

MOTIVATION AND LEARNING INTERFACE:
HOW REGULATORY FIT AFFECTS INCIDENTAL VOCABULARY LEARNING AND
TASK EXPERIENCE

By

Mostafa Papi

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ABSTRACT

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According to the *regulatory fit theory* (Higgins, 2000), individuals with a *promotion regulatory focus* are more motivated when they *approach gains* while those with a *prevention regulatory focus* are more motivated when they *avoid losses*. The present study examined how the match or mismatch between the incentive structure of a task (gain-framed vs. loss-framed) would influence the learning experiences and outcomes of learners with different chronic regulatory foci (Higgins, 1997). One-hundred-eighty-nine ESL learners at a large U.S. university completed a vocabulary pre-test. A week later, they attended an experimental session in a computer lab, where they read a 675-word article about animal testing and wrote an argumentative essay on the topic. They were instructed that if they obtained or sustained 70 out of 100 points they would enter a drawing to win one of three \$100 gift cards. The participants were randomly assigned to two conditions. In the *gain-framed* condition they started the task with zero points and had to *gain* 70 points to enter the drawing. Conversely, participants in the *loss-framed* condition started with 100 points but had to *avoid losing* more than 30 points in order qualify for the drawing. The participants also completed a vocabulary post-test, a regulatory focus questionnaire, and a task evaluation survey. The results of multiple regression analyses asymmetrically supported the predictions of the regulatory fit theory. Prevention focus individuals learned significantly more vocabulary in the loss-framed condition than in the gain-framed condition. However, promotion focus individuals' learning did not vary across the

framing conditions. Overall, promotion focus individuals learned significantly more vocabulary items and had more positive task experiences than prevention focus individuals.

To my Father: You believed in me and gave me the courage to pursue big dreams. You were proud of me for what I was doing and always wished the best for me. I wish you were here to see that I made this happen. Thank you!

To my Mother: I can never thank you enough for all you have done for me. You have always wanted the best for me and prayed for me when that was the only thing you could do. I hope this makes you proud.

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KEY TO ABBREVIATIONS

ESL: English as a Second Language

EFL: English as a Foreign Language

SLA: Second Language Acquisition

L1: First Language

L2: Second Language

SDT: Self Determination Theory

SEM: Structural Equation Modeling

WTC: Willingness to Communicate

MR: Multiple Regression

CHAPTER 1

INTRODUCTION

It has been a few decades since researchers in the field of psychology have become aware of the entwined nature of motivation and cognition (Braver et al., 2014). In the scholarly research literature in the field of second language acquisition (SLA), however, the cognitive and motivational aspects of language learning have often been treated as two independent phenomena. This has been mainly due to the dominance of the cognitive approach (Firth & Wagner, 1997; Swain, 2013) and the lack of attention by both cognitive and motivation researchers to the interconnectedness of these two domains. Traditionally, SLA researchers have been interested in the cognitive aspects of the language learning process (e.g., Robinson, 2001, 2003; Skehan, 1996, 1998) and have treated motivation as a learner variable that might account for some individual variation in the results of their studies. L2 motivation researchers, on the other hand, have been predominantly concerned with what Kormos and Dörnyei (2004) call a “macro perspective” towards motivation, “where the focus has been on general motivational dispositions and influences in relation to global learning outcomes and behaviors” (Kormos & Dörnyei, 2004, p. 1). As a result, L2 motivation researchers do not seem to have much empirical basis to draw on when it comes to questions such as how to improve L2 learning processes and outcomes through motivational manipulations.

More importantly, this gap between the cognitive and motivational aspects of second language learning appears to be the way motivation has generally been viewed in the field. Researchers in the field of SLA have been predominantly approaching motivation as energy that is produced once learners have specific goals in mind. Many important theories and constructs have been proposed including attitudinal, instrumental, and integrative motives (Gardner, 1985),

linguistic self-confidence (Clément, 1980), intrinsic and extrinsic motivation (Noels, 2001), international posture (Yashima, 2002), and ideal and ought-to L2 self (Dörnyei, 2005). Many researchers have found evidence for the relationship between these motivational constructs and different motivational, behavioral, achievement, and proficiency measures (e.g., Gardner, 1985; Dörnyei & Ushioda, 2009). These motives and goals are assumed to produce different levels of energy or what Gardner (1985) called “pulling power” (p. 52). Employing strategies to create or promote those motives is thus supposed to produce this energy among all types of learners. The assumption behind this perspective is that by creating or promoting such motives, motivational energy will be produced, and motivated behavior and learning will automatically follow. The question remains, however, whether those variables are truly motivating for everyone in the same way. Empirical evidence in the field does not support an affirmative answer to that question. In a large scale study, Papi and Teimouri (2014) found that there are learners with different motivational, emotional, and linguistic characteristics, who were motivated by different motives. But why do learners have different motivational characteristics? In other words, why are some learners motivated by certain motives but not by others? Why do some learners have, say, a strong ideal self to motivate them while others do not? Do learners approach the same goal in the same way or in different ways? The L2 motivation literature does not seem to have an answer to these questions because the dominant perspective is that these motives produce the necessary energy or fuel for everyone to learn a language.

This motivation-as-energy view has been of great value and has formed applied linguists’ current understanding of L2 motivation. At the same time, however, it has obscured the true nature of motivation as a construct that could be qualitatively different for different individuals (Higgins, 2012). The central idea behind the qualitative perception of motivation, which has been

proposed by some prominent motivation researchers in the field of social and educational psychology (e.g., Dweck, Mangels, & Good, 2004; Elliot, 1999; Higgins, 1997, 1998, 2012), is that human beings' chronic concerns with different survival needs render them motivationally different from each other. These motivational differences not only direct individuals' choice of goals to pursue but also the processes and strategic means that they employ in their goal pursuits. Considering language learners' chronic motivational preferences in L2 motivation research and examining how those motivational orientations influence the way learners approach the language learning process can paint a better picture of individual differences in SLA (Papi & Teimouri, 2014). It could also help shed light on the long-ignored link between the motivational and cognitive aspects of language learning and provide affordances to improve language learning processes and outcomes through motivational manipulations.

To introduce this qualitative conception of motivation into the field of SLA, I employed Higgins' *regulatory focus theory* (1997) and *regulatory fit theory* (2000) in the present study and investigated how the interaction between learners' chronic motivational dispositions and situated task-related factors results in better learning outcomes and experiences. More specifically, I investigated how creating fit between language learners' predominant motivational orientation and the incentive structure of an integrated reading/writing task could influence the learners' incidental vocabulary learning, and their experience of performing the task.

In the following section I start by explaining Higgins' theories of regulatory focus (1997) and regulatory fit (2000) and discuss how they could be applied to language learning research and pedagogy. Then I turn to major and relevant L2 motivation theories and constructs and review them in light of Higgins' theories. I discuss how the new perspective is different from the viewpoint offered by L2 motivation theorists and how it could complement research in the area.

The Regulatory Focus Theory

The regulatory focus theory (Higgins, 1997) is based on the idea that two distinct but coexisting motivational systems that serve different survival needs regulate human goal-directed behavior: The promotion system and the prevention system. The promotion system is concerned with basic survival needs (e.g., obtaining nourishment) and higher level needs for advancement, accomplishment, and growth. On the other hand, the prevention system involves the survival need for security as well as the higher level needs for safety and calmness. Individuals with a prevention focus are concerned about fulfilling their responsibilities, obligations, and oughts in order to maintain the status quo and feel safe and secure. Individuals with a promotion focus are concerned about accomplishments, advancement, and growth in order to move from the status quo to a more desired end state and feel happy.

