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Educational Intervention in Fostering L2 Learner Autonomy

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ABSTRACT

There is not enough conceptual work done on autonomy relating it to other individual difference variables. Some researchers have investigated the characteristics of L2 English learners in terms of motivation and learning strategy constructs, but they did not include variables associated with learners' perceived L2 learning competence/anxiety. Some other researchers investigated the characteristics of L2 English learners in terms of strategy use and confidence constructs, but did not include motivational constructs. Motivational, affective, and strategy use have been hypothesized to be important in fostering L2 learner autonomy (Benson, 2011), but conceptual work linking these constructs to L2 learner autonomy is needed. The present study aims to identify the links among L2 learner motivation, confidence/anxiety, and strategy use with L2 English learners with varying degrees of L2 learner autonomy, measured with the Self-Determination Theory-based motivational continuum. The results will help to illuminate how autonomy is related to other variables and thereby provide a clearer understanding of L2 English learner autonomy. The second purpose is to investigate which of the above-mentioned constructs can be changed through a specific educational intervention. This is important given that positive changes in such variables are hypothesized to result in more positive educational outcomes. The study also aims to investigate how the participants perceive a set of learner autonomy fostering activities that aims at transferring learning responsibility from teacher to learner.

Keywords: Autonomy; Educational Intervention; Anxiety; Strategy Use; Competence

1. INTRODUCTION

Learner autonomy usually refers to "the capacity to take charge of, or responsibility for, one's own learning" (Benson, 2001, p. 47; for similar definitions, see Dickinson, 1995, p. 167; Littlewood, 1999, p. 71; Nunan 1996, p. 15; Pemberton, 1996, p. 3). The notion of autonomy was brought into the second or foreign language learning and teaching field in 1971 by Holec, when he led the Council of Europe's Modern Language Project, which was part of the larger socio-political adult education movement (see Benson, 2001, 2006, and Esch, 1996 for historical reviews). Learner autonomy rather quickly attained a "buzzword" status between the late 1980s and the early 1990s partly because it overlapped with some important pedagogical concerns, such as learner-centeredness and learner independence, which were key principles of the then already dominant second language teaching method, communicative language teaching (CLT). Influential proponents of CLT (e.g., Nunan, 1993) discussed learners' active participation in planning, implementing, and evaluating language

programs, while Willis (1996), an important proponent of task-based teaching, stressed that the final goal of L2 pedagogy is to help learners become "self-reliant" (p. 10).

In 1996, by drawing on the critical theorists' perspective, Benson (1996) challenged the "unproblematic" (p. 27) nature of the application of the originally socio-politically oriented notion of autonomy into mainstream applied linguistic thinking and L2 pedagogy. Benson demarcated existing studies into two camps, the sociopolitical/ situational and the individual/psychological. He argued that Holec's (1981) original idea of learner autonomy was theoretically rigorous and served as a political principle for a leading center for researching and practicing self-directed learning in France. Holec's description of learner autonomy in L2 learning included the ideas that learners should assume "the responsibility for all the decisions" (Holec, 1981, p. 3), that learners who were not autonomous yet should have this responsibility, and that there should be "a learning structure in which control over the learning can be exercised by the learner" (p. 7). Against these rigorous ideas, researchers such as Allwright (1988) and Wenden (1991) advanced weaker or individual/psychological versions of L2 learner autonomy, in which teachers engaged in classroom teaching could contribute to promoting learner autonomy by encouraging autonomous learning behavior, or by helping learners develop effective learning skills and knowledge. Benson pointed out that these weaker versions of learner autonomy were incorporated into learner strategy training, one of the then major sub-fields in L2 teaching and learning, resulting in weakening the socio-political/situational issues involved in the notion of learner autonomy. Thus, he called for a rethinking for the popularized way of thinking about L2 learner autonomy, stressing that language teaching entailed issues of power and that this aspect should not be neglected. He then proposed an alternative conceptual framework that included the notion of learners' exercising control over the learning process, resources, and language. Other critical theorists raised similar issues against the mainstream thinking about L2 learner autonomy (e.g., Palfreyman, 2003; Pennycook,1997; Schmenk, 2005).

In 1997, however, Benson, still emphasizing the need to critically think about the mainstream L2 learner autonomy and to remember the political origin of this notion, added a modification to his 1996 individual/psychological unit, subdividing it into the technical and the constructivist approaches. He explained that whereas the individual/technical approaches focused on training learning strategies, the individual/psychological approaches included constructivist ways of teaching and learning that valued social interaction and engagement with people and the target language. Thus, his recognition of the individual/psychological approaches in the L2 learner autonomy teaching practices suggested that even the individual/psychological unit could be extended to include social approaches for learning and teaching such as meaningful and authentic interactions with the target language and among learners. At the same time, Benson extended his political approach to include practical ways to develop autonomy, such as authentic interactions with the target language and its users, collaborative work, and collective decision-making.

In 2001, Benson wrote a comprehensive book on autonomy in language learning. In this book, although his preferred way of thinking about autonomy in language learning included the notion's socio-political connotation, as he described autonomous learners as both better language learners and more responsible and critical social members, he dealt with not only these conceptual issues, but also issues relevant to fostering autonomy in different teaching and learning situations in depth. He also called for more empirical research on autonomy, as there was not enough empirical data to arrive at a clearer understanding of the nature of autonomy in L2 learning and ways to foster it.

This was the situation in the field when I began to conceive of basing the present research on the notion that L2 learning autonomy could be fostered through classroom tasks and that increased autonomy would result in greater acquisition. I viewed Benson's 1996 paper as a call for critical thinking about the notion of L2 learner autonomy and the practices based on it. As I read more, I found theorists such as Aoki and Smith (2003) and Little (2003), acknowledging the importance of questioning the uncritical acceptance of the notion in our field, and discussing it as a universal human capacity that can be legitimately promoted in different social and cultural contexts. My reading of the relevant literature led me to decide to begin this study by situating it in Benson's 1996 description.

