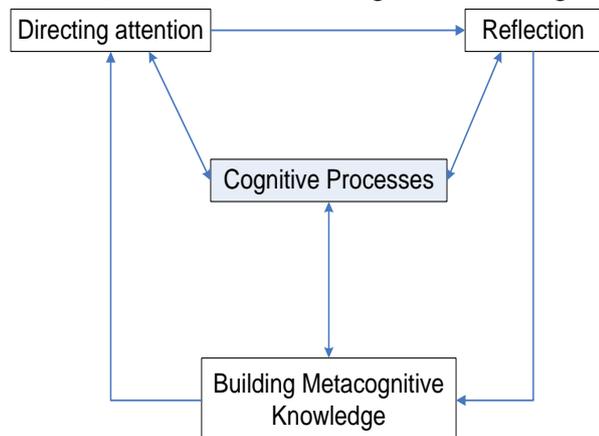

Figure 2. Cognitive Processes in an Autonomous Learner (Benson, 2001)

The cognitive approaches contend that learning is dependent on the learners' active mental engagement with linguistic input. According to Little (1997), autonomy presupposes that learners develop a particular kind of psychological relation to the process and content of their learning. Elsewhere, Little (1995) states that the nature of the autonomous learners' psychological relation to the learning process can be described with respect to the capacity for detachment, critical thinking, and creativity. Therefore, attention is considered essential for language learning if it is to be effective. Schmidt's (1990) noticing hypothesis holds that learners must first demonstrate conscious apprehension and awareness of a linguistic form before any processing of it can take place. As a consequence, Benson (2001) believes that if attention is a precondition for acquisition, it follows that effective language learning might be dependent upon the learner taking cognitive responsibility for what is attended to input. A number of researchers have described reflection as a key psychological component of autonomy. Little (1994) states that conscious reflection on the learning process is a unique feature of autonomous learning. Wallace and Louden (2000) define reflection as a mental process which takes place out of the stream of action, when the person looks forward or back to actions

that have taken place. Hence, reflection is oriented towards the content of language learning and contributes to the learner's autonomy as a language user (Benson 2001; Benson & Lor, 1999; Little, 1991; Kohonen, 1992).

Metacognitive knowledge is another aspect of psychology of autonomous learning.

Metacognition is cognition about cognition or knowledge about knowledge (Flavell, 1979). Therefore, metacognition involves thinking about one's own perceiving. Metacognitive knowledge is essential for successful autonomous learning as the learners' understanding of themselves, the tasks they engage, and the strategies available to them affect all their decisions about learning (Wenden, 1987 1995, 1998, 2002). Likewise, Sinclair (1999) states that the link between the development of metacognitive knowledge and learner autonomy is clear as the definitions of autonomy in language learning assume that learners have the capacity to make informed decisions about their learning. In other words, the development of metacognition through learner training is crucial and its evaluation central to the search for proof of the efficacy of developing autonomy.

Control over Learning Content: The content of learning is the third level of control relevant to the description of autonomy. Controlling the content of learning is fundamental to learner autonomy. If learners are self-managing methodological aspects of the learning process but not learning what they want to learn, their learning might not be authentically autonomous. Autonomy is not just a matter of permitting choices in learning situations or making pupils responsible for the activities they undertake, but of allowing and encouraging learners, through processes deliberately set up for the purpose, to begin to express who they are, what they think, and what they would like to do, in terms of work they initiate and define for themselves (Benson, 2001; Kenny, 1993). Therefore, control over the content is the kind of autonomy that allows the learners to express their ideas about the content of the learning. However, as Benson (2001) points out, further

research is needed to provide experimental evidence for the impact of control over learning management, cognitive processes, and learning content on fostering learner autonomy. Hence, this study aimed to answer the following research questions:

1. Does Benson's (2001) model of learner autonomy have any significant effect on developing autonomy among EFL learners?

2. To what degrees can EFL learners be autonomous through applying Benson's (2001) model of learner autonomy?

Method
Participants
Data were collected from a sample group (N=40) of both males and females EFL learners, ranging in age from 18 to 24 years. The participants assigned to intervention program in this study were selected through administering Oxford Placement Test (Allan, 1992). Those participants whose scores on the test were between one SD above and one SD below the mean were selected. Moreover, all the participants were doing their bachelor's degree in English language teaching program were all participating in Academic Writing Course 1.