According to Higgins (1997), individuals can have a chronically prevention or a chronically promotion focus. They can also be strong or weak on both orientations. The development of the chronic regulatory mechanisms has roots in childhood. People can enjoy varying degrees of these two motivational orientations depending on the way they were raised. If caretakers, for instance, consistently react to a child's unapproved behavior by withdrawing love and attention, the child's chronic need for nurturance will develop. The child would then be highly concerned about how to win back their parents' love and attention. They would thus develop sensitivity to positive consequences. If parents habitually emphasize the security needs, on the other hand, by negatively reacting to their child's unapproved behavior, for example by blaming and criticizing them, the need for security and protection would be emphasized and developed in the child's mentality towards the choices they make. They would grow sensitive to

the negative consequences associated with their actions and strive to maintain their own safety and calmness. Nurturance-based social regulation results in a chronic promotion focus, while security-based social regulation results in the development of a chronic prevention focus (see Higgins, 2012, for a review).

The promotion and prevention orientations reflect not only different ways of looking at the end states or outcomes but also individuals' strategic inclinations towards those goals; that is, the ways those people go about realizing their hopes and ideals (with a promotion orientation) and meeting their responsibilities and oughts (with a prevention orientation). An *eager* strategy fits a promotion focus while a *vigilant* strategy fits a prevention focus. An eager strategic tendency insures *approaching matches* to their desired end states by taking every single opportunity and, in signal-detection terms, avoiding errors of omission (missing an opportunity); whereas a vigilant strategy insures *avoiding mismatches* to their desired end states by making correct rejections and avoiding errors of commission (making a wrong choice). For instance, a promotion-focused ESL learner who wants a high score in a final exam takes an eager strategy to approach matches to this desired end state including studying extra material and communicating with native speakers in order to improve his or her likelihood of gaining the appropriate grade. A prevention-focused ESL learner, on the other hand, would take a vigilant strategy to avoid mismatches to the desired end state by doing all the required assignments and sidestepping the unrelated activities or materials that might increase his or her chance of grade loss.

The Regulatory Fit Theory

According to the regulatory fit theory (Higgins, 2000), “when individuals use goal pursuit means that fit their regulatory orientation, they experience a regulatory fit” (Higgins, 2000, p.

1,219). Individuals experiencing regulatory fit “feel right” about what they are doing, which contributes to their motivation to pursue their goal (Higgins, 2005). Regulatory fit enhances motivation through increasing the value of the goal, which itself is enhanced through an individual’s engagement in goal-directed activity (e.g., Higgins, 2000, 2005). Promotion-focused learners tend to experience fit and feel right about what they are doing when they pursue their goal in an eager manner, while individuals with/in a prevention focus experience fit and feel right about what they do when they pursue their goals in a vigilant manner. In other words, “regulatory fit theory predicts that individuals will be more strongly engaged in an activity and value it more when they have a promotion orientation toward the activity and engage it in an eager manner or have a prevention orientation toward the activity and engage it in a vigilant manner” (Higgins, Cesario, Hagiwara, Spiegel, & Pittman, 2010, p. 560). Numerous studies have provided empirical evidence that when individuals pursue a goal in a manner that fits their chronic or induced regulatory focus, the fit enhances (a) their perceived value of the goal (e.g., Higgins, Idson, Freitas, Spiegel, & Molden, 2003), (b) their engagement, motivational strength, and persistence in the goal pursuit (Avnet, Laufer, & Higgins, 2013; Cesario, Higgins, & Scholer, 2008; Crowe & Higgins, 1997; Higgins & Scholer, 2009; Spiegel, Grant-Pillow, & Higgins, 2004), (c) their learning and performance (e.g., Markman, Baldwin, & Maddox, 2005; Worthy, Maddox, & Markman, 2007), (d) their fluency of their mental processing of messages (e.g., Lee & Aaker, 2004), and finally, (e) their enjoyment of and interest in the goal pursuit (e.g., Freitas & Higgins, 2002; Higgins et al., 2010).

The influence of regulatory fit on the level of engagement and motivational strength in goal pursuit is the main motivation for the present work. Investigating how motivational regulation can result in high levels of cognitive engagement in language learning, which in turn

can enhance the learning outcomes, can open a new avenue in SLA research where the actual process of language acquisition could be better understood through the lens of motivation. The product-oriented view pursued in research on language learning motivation has told us little, if anything, about how the actual process is regulated. This has resulted in the misconception that the process of language acquisition is merely a cognitive one. The purpose of the present study is to challenge this assumption by examining how the application of the regulatory focus theory and the regulatory fit theory can shed light on the motivational aspects that regulate the learning processes involved in incidental vocabulary learning.

Regulatory Fit Theory and Learning

The link between the regulatory fit theory and learning processes and outcomes has been examined only in a handful of research studies; but the results from these few studies appear to be resoundingly clear. Following the research tradition on the regulatory fit theory, researchers typically create fit between the regulatory focus of the task and the chronic or situationally induced regulatory focus of the participants to see how the match or mismatch between the two influences the learning experiences and outcomes. Below, I review six publications on regulatory fit and learning. In two of the six publications, the authors conducted and reported on two separate studies, and in one of the six, the the authors conducted and reported on three separate studies. Thus, by reviewing these six publications, I review ten studies total. And out of the ten studies, all but one indicated a signification relationship between regulatory fit and learning: As I will explain below, in experiment 2 in Grimm, Markman, Maddox, and Baldwin (2008), both fit and non-fit conditions resulted in statistically equal learning. But taken together, the results from

the ten studies seem to show a clear link between fit and general educational (or cognitive task-based) processing or learning or both.

The effects of regulatory fit and learning were first studied by Markman, Baldwin and Maddox (2005). They investigated how creating situational regulatory fit between the incentive structure of a classification task and the temporarily-induced regulatory focus of the participants affected their learning. They asked 44 participants from the University of Texas to write how their sense of hopes and goals has changed over time in order to induce a temporary promotion focus, or write how their sense of duty and obligation has changed over time in order to induce a temporary prevention focus. Then they asked their participants to complete a classification task in which they had to decide whether each of the 150 dots that appeared one at a time on a computer screen belonged to Category A or Category B based on their location on the screen. The dots' position varied either on a vertical or a horizontal axis. They were supposed to learn how to categorize as they went through trials and errors. The incentive structure of the task was framed either in promotion or prevention terms. In the promotion condition, they followed a gain matrix; they were told that they had to gain 80% of the points in order to win a ticket to a \$50 raffle. In the prevention condition, they followed a loss matrix; they were told that if their performance fell below the criterion (80%), they would lose the ticket they were shown at the beginning of the study. In addition, in order to heighten the sense of gain or loss, the researchers accompanied the participants' gains in points with the sound of a ringing cash register, whereas losses were accompanied by an unpleasant buzzer. The results of the study confirmed the predictions of the regulatory fit theory. Participants with/in a promotion focus significantly outperformed those in a prevention focus in the gain matrix. In the loss matrix, on the other hand,

participants with/in a prevention focus showed a significantly better performance than those in a promotion focus.