2. DISCUSSION

As indicated above, rather than thinking of learner autonomy as a self-evidently positive goal for second/foreign language learning, Benson (1996) called for a more critical approach to learner autonomy. Referring to three influential contributions in the literature (Allwright, 1988; Holec, 1981; Wenden, 1991), he argued that a binary division has developed in approaches to L2 learner autonomy. The division occurred when Allwright and Wenden popularized the concept of learner autonomy as being intimately associated with individual psychological variables in the field, a view that differed from Holec's original conceptualization of learner autonomy as involving political aspects of education. Holec's conceptualization has served as a political principle for self-directed learning (SDL) at the Centre de Resherches et d'Applications en Langues (CRAPEL) at Nancy University in France, an institution that has played a leading role for research and practice in the field up to the present day (see Esch, 1996 and Wenden, 2002 for reviews). Importantly, L2 learning projects supported in this institution formed one part of the broader socio-political movement in which adult education should contribute to the improvement of the quality of life, not merely to material well being. Thus, education should help each individual learner to develop the ability that "enables him to act more responsibly in running the affairs of the society in which he lives" (Holec, 1981, p. 1). Based on this principle, Holec (1981) defined autonomy as "the ability to take charge of one's own learning" (p. 3) and stated that this ability includes "hold[ing] the responsibility for all the decisions" involved in learning, from determining objectives to evaluating what has been learned. He recommended that even learners who are not yet autonomous should be responsible for the whole of their learning, and that teachers' primary task should be to offer support. In addition, Holec stressed that for this ability to be realized, "there must be a learning structure in which control over the learning can be exercised by the learner" (p. 7).

As Benson emphasized, Holec's definition of learner autonomy, which includes terms like "learning structure" and "to hold responsibility for all decisions" and the notion that the teacher's role was to support learners' attempts to learn rather than teach them, could be interpreted as the virtual rejection of traditional classroom teaching. This was the point, according to Benson (1996), on which Allwright (1988) cast a strong doubt. Allwright suggested that if teachers could encourage autonomous classroom behavior in students, there could be ways to promote learner autonomy even through traditional whole-class instruction. Benson further argued that this weaker version of Holec's original conception of language learner autonomy was even more developed by Wenden (1991) when she connected learner autonomy with another sub-field in second/foreign language learning, learner strategy training. Benson, who pointed out that Wenden wanted to "situate the methodology of learner

training (learner strategy training in particular) within the wider theoretical context of learner autonomy" (p. 30, original italics), was critical of Wenden's 1991 article because he felt that Wenden was equating "successful," "expert," or "intelligent" (Wenden, 1991, p. 15) learners withautonomous learners and autonomy with the acquisition of the skills and knowledge for effective learning. Thus, Benson claimed that Wenden's incorporation of the notion of learner autonomy in learner strategy training prompted a further weakening of the structural or situational elements of L2 learner autonomy in mainstream second/foreign language learning. In short, Benson argued that her exclusive emphasis on learner behavior and her silence about the politically oriented origin of learner autonomy created an impression that the learner's behavior is a sufficient condition for autonomy. Furthermore, this view, he pointed out, precipitated the proliferation of depoliticized, individual, and psychological versions of learner autonomy in L2 learning and teaching.

At the same time, Benson (1996), by drawing on the perspective of critical pedagogy advanced by such scholars as Benesch (1993) and Pennycook (1989), stressed that language teaching is intimately related to the issue of power and that neglecting this aspect of language pedagogy is an implicit acceptance of the status quo. Therefore, Benson's political version of learner autonomy was meant to create learning situations in which learners exercised, not "responsibility," but control over "the three interrelated levels: control of the learning process, control of resources and control of language" (p. 31). The focus of his 1996 paper, thus, was to call for critical thinking about L2 learner autonomy and to propose an alternative conceptual framework. Readers were not provided with practical suggestions for practicing his favored critical/political approaches.

In 1997, Benson added several interesting modifications to his original 1996 criticism of mainstream versions of L2 learner autonomy. He recognized "constructivist" approaches as increasingly influential in the literature and divided his original individual/psychological division into the "technical" and "constructivist" approaches. According to Benson, whereas the "technical" approach is only focused on strategy training, the "constructivist" approach addresses the internal development of particular attitudes, learners' ability to take responsibility for their own learning, and teachers' role of offering situational support. Benson did not specify what forms the support might take. He acknowledged that this constructivist approach "tend[s] to value interaction and engagement with the target language" and "people" (p. 24). This implies that the individual/psychological version of learner autonomy that Benson originally described can be distinguished into two subdivisions, individual/technical and individual/psychological, and that the psychological version can be extended to include interactive approaches to learning that can be implemented through the use of an L2 in more authentic or meaningful ways.

Concurrently with these modifications, Benson (1997) presented a more practical model for the critical/political approach, in which he proposed a more "extended notion of the political" (p. 33). He admitted that there might be objections to his proposed political version because forcing such an approach on students who simply want to learn language may be "ethically questionable and counter-productive" in many language learning situations (p. 32). In this paper, he set forth his eleven-point "extended notion of the political" approach to L2 learner autonomy. It should be noted that the following three points concern what his original more critical/political version argued; control over the management of learning, control over the content of learning, and control over resources. Many of the remaining points have closer affinity to issues addressed in the constructivist (psychological) approach, such as "authentic interaction with the target language and its users, collaborative group work and collective decision making, participation in open-ended learning tasks" (p. 33). Presented in this weaker

version, his last point, "discussion and criticism of target language norms," does not seem to strictly refer to learners engaging in political criticism as critical pedagogy demands. Teachers can deal with this point by encouraging learners to be more critical of the content of their learning materials even within a usual constructivist classroom.