Instruments
Academic Learning Self-Regulation Questionnaire (Ryan & Deci, 2000) was used to measure autonomous and controlled regulations of the participants in this study. Academic Learning Self-regulation Questionnaire (SRQ-A) is a 7-point (*1=Not at all true* to *7=Very true*) Likert-scale questionnaire, including 12 items. This questionnaire was formed with the two subscales of controlled and autonomous regulations. As Ryan and Deci (2000) report, the reliability indices for the two subscales of controlled and autonomous regulations are 0.76 and 0.80. Also, Metacognitive Awareness Inventory (Schraw & Dennison, 1994) was used to collects data on learners' metacognitive awareness in learning.

Metacognitive Awareness Inventory (MAI) has 52 self-report statements. The participants select true or false for each statement on the questionnaire, and each learner's score was the total number of statements marked true. As Schraw and Dennison (1994) report, the reliability for this questionnaire is 0.88.

The Learning Climate Questionnaire (Black & Deci, 2000) was used to assess the general learning climate in the classroom. The Learning Climate Questionnaire (LCQ) is a 7-point Likert scale questionnaire, including 15 items. The items in the LCQ measure the autonomy support of an individual teacher. Therefore, higher scores represent a higher level of autonomy support. As Black and Deci (2000) report, the reliability of this questionnaire is 0.90. Computer key-stroke logging techniques raises the linguistic and writing strategy awareness of learners (Sullivan & Lindgren, 2006). Computer key-stroke logging permits the writers to record all the key-strokes they made during the composition of their texts, and they replay all the recorded key-strokes in real time. Also, Nunan's (1995) Reflective questionnaire was used to measure the participants' degrees of learner autonomy. This questionnaire has eight open-ended questions.

Therefore, the learners are able to observe and discuss a text's evolution and see all the changes made to the text during its online composition. Key-stroke logging program is concerned with how language users navigate through the task of producing or understanding text. Key-stroke logger involves what the writer does instead of what the final product looks like. Through observing the process of writing process and electronic recordings of all operations, including key presses, editing functions and cursor movements made by the writer, key-stroke logging program allows the storage and subsequent retrieval of a large number of features of the writing actions.

Data Collection and Analysis
The participants in this study benefitted from a semester instructional intervention, including

16 weekly sessions. Each session lasted for three hours. First, to measure the participants' autonomy level, the researcher used Academic Learning Self-Regulation Questionnaire (SRQ-A). The participants were asked to complete Academic Learning Self-Regulation Questionnaire (Ryan & Deci, 2000) at the beginning and after the completion of the instructional intervention. Then, the two subscales of controlled and autonomous regulations were computed to analyze learners' responses to the SRQ-A. Paired t-test was conducted between the data collected from autonomy subscales. Moreover, another paired t-test analysis was run between the data collected from controlled subscale to determine the significance of difference.

Furthermore, to enhance the participants' learning strategies and their use, the researchers applied explicit instruction of writing strategies through applying Sasaki's (2000) taxonomy of writing strategies. The four writing strategies from Sasaki's (2000) taxonomy were selected to develop the writing strategies among the participants. The selected strategies were planning, organizing, generating ideas, and evaluating. The participants were asked to write essays on specific topics prior to and after the instruction of the selected strategies to determine their improvement in writing skill. Then, two raters scored the participants' essays, applying Jacob et al.'s (1981) composition checklist. Repeated measures design was run to adjust the effect of the raters as covariate. The psychology of autonomous learning was identified as the second aspect of autonomy. Control over cognitive problems is concerned with attention, reflection, and metacognitive knowledge. In this study, the concepts of attention and awareness are considered the same and used interchangeably (Van Lier, 2004). The computer key-stroke logging technique together with stimulated recall was used to enhance attention and language awareness among the participants. The participants were asked to write two descriptive texts on the topics of overpopulation and traffic congestion, using key-stroke logger.