In a second publication, Maddox, Baldwin, and Markman (2006) conducted three experiments to examine the effects of regulatory fit on learners' cognitive flexibility and learning in perceptual classification tasks. The study was based on the assumption that because both regulatory fit and cognitive flexibility are related to activation in frontal brain areas, the former might affect the latter and result in differences in learning. One hundred and eighteen university community members participated in the study. The incentive for the task was similar to that of the previous study (i.e., Markman et al., 2005). That is, the participants were told they could earn an entry ticket to win \$50 if they (a) gained 90% accuracy (promotion condition) or (b) did not lose more than 10% on accuracy points (prevention condition). In Experiment 1A, participants completed a rule-based classification task in which cognitive flexibility was advantageous to performance. The task included categorizing twelve 48-trial block of lines whose length, orientation, and horizontal position varied on the computer screen. These lines were supposed to be put in four categories including (a) short, shallow angle lines, (b) short, steep angle lines, (c) long, shallow angle lines, and (d) long steep angle lines. Participants were not given these rules and were supposed to extract those rules through trial and error, which required cognitive flexibility. Because these rules were verbalizable, they considered this type of learning to be rule-based category learning through explicit hypothesis testing. In order to complete the classification task, two strategies could have been taken: either a simple unidimensional rule that resulted in suboptimal but acceptable performance, or a complex subjunctive rule that could have resulted in optimal performance. The participants were placed in a situation for which the reward structure of the task involved maximizing gains, which would fit a promotion regulatory focus;

that is they gained points only when they got an answer right. The results of the study confirmed the predictions of the regulatory focus theory: a) promotion focus participants exceeded the performance criterion faster than the prevention focus participant; b) more promotion focus participants (63.3%) met or exceeded the performance criterion than prevention focus participants (36.7%); and c) promotion focus participants were more accurate than prevention focus participants. In Experiment 1B, the authors replicated the study through a loss-oriented reward structure in which participants tried to minimize losses. That is, participants lost 1 point for getting an answer right and 3 for getting an answer wrong. This loss-based induction was predicted to benefit prevention focus participants. The results again confirmed the predictions of the regulatory focus theory. That is, prevention focus participants performed significantly better than promotion focus participants.

In Experiment 2, Maddox and his colleagues examined the effects of regulatory fit on rule-based classification learning when cognitive flexibility was disadvantageous for performance. In such tasks, conservative decision making regarding one's criterion would lead to better performance than large and risky changes. In contrast to Experiment 1A and 1B, in this experiment participants were given categorization rules. The authors argued that this required participants to follow rules in order to avoid errors and improve performance whereas trying to extract rules through trial and error (employing cognitive flexibility) would result in more errors and lower performance. The reward structure was gain-framed but the predictions were the opposite. It was expected that participants in a fit condition (promotion focus participants) would actually perform worse than those in a non-fit condition (prevention focus participants) because cognitive flexibility was not beneficial to performance. The results of the study this time with 103 participants again confirmed the predictions of the regulatory focus theory. Those who were

in a non-fit condition learned faster and reached the optimal solution faster than those who were in the fit condition.

The experiment was replicated in a loss-framed condition in Experiment 3, which was supposed to increase cognitive flexibility in prevention focus participants at the expense of their learning speed and accuracy. All the procedures in Experiment 1 were followed. This time, however, instead of a rule-based category structure (which is an explicit type of learning), an information integration category structure (which is an implicit procedural-based type of learning) was employed. In other words, in order to reach optimal performance, information integration was required rather than rule-based strategies. Regulatory fit was not expected to influence procedural learning. Rather, because procedural-based learning includes a rule-based hypothesis testing bias in its early stages, regulatory fit was expected to have an effect in the timing of when participants abandon those rules and continue with procedural learning. Cognitive flexibility as a result of regulatory fit in this experiment was expected to increase participants' use of rule-based strategies and slow the shift towards information integration strategies. The participants in a non-fit condition (promotion focus) were thus expected to abandon rule-based strategies earlier and perform better than those in a fit condition (prevention focus). The experiment, which included 41 participants, confirmed the predictions of the regulatory fit theory. The promotion participants abandoned rules in favor of information integration strategies sooner than the participants in the prevention focus. They also reached the optimal performance criterion faster, and obtained higher accuracy rates.

A third publication in this area appeared in 2008: The differential effects of regulatory fit on explicit rule-based category learning versus implicit procedural category learning was examined in two experiments by Grimm, Markman, Maddox, and Baldwin (2008). As went

above, in rule-based learning participants keep testing different hypotheses in order to find the correct rules that results in optimal solutions. Information-integration category learning, on the other hand, “depends on trial-by-trial feedback that is assumed to be learned by an implicit system, the procedural system, instead of the explicit system” (Grimm et al., 2008, p. 922). In Experiment 1, the researchers primed 90 undergraduate university students from the University of Texas at Austin either through a promotion or a prevention induction. The students were told that they could earn an entry ticket into a drawing for \$50 if they reach a certain level of performance. The reward structure was framed either in loss (prevention priming) or gain terms (promotion priming). They used a gain task, which matches a promotion focus. The participants gained points by getting an answer right and gained no points (nor lost points) for getting answer wrong. The students then completed a rule-based category learning task and an information integration task. The task included categorizing visual stimuli based on their background color, foreground object shape, foreground object color, and number of foreground objects. The rule-based solution required a simple rule which could be verbalizable (e.g., the objects with a white background belong to category A; objects with a black background belong in Category B). The rules could be changed flexibly though in order to come to more creative answers. The information-integration solution, on the other hand, would require a complicated rule that could not be easily verbalized; and persisting in search for rules could result in lower performance. They predicted that regulatory fit would improve performance on the rule-based explicit learning but would damage performance on information-integration implicit learning. The results of the study confirmed the authors’ predictions. Promotion focus participants (who were in the fit condition) reached the criterion for the rule-based task significantly faster than prevention focus participants (who were in the non-fit condition). In contrast, prevention focus participants

reached the criterion for the information-integration task significantly faster than promotion focus participants.

Experiment 2 replicated Experiment 1 in a losses/rewards structure, which fits participants in a prevention focus. They put 48 undergraduate students in either a prevention focus or a promotion focus, and asked them to complete the same tasks as in Experiment 1. They were told that in order to complete the task successfully they need to get five correct trials in a row and each time they fail the criterion increases by one (after the first error, the criterion would be getting six trials in a row right). Through this loss rewards structure, the participants were to feel the task got more difficult every time they made an error, a kind of penalty structure which is supposed to fit a prevention focus. The results partially confirmed the stated hypotheses. The prevention-focus participants reached the criterion in the rule-based task faster than the promotion focus participants, but the difference was not significant ($p < .15$). For the information-integration task, however, participants in the promotion focus performed better, as predicted. In sum, participants experiencing regulatory fit performed better on the rule-based task, whereas participants experiencing regulatory mismatch performed better on the information-integration task.