At the same time, Benson (1997) mentioned a problem involved in his three-part classification of L2 learner autonomy approaches. He stated that many L2 learner autonomy advocates adopt a position representing a mixture of elements from each of the three approaches. In this way, Benson acknowledged that actual teaching usually requires more practical adaptation and thinking. More recently, Benson's political expressiveness became somewhat more mitigated and his stance toward the skills/strategies-based learner autonomy approach was less critical than in his original 1996 paper. Benson (2001) even suggested that empirical researchers can consider using some of the items on the Strategy of Inventory for Language Learning (SILL)(Oxford, 1990), a hallmark of the learning strategy approach. He stated, "In principle, the last three sections of the SILL (comprising 21 questions in the EFL/ESL version) might be used to assess the degree to which students report that they take control of elements of their own learning" (p. 84). These changes in his thinking may reflect his double recognition of the complexities of applying theory into practice and the importance of critical thinking towards the mainstream thinking and approaches in the field.

Considering my own teaching situation and my beliefs about second/foreign language learning, I will follow in principle the constructivist approach, which stresses that second/foreign language learning is based on both social processes and the individual's psychological and cognitive processes. I agree with Benson (1996), who wrote, citing Garrison's (1992) critical and constructivist educational theory, that learning by definition is social because it includes dialogue with others and that the dialogue serves to validate meaning through shared control of the learning process. This may be a tenet of critical pedagogy, but it is also one that constructivists in education espouse (see Williams & Burden, 2002, pp. 42-44 for a summary of social constructivism in education). Briefly, the term "social constructivism" is differentiated from "constructivism" in psychology. According to Williams and Burden, constructivism originally refers to Piaget's theory of how individual humans engage from birth in constructing personal meaning-making through interaction with the outer world, including the people around them. While Piaget focused on the internal processes involved in psychological maturation, later proponents of his theory (e.g., Bruner, 1960) expanded it to include aspects of social interaction involved in human learning when they introduced it into the field of education. This approach views the mediating role of social contexts (e.g., significant others, teachers, or peers) as important in learning. Therefore, the constructivist versions of L2 learner autonomy can be extended to address "the social," which is the point that Benson (1996) originally criticized as insufficiently addressed in the mainstream versions of L2 learner autonomy. Nonetheless, it should not be forgotten that constructivist theory stresses internal learning processes, too.

2.1. Definitions of autonomy

A dictionary definition of autonomy states that autonomy is "the ability to make your own decisions about what to do rather than being influenced by someone else or told what to do" (Sinclair, Ed., 1987, Collins COBUILD English Language Dictionary). However, when we consider autonomy in education, it should not necessarily be viewed as an absolute notion as in the dictionary definition above, because educators have to foster the development of

autonomy in learners over an extended period of time, a point made by Holec (1981), who stated that "autonomy is not inborn but must be acquired either by 'natural' means or (as most often happens) by formal learning" (p. 3).

Regarding this seemingly contradictory aspect of autonomy, Deci and Ryan (1985; 1995) provided an important link between the mediator's role and the child's development of autonomy in learning. Developmental child psychologists have observed that extrinsically motivated behaviors can become intrinsic and autonomous through humans' "natural tendencies to internalize and integrate meaningful aspects of [their] social context," (Deci & Ryan, 1995, p. 38), which is a function of the fundamental human need called "organismic integration" (p. 38). According to Deci and Ryan's Self-Determination Theory:

> people tend naturally to internalize the regulations of socially sanctioned activities to feel related to others and efficacious within the social world, and they tend to integrate those regulatory processes *to maximize their experience of autonomy or self-regulation.*
>
> <div align="right">(italics added) (p. 38).</div>

Their theory suggests that individuals naturally pursue autonomy, competence, and relatedness to others in their actions and that the people whom learners come into contact with can contribute to or inhibit the development of autonomy. In short, in Deci and Ryan's theory, autonomy includes competence ("efficacious") and relatedness, as all humans are social beings who cannot live in a social vacuum. Importantly, competence is an integral and essential part of autonomy, and by extension, (L2) learner autonomy.

Deci, Vallerand, Pelletier and Ryan (1991) stated that many forms of formal education, with their socio-cultural practices and values, as well as educational policies, can exert a negative influence on the development of autonomous self-regulation. While this is certainly true, it is also certain that, as Deci and Ryan's theory implies, both people and educational mediation can be supportive, not just inhibiting or negatively conditioning. Thus, while Deci and Ryan's theory provides conceptual support for the role of educational intervention in developing L2 learner autonomy, issues concerning specific ways for teachers to help learners undergo self-regulating advancement remain to be investigated.

2.2. Interventionist Studies of L2 Learner Autonomy

In the next two sections, I will review a number of empirical studies that can be, following Benson's categorization, considered individual/psychological approaches to L2 learner autonomy. First I will examine intervention studies and then survey studies.

Holec (1981), in a discussion of teaching objectives that could be applied in autonomy-fostering frameworks, stated that autonomy fostering intervention should ideally provide learners with opportunities both to develop target language skills according to their chosen objectives and to become aware of various aspects of their learning processes. However, when commenting on empirical studies, Holec acknowledged the practical difficulties and the "limited" (p. 29) ways that most teachers have to introduce autonomous learning into traditional systems of teaching.

Pino-Silva (1993) tried to improve the vocabulary knowledge of science and technology university majors in untutored ways. The teacher-researcher, after consulting both her colleagues and students about items that they perceived as causing difficulties in reading science and technical texts, prepared a list of 1,000 words or lexical phrases, which was

divided into four sections; 200, 300, 200, and 300 words, respectively. The students studied each section for three weeks outside the class in their own way and took a test on each section. Because the teachers selected the target vocabulary, Pino-Silva emphasized that autonomous self-instruction was centered not on the materials to be learned but on how to learn them. She encouraged the students to apply self-study strategies or form study groups. She also asked her participants to self-rate their vocabulary confidence in a pre/post design. She did not the specify passing /failing scores for her test results, or the data collection procedures and analysis of the students' perceived knowledge and ability, but she reported that 73% of the students passed multiple-choice tests 1, 2, and 3 the first time around and that the students' self-rating of their vocabulary knowledge and text comprehension ability increased significantly. She concluded that what she called "untutored vocabulary acquisition" (p. 845) was an effective way to improve learners' vocabulary knowledge.