The participants worked with both Text 1 and Text 2 on two occasions.

In the first writing session (Writing day), the participants were key-stroke logged as they performed writing Task 1. The participants were asked to revise their texts the following day (Text-revision day). They did not benefit from stimulated recall during composing Text 1, while composing Text 2 involved stimulated recall. As Gass and Mackey (2000) point out, stimulated recall methodology is used to collect learners' thought processes or strategies at the time of an activity and it can be achieved by asking learners to report those thoughts after they have completed an activity. The researchers introduced stimulated recall using key-stroke log when the participants were composing writing Text 2 on both Writing day and Text-revision day. When doing Text 2, the participants were key-stroke logged too. Immediately after writing Text 2, the participants took part in a stimulated recall reflection session with their peers on both Writing day and Text-revision day. The logs of the Text 2 essays were replayed and the participants were asked to discuss with their peers what they thought during the writing sessions and why they made the revisions they had. To have a clearer picture of the data collection procedure in this study, the summary of the research design is illustrated in Table 2.

Table 2

Applying Key-stroke Logging and Stimulated Recall in Increasing Language Attention

Text 1		Text 2	
Writing day	Text-revision day	Writing day	Text-revision day
Key-stroke logged writing session	Key-stroke logged writing session	Key-stroke logged writing session accompanied by stimulated recall session with a peer	Key-stroke logged writing session accompanied by a stimulated recall session with a peer

According to Sullivan and Lindgren (2006), the replaying keystroke logged writing sessions allow the on-line analysis of pauses and revisions. Stimulated recall alongside keystroke logging was applied to develop a taxonomy for the analysis of on-line revision. The key-stroke logs provide access to a range of descriptive statistics. In this study, the researchers focused on the number of words in final text and the number of revisions, including typographical error corrections and the number of revisions. These descriptive statistics were generated for the writing and the text revision sessions.

A grade was assigned to all the texts both the Writing day and Text-revision day texts by the researcher. The researchers categorized and coded each revision into surface (spelling, grammar, punctuation and meaning-preserving changes), text-based (meaning- changing revisions at the micro and macro levels), and balance (discourse juncture, topic and audience orientation) changes. Further analysis was conducted to access the descriptive statistics. The LS-taxonomy of on-line revision, adopted from Sullivan and Lindgren (2006), is illustrated in Table 3.

Table 3
LS-Taxonomy of On-line Revision cited in Sullivan and Lindgren (2006, p. 181)

Form Revision		Conceptual Revision	
Typography	**Punctuation and Format**	**Text-based structure**	**Balance**
Spelling	Punctuation marks	Audience	Topic
Revised	Capitalization	Deletion	Audience
Deleted		Substitution	Register
Grammar	Meaning-preserving	**Macro –structure**	
Verb agreement	Addition	Addition	
Preposition	Deletion	Deletion	
Conjunction	Substitution	Substitution	

Moreover, frequencies of the descriptive statistics of participants' texts (Text 1 & Text 2) along with the marks they received were computed to determine how key-stroke logging along with stimulated recall can increase the participants' language awareness. To enhance reflection, the researchers collected and analyzed the data through metalinguistic reflection of the participants' output. Metalinguistic reflection is generally defined as reflections on language, regardless of whether L2 learners use linguistic terminology or not (Swain, 1998). In this study, the dictogloss technique was used to collect and analyze the data on the participants' metaliguistic reflection. Therefore, the participants were asked to write an independent essay on a specific topic. The topic was selected in a way to encourage the participants to use the target features which were aimed to be emphasized. The target features were cause and effect connectors, including conjunctions, prepositions, and adverbial conjunctions of cause and effect. To apply the dictogloss technique, the researchers first selected a short passage on the topic written by the participants, including the target features in the dictogloss technique. Then, a review lesson was provided on the target features which were aimed to be emphasized. The dictogloss was once read at a normal speed and the participants were asked to listen carefully. Then, the dictogloss was read the second time and encouraged the participants to take notes. Then, the participants worked in pairs to reconstruct the dictogloss. The participants were reminded to write their text while trying to be as close to the original as possible in grammar and content. The participants identified similarities and differences in terms of meaning and form between their text reconstructions and the original passage. The participants wrote essays on the selected topic and then the researchers scored the participants' essays, applying Jacobs' et al., (1981) composition checklist. Paired t-test analysis was computed between the two essays written by participants.