In a fourth publication, Worthy, Maddox, and Markman (2007) examined the effects of regulatory fit on the exploration-exploitation behavior in a choice task. They hypothesized that in a choice task, decision makers in a regulatory fit would be more flexible and would choose to explore possible alternatives in the environment than individuals in a regulatory non-fit, who would be less flexible and would choose the option with the highest anticipated value. In order to test these hypotheses, they developed a choice task - similar to a gambling task - in which participants would choose from two decks of cards. Choosing from Deck A would initially give

high values but at the end would be disadvantageous; choosing from Deck B would initially give low values but would eventually be more advantageous. In order to reach the bonus criterion, participants had to show willingness to explore different alternatives (exploration) and avoid persistent and convenient use of the most salient response strategy (exploitation). The fit induction was similar to the previous studies. Participants in a promotion induction were told that they would have to achieve the bonus criterion in order to win a ticket to a drawing for a \$50 gift card (with a winning chance of one out of 10); and those in a prevention focus were told that they would have to achieve the criterion in order to avoid losing entry. The manner in which the task was performed was also either gain or loss-framed. Subjects received between 1 and 10 points in the gain condition and between -1 and -10 in the loss condition. Participants who were in promotion induction and a gain condition, and those who were in prevention focus and a loss condition experienced regulatory fit. The results of the study confirmed the hypotheses. Those who were in a regulatory fit showed more willingness to explore different alternatives and choose from Deck B even if it did not give initial high values. They did so not only in the condition in which this flexibility resulted in their success (Experiment 1) but also when the final outcome was to their disadvantage, as shown in Experiment 2. The authors suggested that “when the reward structure of the environment matches an individual’s expectations, he or she would bring his or her full cognitive resources to bear on problem to solved in that environment. However, when the reward structure does not match an individual’s expectations, he or she is likely to engage fast-acting cognitive strategies until the environment can be better understood” (p. 1131). They concluded that the former will likely result in the employment of wider variety of strategies whereas the latter results in the exploitation of the most convenient strategy.

In a fifth publication, Van Dijk and Kluger (2011) investigated the interaction between positive and negative feedback task type (promotion tasks vs. prevention tasks) as sources of regulatory focus. Their study focused on the hypothesis that tasks could situationally induce either a promotion focus or a prevention focus and this regulatory focus could interact with other sources of situational or chronic regulatory focus and create regulatory fit or non-fit. More specifically, they hypothesized that giving negative feedback on tasks that require attention to details, vigilance, and adherence to rules (prevention tasks), could increase motivation and performance more than giving positive feedback. Conversely, giving positive feedback to individuals when they are doing a task that requires creativity and eagerness (promotion tasks) increases motivation and performance more than negative feedback. In order to test this hypothesis, they conducted a pre-testing and two studies. In the pretesting, they had experts and non-experts rate, make changes, and code a list of 23 tasks as promotion or prevention tasks. They came up with a 11 promotion tasks (e.g., generating ideas, creative problem solving, assimilating new technology, challenging decision making, initiating changes) and 10 prevention tasks (e.g., detecting errors, maintaining safety, bookkeeping, work scheduling, maintaining quality control) while two tasks had mixed ratings. In Study 1, the authors examined the relationship between feedback type (positive and negative) and task type (promotion and prevention). They asked 171 Business Administration students read scenarios in which they visualized themselves working on three promotion or three prevention tasks. The participants were then given either positive or negative feedback. They were told that they were failing or succeeding one month into the project. The motivation level of the participants was measured both before starting the task and after receiving feedback using a one-item questionnaire. The results of the study confirmed the authors' predictions. Positive feedback increased the

participants' motivation on the promotion tasks more than negative feedback; negative feedback resulted in more motivation for the prevention tasks than positive feedback.

In study 2, the authors examined the interaction between feedback type and task type on participants' motivation and their actual task performance. They had 112 undergraduate students do a prevention task or a promotion task. For the prevention task, the participants were asked to detect errors in a list of simple arithmetic calculations. The task required accuracy and attention to details, which matches a prevention strategy. The promotion task involved generating as many uses as possible for a particular object such as a building block. The task required open-mindedness and creativity. In the middle of the task, the participants were told that their performance "thus far" was either *below average* (negative feedback) or *above average* (positive feedback). To measure the participants' motivation both before the task and after receiving the feedback, they responded to the question: "How much effort do you intend to exert on the following task?" Performance on the error detection task was measured by the number of errors detected; and performance on the idea generation task was measured by the number of uses suggested by the participants. The results of the study confirmed the authors' hypotheses. In the error detection (prevention) task, motivation and performance improved following negative feedback but debilitated following positive feedback; conversely, in the idea generation (promotion) task, positive feedback increased motivation and performance while negative feedback decreased those. The authors concluded with the proposal that task type should be considered as a source of regulatory focus which moderates the effects of other sources of regulatory focus (e.g., feedback sign) on motivation and task performance.

And finally, in a sixth publication, regulatory focus theory was examined in relation with motor skill acquisition. Chen, Kee, Hung, and Ling (2015) asked 60 undergraduate students at a

university in Taiwan to throw 50 tennis balls in a bucket. If in a promotion condition, the participants would gain NT\$2 by throwing each ball in the bucket; they would lose NT\$2 off of an initial promised NT\$100 every time they miss the target in the prevention condition. The results of their study confirmed the predictions of the regulatory fit theory. The participants who were chronically promotion-oriented, as measured by Lockwood et al.'s (2002) questionnaire, performed better when they were in the promotion (gain) condition. Those who were chronically prevention-oriented, on the other hand, performed better in the prevention (loss) condition).

As reviewed above, the authors of at least ten studies (reported on in six publications) have applied regulatory focus and fit theories to the area of learning and performance. The outcomes of these 10 experiments are resoundingly clear: There appears to be a link between the two. However, I would like to point out that these studies are limited in scope and examine only on a few areas of general cognitive processing or learning (e.g., classification, skill acquisition). The present study is the first that applies the theories to the area of second language acquisition. It is expected that individual differences in terms of regulatory focus and also the interaction between the environmental factors and those chronic regulatory differences shed light on some motivational aspects of second language learning and help language educators teach in a more motivating way.

Regulatory Fit and Task Enjoyment

Interest or enjoyment in doing tasks is a concept that has been highlighted in the self determination theory (e.g., Ryan & Deci, 2000). Deci and Ryan believe that learners will experience more learning enjoyment when they do an activity because of their intrinsic motivation in doing the task, which in turn satisfies their psychological needs for competency

and autonomy. In other words, action enjoyment is highest when the action and the reward are singularly related; when enjoyment in doing an action achieves action enjoyment. Freitas and Higgins (2002) provided evidence that intrinsic interest in doing an action is not the only source of action enjoyment. In their first study, they asked 83 undergraduate students write an essay about how their hopes and aspirations, or duties and responsibilities have changed growing up in order to put them in a promotion or prevention induction respectively. In an unrelated task, the participants then were asked to read a list of strategies that they would use to achieve a 4.0 GPA. The strategies were framed either in eagerness terms (e.g., spend more time at the library) or in vigilance terms (e.g., stop procrastinating). The participants rated on a 10-point scale “how enjoyable each strategy would be to carry out.” The results of the study somewhat conformed the predictions of the regulatory fit theory. Following the promotion induction, participants enjoyed the eagerness-framed strategies more than the vigilance strategies whereas following a prevention induction, vigilance-framed strategies were rated as more enjoyable although the difference for the latter was not significant.

In the second part of the study, the authors replicated the study this time for the action plans that the participants themselves produced. The results of the study were similar to the first study. In addition, participants put in a promotion induction predicted greater overall enjoyment than those in the prevention condition.

The first two studies examined the amount of anticipated enjoyment in performing a strategy. The third study focused on both the predicted and the actual enjoyment of the participants. In addition, since enjoyment maybe a feedback signal of success on a task, they also measured the participants perceived task success. Also, based on the assumption that enjoyment in a task could predict learners’ willingness to repeat the task, interest in task repetition was also

examined. The results of the third study also confirmed the predictions of the regulatory fit theory. Learners in a fit condition experienced more enjoyment, were more optimistic about their success, and were more willing to repeat the task.