Dam and Legenhausen (1996) investigated the effectiveness of autonomy-enhancing vocabulary learning through learners' self-selection of vocabulary. The authors hypothesized that beginners' self-selected vocabulary learning would equal or exceed the official syllabus guidelines for vocabulary acquisition for the targeted age group. The experimental group of 21 twelve-year-old students collected L2 English vocabulary from their surroundings or selected words from teacher-introduced materials, and produced them as language output (e.g., posters and word cards) individually, in pairs, or in small groups. Those collected words were kept in "Our material box" or written on posters and put up on "Our English board" in the first four weeks (i.e., 16 lessons) of the class so that the class members could share the newly learned words. The authors analyzed 400 entries that had been collected and publicly shared by the experimental class in terms of both semantic fields and frequency. It was found that the 400 items collected by the experimental group after 16 lessons exceeded the number of words that the official syllabus required the students to learn in 35 lessons. Semantically, the experimental group's collection included a wider variety of lexical fields, 28 animal-related and 12 food-related words. The official course textbook did not introduce any words from these semantic fields in the first 35 lessons. After four weeks, 32% of the 500 most frequent words based on their teaching vocabulary list were shared publicly by the experimental group while only 19% of the same frequency words were introduced in the official textbook after 35 lessons. Also, after 11 weeks, the long-term retention of the experimental group was compared with the performance of a reference group from a superior German school. The test battery included auditory recognition, meaning recall (through translational equivalents or drawing, or matching), and spelling. Out of the five comparable sub-tests, the German grammar school students performed slightly better than the experimental group on the spelling subtest (88.7% versus 73.1%, of the tested words) while the experimental group performed slightly better on average on the two auditory recognition tests (95.5% versus 89.3%). The results were mixed for the other two meaning recognition tests. The authors argued that providing autonomy yielded vocabulary learning equal to or better than that of the reference group who were provided with a superior L2 learning education.

Ho and Crookall (1995) attempted to change their university students' learning behavior by changing the class from a relatively teacher-fronted approach to a student-initiated one and to improve their communicative L2 English skills through the use of a computer-mediated simulation program. Twenty-one first-year university English communication majors assumed the role of ministers of a poor landlocked country and engaged in group-work in order to reach an international treaty on world sea preservation with other student teams representing 26 countries. The student team had to prepare a two-page policy statement, a 10-

page position paper, and various drafts of the treaty. The authors claimed that the simulation program provided the students with opportunities to use their L2 communicatively and to experience a non-traditional teacher-fronted relationship. The authors found that the students had dealt with 1750 simulation communications (e.g., editorials and arguments) and exchanged several thousand other messages in real-time teleconferences. The authors reported that the teacher's insufficient computer skill caused her and the students to initiate a new type of relationship, with the teacher becoming a helper rather than an "all-knowing teacher" (p. 240), an image that the authors claimed that Chinese students traditionally expected of teachers. Based on these observations, the authors argued for the importance of providing a learning environment in which learners have to initiate both autonomous learning behavior and real target language use.

Smith (2003) also sought to transfer teacher responsibility for managing English classes to students. The students clarified their individual learning goals, chose a withinclass activity from nine different kinds of activities, and wrote an evaluation concerning what they had done. Qualitative data showed positive student evaluations of this form of class management. Although the data were not thematically categorized, some students positively reflected on their increased confidence in speaking English, suggesting that confidence can be an important variable in fostering L2 learner autonomy.

Victori and Lockhart (1995) focused on enhancing learners' knowledge of L2 learning strategies and their use in order to develop the learners' autonomy through learner training and counseling programs at a university affiliated language center. The authors employed an instrument that they called AmbiMoti, which was made up of 16 items that were designed to assess motivation, self-esteem, and tolerance of ambiguity\ involved in language learning/use situations. They also administered the Assumptions about Language Learning (ALL) questionnaire consisting of 22 items designed to measure person knowledge (e.g., motivation, personality, and learning style), 26 items for measuring task knowledge (e.g., roles of teacher and learner, group work, error treatment), and 182 items measuring strategic knowledge (e.g., metacognitive strategies, cognitive strategies, and skill-focused strategies). It should be noted that various combinations of items from the AmbiMoti and ALL questionnaire were usually utilized for actual counseling. Victori and Lockhart presented detailed accounts of two cases. One participant, who was already highly motivated and relatively autonomous when he joined the program, increased his tolerance toward language learning/use ambiguity and began to use more of the reading strategies generally thought to be effective in the literature. Another learner, who believed that teachers should decide what he should do in learning an L2, showed significant gains in self-esteem and motivation. The authors concluded that their program helped improve learner autonomy in 40 out of 41 cases. They found that key variables for these successes were improved self-knowledge, the use of more efficient strategies and a wider variety of resources, and an increased use of the target language. Based on gains observed on the scales and the observations that they made through counseling, they claimed that "less anxiety, more motivation, and improved self-knowledge" (p. 232) would accelerate more autonomous approaches and progress in L2 learning.

Miller and Ng (1996) sought to foster 41 university English majors' metacognitive awareness toward language assessment by requiring them to make their own oral performance tests and administer them to another peer group. The researchers gave a two-hour lecture to sensitize the students to important elements of oral tests from preparing to marking them. The students formed groups of four, made tests, and administered them. Data were collected and analyzed both quantitatively and qualitatively. The authors calculated Spearman Rank Order Correlations and found correlations of .68 and .80 between the students' and the tutors'

assessment of the students' performances on the oral tests. The authors also classified the students' responses to six open-ended questions into three categories: positive, negative, or neutral, and showed the frequencies for each category. The results revealed that 28 students responded positively towards the experience in general, but 34 commented negatively about assessing their peers. Twenty-eight students expressed apprehension toward the reliability of peer assessment. The authors concluded that the rank order correlations showed that the students' evaluations were as good as the tutors', but there was a discrepancy between the students' and the teachers' perception of the role of assessment. They argued that teachers view assessment as part of learners' metacognitive ability to monitor their language learning while students see assessment as the teacher's responsibility.