Furthermore, the explicit instruction of metacognitive strategies was used to enhance the participants' metacognitive knowledge, applying Oxford's (1990) theoretical framework of metacognitive strategies. The selected strategies were concept-mapping, selective attention, identifying

the purpose of language task, self-monitoring, and self-evaluation. The participants were asked to complete the Metacognitive Awareness Inventory (Schraw & Dennison, 1994) two times, at the beginning and at the end of the semester, to determine the development in participants' awareness of metacognitive strategies. Then,

paired t-test analysis was computed between the collected data to determine the significance of differences. The content of learning is a third level of control relevant to the description of autonomy. Learner-initiated activities (Wu, 2003) were applied during the instructional intervention to enhance the control over learning content.

Table 4
Autonomy-supportive Teaching Method (Wu, 2003)

Teaching procedure	Brainstorming and introduction of an activity; presentation and communicative drills; meaningful production.
Activity types	learner-initiated activities (e.g. free discussion; having a dialogue or role-play under a particular topic)
Participant organization	The teacher working with the whole class; independent seatwork; and pair work or group work.
Teacher Roles	supporter (who break a challenging task down into smaller, more manageable units for students to complete at different points in time or for different students to complete; provides explanations to increase learners' understanding of the content and procedure; provides hints or suggestions to prompt the use of skills.

As Table 4 illustrates, learner-initiated/open-ended activities encourage the learners to choose the content of learning. In this study, learner-initiated activities, such as free discussion under a particular topic, open-ended dialogues about the learning content, and presentation were applied during the instruction. The participants were asked to complete the Learning Climate Questionnaire (Black & Deci, 2000) two times at the beginning and at the end of the course to collect data on the their development on control over learning content. Then, paired t-test analysis was run between the data collected from participants' responses to the Learning Climate Questionnaire to determine the significance of differences. Moreover, the Reflective Questionnaire (Nunan, 1995) was administered among the participants to determine the degrees of learner autonomy. The systematic content analysis suggested by Brown (2001) was used to analyze the participants' re

sponses to the questionnaire. First, the researcher took each participant's responses in turn and marked in them any distinct elements, substantive statements, or key points. Second, based on the highlighted ideas and concepts, the researchers formed broader categories to describe the content of the response in a way that allowed for comparing with other responses. Then, the obtained categories were numerically coded and treated as quantitative data.

As Table 5 displays, Nunan's (1995) categorization of learner autonomy involves five levels. Thus, two raters were asked to determine the degrees of autonomy among the participants. Based on the participants' responses to the Reflective Questionnaire, the raters applied Nunan's framework to determine the degrees of learner autonomy among the participants. Then, kappa coefficient was used to access a quantitative measure of the magnitude of agreement between the two raters (Ary et al., 2010).

Table 5
Different Degrees of Learner Autonomy (Nunan, 1995)

Level	Learner action	Content	Process
1	Awareness	Learner are made aware of the pedagogical goals and content of the materials they are applying.	Learners identify strategy implications of pedagogical tasks and identify their preferred strategies
2	Involvement	Learners select their own goals from a range of alternatives	Learners make choices among many alternatives
3	Intervention	Learners modify and adapt the goals and content of the learning program	Learners modify and adapt tasks
4	Creation	Learners create their own goals and objectives	Learners create their own learning tasks
5	Transcendence	Learners move beyond the classroom and linkthe content of classroom learning and the world beyond the classroom	Learners become researchers and teachers

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Results and Discussion

To foster learning management, the explicit instruction of learning strategies was applied. Therefore, the participants were asked to write essays on specific topics prior to and after the completion of the instruction to determine their improvement in using L2 writing strategies targeted in this study. The results of the descriptive statistics are reported in Table 6.