The study by Freitas and Higgins (2002) is the only work examining the effects of regulatory fit on task enjoyment. In order to build on that study, participants' enjoyment of the task, perceived success, and willingness to repeat the task are also examined in the present study. In addition, because the prevention orientation is more associated with agitation related emotions (Higgins, 1997; Papi, 2010; Papi & Teimouri, 2014), it would be interesting to examine the level of anxiety that participants will experience during the task.

L2 Motivation

The Integrative Motive

L2 motivation research was pioneered by social psychologist Gardner and his associates in the multilingual context of Canada (e.g., Gardner, 1985; Gardner & Lambert, 1972). While up until then aptitude was perceived as the most important learner factor predicting success in second language learning, Gardner and his associates proposed that attitudes and motivation might play an even more important role. Since the socio-educational context in which they initiated the research was home to Francophone and Anglophone students, the attitudinal factors naturally turned out to be the most significant reasons why people would want to learn the language of the other group. They proposed that there are two motivational orientations among language learners, *integrative orientation* and *instrumental orientation*. The integrative orientation reflects "a sincere and personal interest in the people and culture represented by other

group” (Gardner & Lambert, 1972, p. 132) and the desire to be part of that culture. The instrumental orientation, on the other hand, was proposed to refer to “economic and practical advantages of learning English” (Gardner, 1985, p. 52) such as getting a job or passing a test. Some studies especially in the context of Canada showed that the integrative orientation was more highly associated with motivational intensity (Gardner & Lambert, 1959; Gordon, 1980) while some others such as Lukmani’s (1972) study in India and Oller, Hudson, and Liu’s (1977) study of Chinese graduate students in the US showed that the instrumental orientation was a stronger correlate of English learning motivation and/or proficiency. Oller, Baca and Vigil (1977) studied 60 Mexican-American female students at a vocational school in New Mexico and found that the more anti-integrative they were the higher their proficiency scores were, and the more integratively-oriented they were the lower were their proficiency scores. However, Gardner’s dominant tendency in his writing has been towards underlining the integrative orientation as a stronger antecedent of motivation.

Gardner (1985) later expanded this simple dichotomy into a more comprehensive *socio-educational model of second language learning*. The cornerstone of this theory was still an umbrella term called the *integrative motive* that in Gardner’s (1985) words “not only includes the [integrative] orientation but also the motivation (i.e., attitudes toward learning the language, plus desire, plus motivational intensity) and a number of other attitudinal variables involving the other language community, out-groups in general and the language learning context” (p. 54). Gardner and his associate believed that the integrative motive was the ultimate motivational profile that could make any learner highly proficient. They argued that “the integratively motivated student is one who is motivated to learn the second language, has openness to identification with the

other language community, and has favorable attitudes toward the learning situation” (Masgoret & Gardner, 2003. p, 128).

Gardner’s dichotomy of instrumental and integrative orientations has been influential in understanding language learners’ goals in different contexts. However, such orientations only reflect the types of goals that learners choose to follow in specific language learning contexts. They do not tell anything fundamental about the trait-like motivational dispositions of language learners. Any learner in different situations might subscribe to one of these orientations. A student who studies English in high school in the rural area of Iran, for instance, would be having an instrumental orientation in order to get a good grade, graduate from high school, and enter college. If the same student immigrates to the United States and wants to live there, his or her orientation would likely be more of an integrative one in order to be accepted in the new community. Being instrumentally or integratively-oriented, thus, is more of a choice that individuals make depending on their circumstances and their goals in life than a trait of those individuals.

In addition, the integrative and instrumental goals could have different meanings for different individuals (Oller, Hudson, & Liu, 1977). From a regulatory focus perspective, a prevention-oriented learner would look at instrumental goals as negative consequences to be avoided. He or she, for instance, would work hard in order to *avoid* failing to get a top score in the course. A promotion-oriented learner, on the other hand, would work hard in order to *approach* obtaining a top score in the course. In other words, while the prevention oriented learner tries to sustain the status quo and avoid negative consequences such as parents’ disapproval, the promotion-oriented learner tries to change the status quo for a better status such as impressing his or her parents. Evidence for the difference of interpretation has been

provided by studies in which the instrumental orientation has been categorized into promotion and prevention versions (e.g., Taguchi, Magid, & Papi, 2009; Papi & Teimouri, 2014). The same is true about the integrative orientation. Wen (1997), for example, found that the motivational reasons related to contact with the target language community among learners of Chinese could be either instrumental or intrinsic. The regulatory focus theory affords the opportunity to investigate goals and motives from the perspective of learners, who perceive those goals differently depending on their chronic regulatory focus.

It might be argued that the difference between trait and state motivation has already been introduced in the field. In a study investigating the effects of motivation on the learning of 26 Hebrew/English word pairs by 88 university students in Canada, Tremblay and Gardner (1995) came up with motivational and attitudinal variables which they categorized under the labels *state motivation* versus *trait motivation*. They considered more general motives such as *attitudes, persistence, interest in foreign languages* as trait motivation, while variables such as *viewing time* (before translation of words appeared) and *study time* (after translation of words appeared) of the word pairs were put under state motivation. They found that “trait motivation influences state motivation, which in turn influences learning” (p. 368). While categorizing motivational variables into more general and more situated variables is of great value (as it has extensively been done by Dörnyei, 1994b), considering these variables as trait versus state motivation, however, only adds to the already existing ambiguity in L2 motivation research. Attitudes and goals are more general and more enduring motivational variables than a behavioral variable such as looking at word pairs. But the relative endurance of these variables does not qualify them as traits since they are subject to rapid change depending on the circumstances. A person might

pursue a goal to learn English, but for some reason give up after a short while. Just having an (integrative or instrumental) goal for learning English would not make that goal a trait of that person. Such a goal may change easily at any point. While Gardner's conceptualization of state and trait motivation seemed to be more of a construct mislabeling that does not tell much about individual motivational differences, the regulatory distinctions (promotion vs. prevention) that are investigated in the present study reflect chronic motivational characteristics that shape how learners' perceive and approach goals.

Gardner's theory was dominant in the field up until the 1990s when it came under attack by many prominent motivation researchers (e.g., Crooks & Schmidt, 1991; Dörnyei, 1990; 1994a; 1994b; Skehan, 1991; Oxford & Shearin, 1994). The critiques were mainly concerned about the concept of integrative motive and how it subsumed not only almost every other motivational antecedent (attitudes towards community, culture, language learning, L2 course etc.) but also the construct of motivation. In other words, even motivation was part of the integrative motive. Pointing out this problem, Dörnyei (1994a) argued that "motivation appears to be the broader term and the relationship should be reversed, with the 'integrative motive' being part of motivation" (p.517). Crooks and Schmidt (1991) argued that this model "was so dominant that alternative concepts have not been seriously considered" (p. 501). Oxford and Shearin (1994) stated that "evidence suggests that the current theory might not cover all possible kinds of L2 learning motivation" (p. 12).