Cohen et al. (1998) investigated the effects of strategies-based instruction (SBI) designed to promote learner autonomy on oral performance tasks (see also Cohen, 1999 for an article based on the same study, in which he elaborates on the role of SBI in L2 learner autonomy). Thirty-three advanced intermediate L2 French and Norwegian learners at Minnesota University took a 30-hour strategy course taught by three trained instructors, while another group of 23 students, serving as a comparison group, were taught with the usual syllabus by three instructors. The researchers employed a mixedmethod approach: The 80-item Strategy Inventory for Language Learning (SILL) for English speakers learning a new language (Oxford, 1990) was administered to measure general L2 learning strategies in a pre-post design; a set of strategy checklists (Strategy Checklist) that the authors had developed to investigate speaking-specific strategies was administered before, during, and after three 15-minute speaking tests (Self-Description, Story-Retelling of a 300-word passage with glosses, and City Description with a list of 30 target language words/phrases). Twenty-one of the 55 students from both the experimental and comparison groups provided verbal reports on their strategy use. An ANCOVA, with strategies-instruction as the independent variable and post-test means adjusted by pre-test means as the dependent variable, revealed a statistically significant main effect only on the City Description task. Therefore, for this task, I look at the follow-up co-relations between the self-reported frequency of strategy use measured with the Strategy Checklist and the sub-scales in the oral performance grades. As expected, for the use of strategies before the task, the experimental group, who practiced the pronunciation of specific words, received higher sub-scores on self-confidence ($r = .43$) and grammar ($r = .50$), while the comparison students, who practiced the pronunciation on their own, were graded lower on the vocabulary subscale ($r = - .42$). However, unexpectedly, seven out of the eight statistically significant correlations for the use of strategies during the task were for the comparison group. For example, the comparison students who used positive talk during the task received higher self-confidence sub-scores ($r = .43$), and those who made up words when they could not remember them received higher self-confidence sub-score ($r = .63$), also resulting in higher grammar sub-scores ($r = .59$) and higher vocabulary sub-scores ($r = .56$).

Regarding the SILL and the City Description task, the experimental group students who understood the L2 passage without translation and those who attempted to identify reasons for their language errors received lower vocabulary sub-scores ($r = -.52$; $r = .50$, respectively). Thus, some of the findings ran counter to the authors' expectations. The authors concluded that because even the comparison students sometimes displayed positive correlations between the use of certain strategies and their grades, some resourceful learners could utilize strategies effectively without receiving strategies-based instruction. At the same time, because the use of the same strategy yielded positive results for the students in the experimental group but not for those in the comparison group, they suggested that systematic instruction could help improve the use of certain strategies.

The authors categorized the verbal protocol results into two types: responses toward strategy use and feedback on the checklist items that they had developed for the study. However, the authors placed greater importance on laying out the verbatim data without adding interpretation from their perspectives. As a result, it is difficult to interpret whether one quoted response from a participant was idiosyncratic or representative of a certain number of the participants.

In short, except for Miller and Ng's and Cohen et al.'s studies, methods employed to report the findings by the authors reviewed above tended to use either linguistic gains or the researcher's observational accounts coupled with some extracts from the participants' comments.

2.3. Survey Studies of L2 Learner Autonomy Focusing on Affective and/or Behavioral Variables

In this section, I review empirical survey studies that address "readiness for autonomy" (Cotterall, 1995, p. 195; Spratt, Humphreys & Victoria, 2002, p. 245), which refers to learners' beliefs and thinking towards L2 learning. Cotterall (1995) defined autonomy as "the extent to which learners demonstrate the ability to use a set of tactics for taking control of their learning" (p. 195). She hypothesized that variability in the degree of use of these tactics can be partly explained in terms of "differences in learner beliefs about language learning" (p. 195). In order to investigate such tactics and underlying beliefs, she developed a 26-item questionnaire and administered it to 139 adult ESL learners who were enrolled in a summer English for academic purposes (EAP) program in New Zealand. Through a factor analysis, she identified six dimensions and examined each factor by relating the factors to the claims that had been advanced in the literature. To take an example, what she called Factor 3, Learner Independence, received strong loadings from items such as "I have a clear idea of what I need English for," "I like trying new things," and "Learning language is different from learning other subjects" (p. 199).

This factor was, Cotterall argued, central to the beliefs underlying autonomy because strategy researchers like Stern (1975) reported similar features in good (therefore, probably autonomous) language learner profiles. Likewise, Cotterall argued that Factor 4, Learner Confidence in Study Ability, and Factor 5, Experience of Language Learning, were also important factors underlying autonomy. On the other hand, she stated that Factor 1, The Role of Teacher, was detrimental to the development of learner autonomy because this factor received high loadings from items such as "I like the teacher to offer to help me," "to tell me what my difficulties are," and "to tell me how long I should spend on an activity" (p. 197). She concluded that learners who agreed with the ideas that loaded on Factor 1 were not ready for autonomy. However, the main purpose of the study was to investigate if meaningful dimensions were found in learner beliefs about L2 learning as the literature claimed, correlations were not sought among the factors that were observed, so it remained unclear how these belief dimensions were related to different degrees of autonomous L2 learning.