Table 6
Descriptive Statistics of Participants' Writing in Benson's (2001) Model

		SD	Std.	95% Confidence Interval	
Essays	Mean		Error	Lower Bound	Upper Bound
Before	11.91	.83	0.07	11.76	12.07
After	16.92	.78	0.07	16.77	17.08

Although the results reported in Table 6 illustrate an increase in the participants' mean scores from 11.91 (SD=.83) to 16.92 (SD=.78), repeated measures design was run to determine whether there was any significant difference between the mean scores of the participants' writing performance and the results are reported in Table 7.

Table 7
Inferential Statistics of Repeated Measures Design on Participants' Writing Performance in Benson's (2001) Model

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Participants	46.21	39	1.18	2.42	.00
Method	1002.50	1	1002.50	2055.15	.00
Rater	.00	1	.00	.00	.95
Error	57.55	118	.48		
Total	34384.75	160			

As it is illustrated in Table 7, the F-observed value for comparing the mean scores in the participants' writing (F(39)=2.42, *p*=00<.05) indicated a significant difference between the mean scores. Moreover, the psychology of autonomous learning was identified as the second aspect of autonomy. The computer key-stroke logging technique together with stimulated recall instruction was applied and the descriptive statistics were applied for the writing and the text revision sessions. Then, a grade was assigned to all the participants' essays, both in the Writing day and Text-revision day. The descriptive statistics of one of the participants is reported in Table 8.

Table 8
Descriptive Statistics of Key-stroke Logging & Stimulated Recall

Participant 1	Text 1: No stimulated recall		Text2: with stimulated recall	
	Writing day	Text-revision day	Writing day	Text-revision day
Number of words in the final text	215	218	231	249
Number of typographical revisions	21	9	39	15
Number of text-based revisions	17	8	29	12
Grade out of 20	14.5	14.5	18	18

As it is illustrated in Tables 8, the participant added more words to the revised texts. Also, the participant had more revisions on the Text-revision day with stimulated recall. Therefore, there was a greater frequency of typographical and text-based correction revisions on the Text-revision day after a stimulated recall session. In other words, the revisions provided evidence on the focus of the par ticipant's language awareness and noticing. As Flower and Hayes (1981) point out, the writing process is a learning experience in which the writer notices his texts and his goals throughout his writing. Besides, according to Kellogg (1994), the thoughts and ideas made by the writer provide him/her with new input that may be a source for noticing a mismatch for newideas.

Similarly, the results reported in Tables 8 indicate that the participant made more typographical and text-based revisions on text revision day after a stimulated recall, resulting from an increase in their language awareness and noticing. The descriptive statistics of the other participants in this study indicated that there was a clear difference in revision days without and with stimulated recall. In other words, the participants had higher marks when the Text-revision session was followed by stimulated recall. Moreover, all the participants made more typographical and text-based correction revisions on Text-revision day after a stimulated recall session. Moreover, the results were consistent for all the participants as key-stroke logging along with stimulated recall led to higher correction revisions and consequently higher marks among the participants. Therefore, the findings indicated that key-stroke logging and stimulated recall led to an increase in noticing among the participants. Table 9 reports the descriptive statistics of dictogloss technique.

Table 9
Descriptive Statistics of Dictogloss Technique

Dictogloss Essays	Mean	N	Std. Deviation	Std. Error Mean
Before	12.40	40	1.82	.28
After	17.58	40	1.33	.21

The results reported in Table 9 show that dictogloss technique had effects on enhancing the participants' writing skill as the mean of the participants' writing skill increased from M=12.40 (SD=1.82) to M=17.58 (SD=1.33). Paired t-test analysis are was computed and the results indicated a statistically significant mean score gain from Time 1 to Time 2: t(39)=-23.797, $p< .05$.