Another strong drawback in Gardner's theory was dependence on the existence of a target language community with which an integratively-motivated person would want to identify. While this is the case in the context of Canada and other English speaking

countries, millions of people all around the world learn English without any contact with the English speaking communities. The concept of integrativeness should not thus have any relevance in most parts of the world and should not have been given so much credit. In addition, the new perspective about the global status and ownership of English (Widdowson, 1994; Crystal, 2003) further questions the validity of the integrative orientation (see Dörnyei, 2009). Critiques questioned: If English is the language of the world and the lingua franca for international communication, which target language community is meant in this theory? These critical positions were further supported by many studies in which the instrumental orientation was a stronger predictor of L2 motivation and achievement, or where the integrative orientation had a negative correlation with proficiency (e.g., Chihara & Oller, 1978; Gardner & Lambert, 1972; Lukmani, 1972; Oller, Hudson, & Liu, 1977). Other studies also cast doubt on the relevance of integrativeness in different socio-educational context (e.g., Clément & Kruidenier, 1983; Dörnyei, 1990; Gardner & Santos, 1970, cited in Clément, Gardner, & Smythe, 1977; Noels & Clément, 1989). These criticisms and studies resulted in the introduction of a new phase of L2 motivation research when other L2 motivation approaches and theories were introduced in the field. Dörnyei (2003) labeled this period as the “cognitive-situated” phase in L2 motivation research.

Clément's Model of Second Language Proficiency

Another important motivational model that was proposed from a social-psychological perspective was Clément's model of second language proficiency, which also had origins in the socio-educational context of Canada. Clément argues that since this model, which is based on his

(1980) concept of *social context*, includes both unicultural and multicultural contexts and thus is broader in scope than Gardner's model, which Clément argued was more relevant to school environments in bilingual contexts. As depicted in Figure 1 (adapted with permission from Clément & Kruidenier, 1985), this model postulates that the sequential effects of primary and secondary motivational processes determine communicative competence in a second language. The *primary motivational process*, which is based on Gardner's model, includes the concepts of *integrativeness* and *fear of assimilation*. As went above, integrativeness refers to learners' positive outlook towards and the desire to identify with the target language community. Fear of assimilation refers to learners' fear for the loss of their first language and culture. The *secondary motivation process*, which is determined by the primary motivational factors, can be at play or not depending on the social context of language learning. In unicultural contexts where there is no contact with the target language community, the primary motivational factors directly influence the motivation of language learners. In multicultural contexts, on the other hand, the primary motivational process determines motivation and competence through *linguistic self-confidence*, which constitutes the core of the secondary motivational process. The concept of linguistic self-confidence is the most special and innovative feature of Clément's model. This construct includes *language use anxiety* and the individual's *perceived L2 proficiency*. Clément postulates that in multicultural contexts, integrativeness and fear of evaluation (the primary process) determine the quality and quantity of contact with native speakers, which in turn regulate learner's linguistic self-confidence, as "the most important determinant of motivation to learn and use the second language" (Clément & Kruidenier, 1985, p. 23).

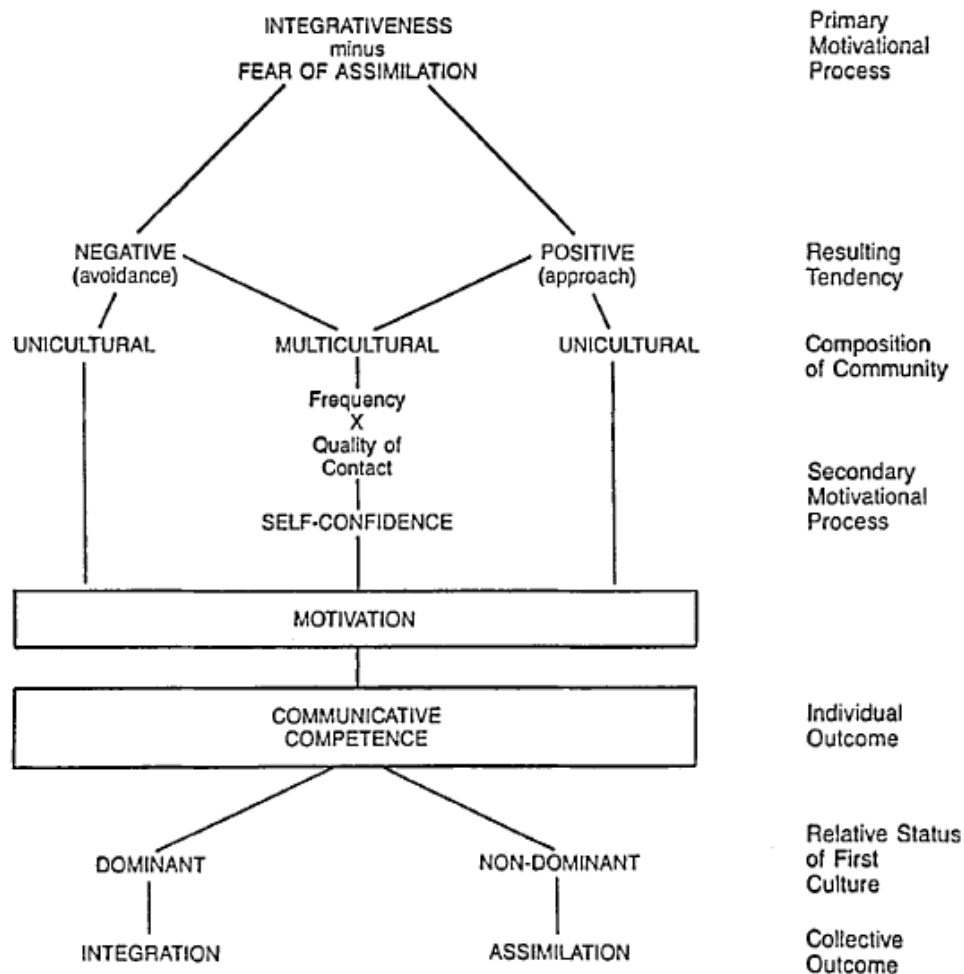


Figure 1. Clément's model of second language proficiency.

There have been a number of studies corroborating the specific hypotheses postulated in Clément's model, especially the ones related to the construct of self-confidence. The formulation of this model was inspired by the results of a study by Clément, Gardner and Smythe (1977) in Montreal, Canada. The authors investigated the attitudinal and motivational characteristics of 304 grade 10 and 11 francophone learners of English in order to test Gardner's integrative and instrumental orientations. They factor-analyzed the data collected from the participants on their attitudinal and motivational characteristics as well as target linguistic and intelligence quota

measures. Four factors emerged from their data. An *integrative motive* factor was associated with higher interest and motivation in learning English as well as more positive attitudes towards Anglophones among other things. *Self-confidence with English*, the second factor, was composed of low levels of English use anxiety, higher self-ratings of English proficiency, higher motivation and attitudes, and better English skills. The two other factors that emerged were labeled *academic achievement* (associated with high need achievement, lack of ethnocentrism, and higher self-perceptions of English competence) and *anomic* (associated with ethnocentrism, being critical of the self, the English teacher and French Canadians, and instrumental orientation), which referred to “dissatisfaction with one’s role in his own cultural community” (p. 126). This study provided the first piece of empirical evidence that motivated Clément’s formulation of his model.

In a similar study, Clément, Gardner and Smythe (1980) investigated the social and individual characteristics of 223 francophone grade 11 students learning English again in Montreal. The factor analysis of their data showed the existence of three factors. The first factor, which they labeled as *the integrative motive*, was the characteristic of those learners who tend to have frequent contact with Anglophones, positive attitudes towards Americans, strong motivation and intention to continue studying English. In addition, the integrative motive was negatively associated with feelings of threat to ethnic identity, a result that supports Clément’s hypothesis in the primary motivational process regarding the negative relationship between fear of assimilation and integrativeness. The second factor that emerged in the results of the factor analysis was labeled *self-confidence with English*. Individuals who were high on this factor rated themselves as relatively competent in their English skills and reported little anxiety. In addition, such students reported frequent contacts with Anglophones and higher motivation, and also

performed better on tests of aural comprehension and grammar knowledge, as postulated in Clément's model. *Academic achievement* was the third factor that also emerged in this study.