Cotterall (1999) conducted a follow-up study with a similar population of 131 learners who were enrolled in EAP courses. In this study, she set out to identify belief variables that the learner autonomy literature suggested led to successful second language acquisition, using a 90-item questionnaire. The key variables in the questionnaire were decided based on the findings of her 1995 study and the published literature. They were learner beliefs about the role of the teacher, the role of feedback, self-efficacy, important strategies, strategy-related behavior, and the nature of language learning. She reported that while 79% of her

respondents, when asked about the teacher's role, answered that teachers should provide learners with opportunities to practice the language, 76.7% of them ranked their own responsibility for finding opportunities to use the language before the teacher's role when asked who was responsible for language use opportunities. She also identified a trend concerning participants' strategy-related beliefs and attitudes; even learners who lacked knowledge of metacognitive strategies were willing to adopt them when introduced to them. It was also observed that the participants' strategies related to monitoring and evaluating progress were limited and that their self-efficacy differed according to specific skills (e.g., Her participants were generally confident about learning English successfully but not about writing it accurately). Thus, the data generally suggested that some meaningful relations might exist among the six aspects that she investigated and more autonomous forms of L2 learning. Autonomous learning might be positively influenced by certain types of beliefs about language learning, strategy beliefs and use, and/or greater degrees of self-confidence that L2 learners may develop toward L2 learning in general and/or a specific language skill.

Spratt et al.'s study (2002) with 508 first-, second-, and third-year students studying at Hong Kong Polytechnic University was focused on the question of whether autonomy or motivation comes first in L2 learning. The researchers investigated the correlations among four levels of motivation and the frequency with which the students engaged in learning activities outside of class. The questionnaire items regarding outside-of-class activities (e.g., "read grammar books on one's own," "note down new words and their meanings," "done English self-study in a group") were developed based on the ideas produced by a similar population of students who were asked to list autonomous learning activities. Out of the 22 questionnaire items, 20 activities were statistically significantly correlated with the level of the student's motivation ($p < .01$).

In addition, the researchers conducted follow-up interviews in order to qualitatively determine why the students voluntarily did or did not perform certain activities. The researchers found that the main reason for not engaging in outside-of-class activities was a lack of motivation. The researchers argued that, "one way to encourage autonomy may be to develop students' motivation to learn" (p. 263). Thus, this study provided evidence of significant relationships between motivation and autonomous learning activities or behavior, suggesting that higher motivation is likely to be positively related to more autonomous forms of L2 learning.

In the learning strategy research, Fan (2003) investigated L2 vocabulary learning strategies with 1061 first year university students in Hong Kong with a 56-item questionnaire that was designed to assess how L2 learners perceive and use vocabularylearning strategies thought to be effective in acquiring an L2 in the language acquisition literature. She found significant differences in the use of 24 learning strategies between the higher and lower scorers that were grouped according to their results on a vocabulary test.

When all these survey studies are considered together, it becomes clear that some of the strategies that Fan's higher scoring group used significantly more often than her lower scoring group (e.g., "I learn new words at every opportunity" or "I increase my English vocabulary by reading stories, newspapers, magazines, etc. outside class") overlap with the autonomous learning activities that Sprat et al.'s (2002) more motivated participants often engaged in outside of the class (e.g., "noted down new words and their meanings," "read English notices around you," "read newspapers in English," or "read books or magazines in English"). Cotterall's 1999 survey study also suggested that learners' knowledge and use of certain learning strategies might influence more autonomous learning. In addition, her data suggested that learners' self-efficacy in language learning in general and specific skills might be closely

related to more autonomous L2 learning and her 1995 study also suggested that certain types of learner beliefs about the learner, the teacher, and the nature of language learning might influence greater degrees of autonomous learning. Thus, these empirical survey studies indicate that motivation, strategy-related knowledge and/or behaviors, and self-efficacy are linked to more autonomous forms of L2 learning. This observation converges with what Benson (2011) observed about the literature, saying that "autonomy appears to be closely related, for example, to language awareness, motivation, strategy use, learner beliefs and metacognition" (p. 66). However, as the review of L2 autonomy readiness research and interventionist studies suggest, there does not seem to be a conceptual framework linking these important psychological variables to L2 learner autonomy. In order to address this issue, I review, in the following section, a motivational model based on Deci and Ryan's (1985, 1995) Self-Determination Theory. This model links those variables posited important for L2 learner autonomy (see Ushioda, 2008, for her interesting comment on the use of SDT in explaining for L2 learner autonomy when L2 learning motivation research still largely draws on the Gardnerian tradition).

2.4. A Model of Autonomous Learning Based on Self-Determination Theory

By drawing on Deci and Ryan's (1985) Self-Determination Theory (SDT), a group of educational psychologists, Vallerand, Pelletier, Blais, Brière, Senécal, and Vallières (1993), designed a scale to assess autonomous academic motivation, which they called the Academic Motivation Scale (AMS). Deci and Ryan's Self- Determination Theory is based on the notion that "the prototype of autonomous behavior [emanating from one's self] is intrinsically motivated" (Deci & Ryan, 1995, p. 37), while extrinsically motivated behaviors are performed to attain some ends. It is argued that because humans have an innate organismic tendency to "*internalize* and *integrate* meaningful aspects of one's social life" (Deci & Ryan, 1995, p. 38, italics in the original), extrinsically regulated behaviors can become intrinsic. Therefore, Self- Determination Theory explains human motivation and behavior along a continuum consisting of intrinsic motivation (IM), four types of extrinsic motivation (EM) (i.e., integrated regulation, identified regulation, introjected regulation, and external regulation), and amotivation, which leads to behavior that is caused by forces out of one's control (Deci & Ryan, 1985). In this theory, individuals with more intrinsic, integrated, and identified motivation engage in more autonomous forms of learning and achieve more satisfying outcomes in school. Vallerand et al. translated these conceptualizations into their Academic Motivation Scale, which is made up of seven subscales of four items each assessing three types of intrinsic motivation (i.e. IM to know, to accomplish something, and to experience stimulation) and three types of extrinsic motivation (i.e., identified regulation, in which one does something because one decides to do so; introjected regulation, in which one does something to avoid negative contingencies or to receive social reward; and external regulation, in which one does something because one is pressured by someone to do it). Finally, amotivation refers to a lack of intrinsic and extrinsic motivation. It should be noted here that the AMS does not include items for integrated motivation because it is extremely difficult to write items to reflect differences between integrated and identified motivation. Intrinsic and identified motivations are considered autonomous forms of motivation (e.g., Fortier, Vallerand, & Guay, 1995). Employing the same conceptual framework, Fortier et al. (1995) proposed a motivational model of school performance, consisting of three major constructs, motivational antecedents, motivation, and outcome. Two motivational antecedents, Perceived Academic Competence and Perceived Academic Self-Determination were

hypothesized to positively influence Autonomous Academic Motivation, which was hypothesized to positively influence School Performance.