Table 10
Descriptive Statistics of Metacognitive Awareness Inventory in Benson's (2001) Model

Metacognitive Awareness Inventory	Mean	N	Std. Deviation	Std. Error Mean
Before	15.55	40	2.55	.40
After	43.80	40	4.68	.74

Furthermore, the participants were asked to complete the Learning Climate Questionnaire two times at the beginning and at the end of the course to collect data on their development on control over learning content. Then, paired t-test analysis was run to determine the significance of the difference. Table11 reports the descriptive statistics.

Table 11
Descriptive Statistics of Learning Climate Questionnaire

	Mean	Number of Participants	Standard Deviation	Std Error Mean
LCQ T1	28.70	40	2.79	1.12
LCQ T2	42.80	40	1.87	.87

As the results reported in Table 11 show, the mean increased from M=28.70 (SD=2.79) to M=42.80 (SD=1.87). In addition, the results of paired t-test analysis indicated that there is a statistically significant mean score gain from the Time 1 to Time 2: t(9)=-17.386, $p<.05$.

Table 12 reports the descriptive statistics of autonomy and controlled mean scores of the participants. As the 12 illustrates, the mean for autonomy subscale increased from M=1.53 (SD=.18) to M= 5.20 (SD=.45), while the mean for controlled subscale decreased from M=5.91(SD=.52) to M=1.75 (SD=.30).

Table 12
Descriptive Statistics of Autonomy & Controlled Subscales

	Mean	N	Std. Deviation	Std. Error Mean
Autonomy Before	1.53	40	.18	.03
Autonomy After	5.20	40	.45	.07
Controlled Before	5.91	40	.52	.08
Controlled After	1.75	40	.30	.04

The results of paired t-test data analysis between autonomy subscales and the data collected from the controlled subscales show that there is a statistically significant mean score gain in the participants' autonomy level from the pre-scores to post-scores: t(39)= -49.282, *p*<.05. Therefore, the results of this study indicate that Benson's (2001) model has a significant impact on developing autonomy subscale among EFL learners. As Benson (2001) points out, the description of autonomy should involve the importance of control over learning management, cognitive processes, and learning content. To fulfill control over learning management, the researcher applied explicit strategy instruction and the results showed that learners employ learning strategies in order to manage the organization and evaluation of their learning. Also, the results of this study provide evidence on the fact that control over the cognitive processes in language learning can be described in terms of attention, reflection, and metacognitive knowledge. That is to say, cognitive approaches to second language acquisition, which assume that acquisition is dependent on the learners' active mental engagement with linguistic input, offer a basis for the fundamental psychological processes involved in autonomous learning (Little, 1997).

As Wenden (1991) points out, metacognitive knowledge is crucial to the development of autonomy in learning. Hence, metacognitive strategy training is key to the promotion of learner autono

my. This is because metacognitive knowledge refers to making use of the knowledge in the cognitive process to regulate language behavior through setting goals, planning, monitoring, and evaluating learning processes (Wenden, 1986). Therefore, metacognitive knowledge is the bridge to autonomous learning and it is needed for the cultivation of learner autonomy (O'Malley & Chamot, 1990; Wenden, 1998; Zhang, 2004, 2010). Similarly, as Little (1997) points out, if attention is a precondition of acquisition, it follows that effective language learning may be dependent on the learner taking cognitive responsibility for what to attend.

However, for the purpose of fostering learner autonomy, many researchers and practitioners (Holec, 1981; Little, 1991) often attach more importance to one level of control than others, but the results of this study revealed that each dimension of autonomy in language learning should be considered and fostered separately. Moreover, another purpose of this study was to investigate the degree to which the learners can be autonomous through applying Benson's (2001) model of learner autonomy. Therefore, two raters were asked to determine the degrees of autonomy among the participants.

As it is illustrated in Table 13, the results were in favor of the third level of learner autonomy. In other words, the results indicated that 22 out of 40 participants reached the third or intervention level of learner autonomy and only 3 of the participants reached creation level.