In a structural equation model that contained different paths hypothesized in this model, Clément and Kruidenier (1985) investigated 1,180 francophone learners of English in Quebec, Canada. The study examined the relationship between the socio-motivational characteristics of the participants (integrativeness, fear of assimilation, quality and quantity of contact with Anglophones, English self-confidence, and motivation), their aptitude (spelling cues, words in sentences, and paired associates), their linguistic outcomes (final marks, teachers' rating of students' oral and written English proficiency), and their non-linguistic outcomes (persistence in studying English). The results of the study confirmed all the hypothesized causal paths, as formulated in Clément's model: integrativeness was negatively associated with fear of assimilation; integrativeness and (lack of) fear of assimilation (as primary motivational components) as well as the quantity and quality of contact with the target community strongly influenced self-confidence (as the secondary motivational process); the secondary motivational process mediated the effects of the primary motivational process on motivation; and language anxiety and perceived L2 proficiency grouped together under the construct of self-confidence in English. In addition, aptitude and motivation both contributed to linguistic outcomes, with the former being the stronger predictor. The authors argued that the relatively stronger effect of aptitude compared to motivation could have been due to the similar nature of the aptitude and linguistic measures. Finally, self-confidence and integrativeness contributed equally to motivation, a result that did not confirm the findings of previous studies that found self-confidence to be the strongest predictor of motivation (e.g., Clément, Gardner, & Smythe 1977, 1980; Clément, Major, Gardner, & Smythe, 1977).

In order to test Clément's hypotheses in an EFL context, Clément, Dörnyei, and Noels (1994) collected survey data from 301 grade 11 students studying English in Hungary with minimal contact with Anglophones. More relevant to the present discussion, five factors emerged from the collected data. These included *evaluation of the learning environment*, *self-confidence with English*, *student achievement and performance*, *integrative motive*, and *orientation* (an index of *xenophilic*, *sociocultural*, *instrumental-knowledge*, and *English media* orientations). The results of further analyses showed that self-confidence with English was most strongly correlated with motivational ($r = .47$), English achievement ($r = .53$), and evaluation of learning environment ($r = .12$), which was in turn associated with *class cohesion*. The integrative motive, on the other hand, was less strongly associated with both the motivational scale ($r = .40$), the achievement scale ($r = .17$) and self-confidence ($r = .20$). But it was not correlated with evaluation of learning environment. The relationship between the classroom-related factors and both anxiety and self-confidence led the authors to extend the conceptual scope of the construct of self-confidence to unicultural and EFL contexts. In other words, they discussed that self-confidence should not be considered as a motivational construct that is relevant only in multicultural contexts where there is contact between L2 learners and the target language community. It could also be relevant in EFL contexts, where “good classroom atmosphere promotes student involvement and activity while moderating anxiety and promoting self-confidence” (p. 442).

Whereas previous studies showed that self-confidence was the outcome of contact with the target language community, some other studies (e.g., Csizér & Dörnyei, 2005; Csizér & Kormos, 2008a, 2008b, cited in Sampasivam & Clément, 2014) have found that self-confidence could also be the precursor of contact as well as motivated learning behavior. In other words, contact and L2 self-confidence have a bidirectional relationship; frequent and pleasant contact

can lead to higher L2 self-confidence and higher L2 self-confidence can result in more contact with the target L2 community (Sampasivam & Clément, 2014).

Clément's concept of self-confidence has added another dimension to the way we look at L2 motivation. It has highlighted that sometimes motivation to learn a language or lack thereof stems from how much learners believe they are capable of doing the action. The closest match for self-confidence in the field of social psychology is the concept of self-efficacy, which was proposed by Bandura in his *self-efficacy theory*. According to Bandura (1982), "perceived self-efficacy is concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (p. 122). Applying to language learning, linguistic self-confidence, could be perceived as the judgments of how well one can learn or speak a target language. Although Dörnyei (2005) believes that self-confidence is more of a social construct than self-efficacy, some other researchers consider the two constructs to be equivalent (e.g., Tremblay & Gardner, 1995). Self-efficacy and linguistic self-confidence concern peoples' beliefs whether they are capable of performing an action regardless of whether or not their actions would result in desired outcomes (Bandura, 1977, cited in Higgins, 2012). It is not thus directly related to the person's regulatory focus, which is about approaching desirable and avoiding undesirable outcomes. Feeling right about what people do, however, has been shown to result in higher perceived success on the task, lower task anxiety, and higher willingness to repeat similar tasks, which could be indications of heightened self-efficacy/confidence about performing such tasks. The present study does not directly examine the construct of self-confidence but it investigates whether regulatory fit results in participants' *perceived success*, *desire to perform similar tasks*, and *task anxiety*. This could help us understand whether manipulating the incentive

structure of the task could influence such learners' beliefs about their efficacy, and instigate further inquiries on this topic.

The Self-Determination Theory

Self-determination theory (SDT; Deci & Ryan, 1985) is a theory of autonomy and control. According to this theory, the more self-determined a behavior is the more motivated the learner and the more effective the learning experience would be. SDT makes a distinction between the behaviors that are volitional and autonomous and those that are more controlled and motivated by external incentives. In a classic dichotomy, SDT introduced *intrinsic motivation* to refer to doing something because the action is inherently interesting and enjoyable, and *extrinsic motivation*, which refers to doing something because of a separable outcome rather than enjoying the actions.

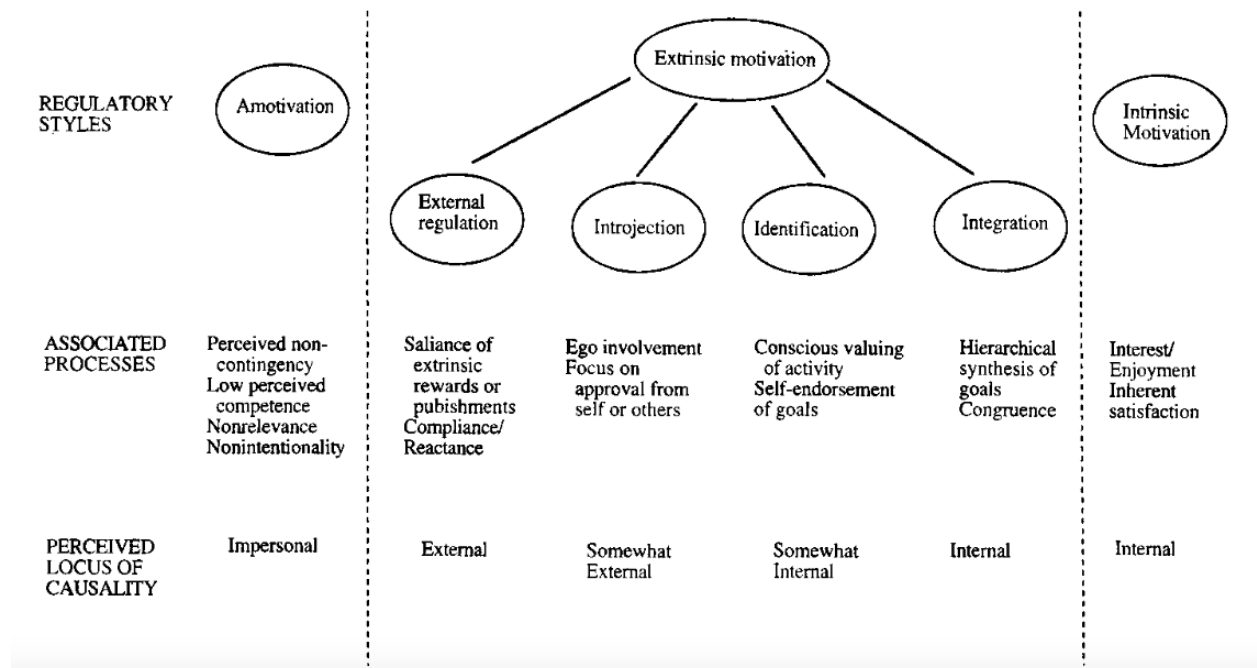


Figure 2. Schematic representation of the Self-Determination Theory.