Researchers have empirically tested this model with the Academic Motivation Scales at its core and demonstrated its validity (e.g., Noels, Clément, & Pelletier, 1999; Vallerand et al., 1993; Fortier et al., 1995; see Appendix A for a list of empirical studies in this tradition). Vallerand et al. (1993) sought to demonstrate the construct validity of the AMS with 217 junior college students ($M = 18.7$ years old, 107 males and 110 females) from the Montreal area. The results confirmed an expected "simplex pattern" (p. 162), in which adjacent subscales had high positive correlations (e.g., introjection and identification, $r = .44$, $p < .05$) and amotivation (AM) and other subscales showed negative correlations (e.g., AM and the IM subscales all showed negative correlations, ranging from $r = -.22$ to -. 43, $p < .05$) (alpha values for the subscales ranged from .60 to .86). The authors also found the expected positive or negative correlations between each subscale of the AMS and other already established motivational scales. Between Gottfried's (1985) scale of intrinsic interest in learning and the AMS, the strongest positive and negative correlations were respectively obtained with IM to Know ($r = .67$) and Amotivation ($r = -. 46$). Amotivation showed a statistically significant positive correlation with Nicholls, Patashnick, and Nolen's (1985) work avoidance subscales ($r = .26$, $p < .05$), and IM to Know yielded the strongest positive correlation with Nicholls et al.'s task orientation ($r = .50$, $p < .05$). Furthermore, the authors successfully demonstrated expected concurrent validity between the AMS and other established motivational antecedent scales, as well as between the AMS and other school performance scales. The motivational antecedents included perceived general academic competence (e.g., "I consider myself a good student"), perceived classroom climate closely associated with teachers' communication styles (e.g., "The feedback I get from my professors is constructive and helps me perform better in my courses"), educational optimism (e.g., "I generally look at the brighter side"), and self-actualization ("It is better to be yourself than to be popular") (pp. 163-164). School performance was measured by achievement variables, including concentration in the classroom, positive emotions, academic satisfaction, grades, and schooling intentions. By demonstrating concurrent validity, the authors provided some support for the psychometric adequacy of the AMS.

Fortier et al. (1995) examined the effects of two motivational antecedents, perceived academic self-determination and perceived academic competence, on autonomous academic motivation (i.e., Intrinsic Motivation and Identified Regulation) and the influence of autonomous academic motivation on school performance (math, French, geography, and biology final grades) using structural equation modeling (N = 263, male = 54%, female = 46%, mean age = 14.9 years, Montreal high school French Canadians). The results supported the hypothesized model. Perceived academic competence and perceived self-determination significantly contributed to autonomous academic motivation ($r = .584$, $p < .001$ and $r = .531$, $p < .001$, respectively) and autonomous academic motivation was significantly and positively correlated with academic performance indexes ($r = .532$, $p < .001$) (the integrated structural model accounted for 28% of the variance observed in School Performance, with the root mean square residual = .071). Thus, the authors successfully demonstrated that more academic self-competence and a more positive orientation toward schooling (self-determination) increase autonomous forms of motivation, which also increases school achievement.

Noels et al. (1999) applied the AMS into L2 (French) learning contexts with 78 Anglophone students in Ottawa (mean age = 22 years old). One of their purposes was to examine the link between extrinsic and intrinsic motivation and various L2 learning-related affective variables such as perceived competence. In order to examine perceived academic

competence, they used four anxiety and self-evaluation items from the Classroom Anxiety Scale (Gardner, 1985) and four items from the Self-Evaluation Scale (Clément, 1988). Furthermore, Noels et al. included four confidence items, called the Self-Perceptions of Spanish competence scale (again based on Clément, 1988). The competence items asked the L2 learners to self-rate the extent to which they felt that they could read, write, speak, and understand the target language on a 7-point scale (see also Noels 2001, p. 118, for the same kind of procedure). This indicates that perceived academic competence, a motivational antecedent, can be assessed in terms of learners' confidence or lack of confidence in general and specific L2 language skills. As predicted by Self-Determination Theory, the results showed that the autonomous intrinsic and identified regulation significantly negatively correlated with class anxiety ($r = -.24$, $r = -.25$, respectively, $p < .05$) while intrinsic motivation had a statistically significant positive correlation with perceived linguistic competence ($r = .34$, $p < .05$).

The researchers concluded that the results attested to the predictive utility of the intrinsic and extrinsic orientations as described by Deci and Ryan (1985) for L2 learning motivation and outcomes. They argued that learners who valued the goals of enjoyment and self-development in learning tend to make a sustained effort and develop competence. Zimmerman and Bandura's (1994) study of L1 writing also provided insights into the competence construct. They investigated the link between perceived competence for academic writing and perceived self-efficacy in general academic achievement with 95 1st year university students from a highly selective university (43 males and 52 females, 17-20 years old). Using a path model, the researchers found that the participants' self-efficacy for writing influenced perceived general academic achievement as well as personal standards for the quality of writing ($r = .41$, $p < .05$ for self-efficacy for writing and that for academic achievement and $r = .36$, $p < .05$ for writing self-efficacy and self-evaluative standards). That is, the students with higher self-efficacy for writing set higher goals and persistently applied themselves to the given task in order to attain a higher outcome. Self-efficacy for writing skills and goal setting accounted for 35% of the variance measured by the course writing grades.