Table 13
Degrees of Learner Autonomy

Raters	1 = awareness	2= involvement	3= Intervention	4=Creation	5= Transcendence
Rater 1	3	12	22	3	
Rater 2	4	12	21	3	

However, the approximate value of the agreement coefficient or the kappa coefficient was computed to access a quantitative measure of the magnitude of agreement between

the two raters. As Table 14 shows, kappa coefficient has a range from 0-1.00, with larger values indicating better inter-rater reliability (Cohen, 1978).

Table 14
Interpretation of Kappa Coefficient

Kappa	Poor 0.0	Slight .20	Fair .40	Moderate .60	Substantial .80	Almost perfect 1.0
Kappa	Agreement					
<0	Less than chance agreement					
0.01-0.02	Slight agreement					
0.21-0.40	Fair agreement					
0.41-0.60	Moderate agreement					
0.61-0.80	Almost perfect agreement					
0.81-0.99						

As Table 15 reports, kappa coefficient in this study was found to be 0.96, which is almost a perfect agreement coefficient. Therefore, the results showed that Benson's model enhanced the learners' degrees of autonomy to intervention level. As Nunan (1997) points out, learner autonomy is not an absolute construct as it has a certain developmental level where the learner develops his autonomy from the lower to higher level. In this study, the results indicated that Benson's model of learner autonomy helps the learners reach the intervention level of learner autonomy. This in fact implies that the learners passed through "awareness" and "involvement" degrees of learner autonomy and reached the level of "intervention."

Table 15
Descriptive Statistics of Kappa coefficient

	Value	Asymp. Std. Error[a]	Perfect Kappa Coefficient	Approx. Sig.
Measure of Kappa Agreement	0.96	.040	1.00	.000
Number of partici-pants	40			

According to Nunan (1997), learners at the "intervention level" can gain the ability to be involved in modifying and adapting the goals and content of the learning program. The planning of learners' work is an on-going process of modification and adaptation as learners move through the process from planning to evaluation. Also, as Holec (1981) points out, learners do not define their needs a priori, but they work them out empirically as they go along the learning process. The results of this study arte consistent with Nunan's (1991) and Schmidts and Frota's (1985) findings as the participants in this study reached the "intervention level" of learner autonomy. Moreover, the results of this study are consistent with the fact that autonomy is not an all-or-nothing concept. Although the results of this study indicate that EFL learners can reach the "intervention level," it cannot be neglected that learners might reach higher degrees of learner autonomy (Dam & Gabrielsen, 1988).

Conclusion
The results of this study provided evidence that fostering autonomy involves control over learni-ng management, cognitive processes, and learning content. However, the results indicate that EFL learner cannot reach an idealistically perfect autonomy level through Benson's (2001) intervention program. Thus, the findings might help EFL researchers and practitioners understand what to focus on when they aim to foster autonomy. Undoubtedly, training the learners helps them find out appropriate learning strategies that enable them to be more effective learners and this in fact leads them to more responsibility taken for their own learning (Sinclair, 1999). Hence, creating a learning environment, which provides learners with opportunities to make decisions about their learning must be considered to be an important method for training the learners to be autonomous.

The following are the major conclusions drawn from this study. First, learners' ability and willingness to take responsibility for learning does not develop naturally, so learner autonomy necessarily involves formal instruction. Second, learner autonomy means developing learning strategies for the purpose of learning independently. Third, learner autonomy is not neces-

sarily self-instructed or in any form of learning process without teachers' intervention. Finally, fostering autonomy among learners does not necessarily mean that the learners reach an idealistically complete level of autonomy since there are always degrees to autonomy level.

Autonomy is a multidimensional construct in the sense that learners control their learning in a variety of ways. As Benson (2001) points out, learners' control over learning falls under the three headings of learning management, cognitive processes involved in language learning, and the content of learning. Although many more experimental studies are still required, the results of this study provide evidence on the effect of Benson's (2001) model on developing autonomy among EFL learners. In other words, many researchers (Holec, 1981; Little, 2001) often attach

more importance to one level of control than others, but the results of this study reveal that each dimension of autonomy in language learning should be fostered separately.

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