A group of Japanese psychology scholars conducted a series of empirical studies in order to investigate the link between autonomous forms of motivation (measured by the AMS or the AMS for small children version) and strategy use. Yamauchi, Kumagai, and Kawasaki (1999) administered a questionnaire to 228 Japanese junior high school students and 306 Japanese high school students. Two types of learning strategy scales were used, Cognitive Strategy Use (11 items, $\alpha = .78$) (e.g., "When I study for a test, I try to put together the information from class and from the book") and Self-Regulation (6 items, $\alpha = .73$) (e.g., "I work on practice exercises and answer end of chapter questions even when I don't have to"). The results were analyzed separately for the junior and high school samples. A multiple regression analysis showed that autonomy accounted for 32% and 23% of Cognitive Strategy Use and 39% and 28% of Self- Regulation among the junior and senior high school participants, respectively. The researchers also found statistically significant correlations between more autonomous motivation (Introjected Regulation for the junior high school sample and Identified Regulation for the high school sample; $r = .20$, $r = .34$, $p < .05$, respectively) and cognitive strategy use in both samples. Statistically significant correlations were also identified in both samples between Intrinsic Motivation to Accomplish and the use of Self-Regulation ($r = .31$, $r = .25$, $p < .05$, respectively for the junior and high school samples).

Using the same framework, Tanaka and Yamauchi (2000) conducted a survey with 101 university students (40 males and 81 females, 18–21 years old). Statistically significant correlations were found between Intrinsic Motivation and a belief variable, Mastery Orientation (r = .32), Identified Regulation and Mastery Orientation (r = .44), Mastery Orientation and a general learning strategy variable, Deep Processing (r = .52), and Deep Processing and academic achievement (i.e., the self-reported English grade at the 12th grade) (r = .22). In this way, these Japanese survey studies confirmed the predictive utility of Deci and Ryan's motivational model for explaining the use of more effective self-regulated and deep-processing learning strategies.

3. CONCLUSION

First, the preceding literature review suggests four areas in need of further investigation. First, in the previous empirical studies using the SDT-based academic motivational model, few researchers addressed the correlational relationship among L2 learning motivational, affective (e.g., confidence and anxiety), and strategy constructs according to learners' autonomous motivation levels. Noels et al. (1999) focused on the links among SDT-based motivational constructs, L2 class-anxiety, and teachers' communication styles. Noels et al. (2000) investigated the links among SDT-based and L2 learning-related motivational constructs, L2 competence, and anxiety. Noels (2001) again investigated the links among SDT-based and L2 learning-related motivational constructs, teachers' communicative styles, and some other L2 related variables (e.g., frequencies of contacts with the target language people). In Iran, Tanaka and Yamauchi (2000) focused on the links among SDT-based motivational constructs, general learning strategies, and some other general learning-related variables (e.g., mastery, performance or work avoidance goal orientation). However, few L2 researchers drawing on the SDT-based motivational thinking have investigated the links among L2 learning motivation, confidence/anxiety, and strategy use with L2 learners with different autonomous motivational levels measured using the SDT motivational continuum. Related to this gap, in the L2 learner autonomy-readiness research, few researchers have reported correlations among affective variables and what are regarded as effective L2 learning strategies. Based on the Likert-scale questionnaire data, Cotterall (1999) reported that her participants possessed little knowledge and confidence in monitoring and evaluating their progress in learning L2 English. Spratt et al. (2002) found that even highly motivated and more proficient participants seldom utilized certain learning strategies, such as studying English in student groups and engaging in grammar exercises outside classrooms. Although these findings are valuable, further systematic investigation is needed to increase our knowledge of the relationships that exist among L2 learners' motivation, affect, and strategy use according to their autonomous motivation levels.

Second, a number of researchers investigating L2 learner autonomy fostering interventions (e.g., Ho & Crookal, 1995; Victori & Lockhart, 1995) have attempted to increase learner autonomy by focusing on developing learners' linguistic skills and/or knowledge of how to learn. Positive findings were reported, but too often the researchers failed to systematically investigate changes that those fostering interventions might have facilitated in the learners' motivation, affect, and behavior. Combining a learner autonomy fostering interventionist approach with the use of measurements on temporal changes in learners' linguistic, motivation, affect, and behavior is needed in order to obtain greater insight into effective ways of developing L2 learner autonomy.

Third, reports about learner autonomy fostering studies conducted in Japanese universities (e.g., Barfield, 2003; Shimo, 2003; Takagi, 2003) suggest that an autonomy fostering intervention is feasible in the area of new vocabulary learning, as the participants' reflective writing reported in those studies often indicated that a lack of vocabulary prevented the participants from using English communicatively, resulting in increased sense of failure or anxiety in L2 English learning. In L1 alternative reading comprehension classes, a few researchers (Dole et al., 1995; Fisher et al., 1991) implemented versions of the Vocabulary Self-Collection Strategies (VSS) and obtained positive effects in terms of increasing the participants' vocabularies. In an L2 learner autonomy enhancing intervention, Dam and Legenhausen (1991) reported that an adapted VSS yielded a positive effect with young children learning an L2. However, in these VSS-based studies, the findings were reported mainly in the forms of new vocabulary learning. Therefore, it is necessary to combine an adapted VSS featuring not only new vocabulary learning, but also a gradual transfer of learning responsibility from the teacher to the students, and to measure temporal changes not only in vocabulary learning but also in motivation, affect, and learning behavior.

Finally, as indicated above, both individual and social (e.g., cooperative) learning approaches have increasingly been considered important in the L2 learner autonomy literature. At the same time, the role of the teacher as helper has often been stressed. However, little research has been conducted quantitatively and qualitatively investigating how the participants themselves receive an autonomy fostering intervention designed to facilitate individual, cooperative, and teacher-modeling learning processes. An empirical investigation using a mixed-method technique can reveal how this approach facilitates learners' more autonomous learning.

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