While intrinsic motivation is a unitary concept with no sub-components, the extrinsic motivation is categorized into different types that fall on a continuum based on how self-determined they are. As shown in Figure 2 (Ryan & Deci (2000). Used with permission) , extrinsic motivation is categorized into four types, *external regulation*, *introjected regulation*, *identified regulation*, and *integrated regulation*. According to Ryan and Deci (2000), externally regulated behaviors are performed to satisfy an external demand or obtain an externally imposed reward. Fear of punishment and desire for getting a reward are examples the most external type of extrinsic motivation for doing an activity. Introjected regulation refers to actions that are performed out of guilt or anxiety or to enhance one's ego and attain pride. The person with this type of motivation performs an action in order to feel worthy and protect his or her self-esteem. For example, a student who studies a language in order to not disappoint his or her teacher or to outperform a peer could be considered an introjector. Identified regulation describes behaviors that are performed because the person has personally identified with the importance of the behavior and thus has internalized it as a self-regulated behavior. Memorizing lists of vocabulary items in order to succeed on the college entrance exam, which the person values as a life goal, falls under this type of motivation. Integrated regulation represents the most self-determined form of extrinsic motivation and occurs when the person fully assimilates the behavior into the self and views it as congruent with one's other values and needs. Learning English in order to be accepted as a member of target language community could fall under this category. Intrinsic and integrated motivations are both considered autonomous and congruent with one's values and needs. Another component of the SDT is the concept of *amotivation*, which refers to lack of motivation of any type.

Noels, Pelletier, Clément, and Vallerand (2000) made the initial attempt to examine how SDT motivation types (except integrated regulation) are related to some criterion motivational measures as well as the L2 motivational orientations proposed by Clément and Kruidenier (1983) including instrumental, travel, knowledge, friendship orientations. They investigated the motivational characteristics of 159 native speakers of English learning French as a second language at the University of Ottawa using a questionnaire survey. The results of their study showed that only intrinsic measures and identified regulation were significantly correlated with *freedom of choice* (autonomy) and *perceived competence*, as two of their criterion measures. Surprisingly, the correlations between identified regulation and the two criterion measures were stronger than the ones between intrinsic motivation measures and the criterion variables. The same pattern was found for the correlations between these orientations and *intention to continue studying the language*, a third criterion measure. In terms of the relationships between SDT orientations and the orientations proposed by Clément and Kruidenier's (1983), instrumental orientation correlated with the most extrinsic orientation (i.e., external regulation); on the other hand, travel, friendship and knowledge orientations correlated with identified and intrinsic motivation. In addition, while instrumental orientation was significantly correlated only with intention to continue studying the language, the three other orientations (i.e., travel, knowledge and friendship) showed positive correlations with perceived competence, freedom of choice, and intention to continue studying the language, and a negative correlation with anxiety.

In a study of 78 Anglophone learners of French enrolled in a summer French immersion program in Canada, Noels, Pelletier, Clément, and Vallerand (2000) investigated the relationship between the learners' motivational orientations, motivational intensity, anxiety, and their teachers' communicative style (informative vs. controlling). The results of their study confirmed

the basic SDT assumption that intrinsic motivation is associated with higher motivation, feeling of autonomy, and informative and autonomy supporting teachers. While amotivation was correlated with higher anxiety and lower motivation, external regulation and introjected regulation were not associated with lower motivation, and identified regulation was positively correlated with motivation and negatively with anxiety. In addition, none of the extrinsic motivation types were related to the perceptions of teachers as informative or controlling.

In a follow-up study of 322 English speaking learners of Spanish studying at a university in California, Noels (2001) found that Gardner's (1985) integrative orientation was most strongly associated with intrinsic and identified regulations. She also confirmed the results of the previous study that students' sense of autonomy and competence, which were both strong predictors of intrinsic motivation, was related to their teacher's communicative style. "The more the teacher was perceived as controlling, the less students felt they were learning Spanish of their own accord. The less students felt they had choices about learning, the less they felt they were learning the language because it was fun or because it was valuable to them" (Noels, 2001, p. 125). She concluded that the SDT is best seen as a complement to those that emphasize intergroup relations and ethnolinguistic identity issues.

In order to replicate and extend the previous research on the SDT to French Canadian learners of English and re-examine the relationship between the SDT motivation types and the integrative orientation, Noels, Clément, and Pelletier (2001) administered a questionnaire survey to 59 francophone students from Quebec learning English in a summer immersion program in Ontario. The results of their study confirmed the previous findings. Integrative orientation was predicted by identified regulation and intrinsic motivation, respectively, while it was not associated with other extrinsic orientations. Somehow surprisingly, the integrative orientation

was the strongest correlate of perceived autonomy and perceived competence, followed by identified regulation and intrinsic motivation. Correlations between the other extrinsic orientations and the two antecedent variables (i.e., perceived autonomy and perceived competence) were either negative or non-existent. Integrative motivation was also the strongest predictor of achievement (final grades) followed by intrinsic motivation. The authors concluded that the emergence of the pattern of results in both francophone and Anglophone groups suggests the cross-linguistic generalizability of the findings.

In addition to the studies that were reviewed above, there have recently been similar studies (e.g., Chaffee, Noels, & Sugita McEown, 2014; Noels, 2013; Sugita McEown, Noels, & Saumure, 2014) that have generally provided support for the validity of the SDT and its relevance to language learning. The application of the SDT has furthered our understanding of L2 motivation. The theory highlights motivation coming from promoting the actual process of language learning through supporting autonomy, competence, and relatedness. It is about the motivation coming from what Higgins (2012) calls “control effectiveness,” the feeling of being good at doing something regardless of the outcome. However, the SDT seems to have put too much emphasis on the importance and strength of the intrinsic motivation. Strong motivation is usually a product of different interacting factors. The SDT considers pleasure of doing as the only so-called “intrinsic” type of motivation and any other source of motivation ranging from fear of punishment (extrinsic regulation) to most internalized dreams (identified/integrated regulation) all fall under the category of extrinsic motivation. That is the case despite the fact that in many of the studies reviewed above identified-regulation contributed more strongly than intrinsic motivation to motivated behavior. Those results could be explained by the argument that people take enjoyment in activities that are meaningful to them and that enjoyment becomes the

source of motivation after it has been assigned meaning. The intrinsic motivation that has been shown to result in motivation and achievement has been treated like an independent variable; however, the people who enjoy doing an activity usually have been shown to have other sources of motivation that give that activity some sort of value and significance (Csizér & Dörnyei, 2005; Papi & Teimouri, 2014). Pure enjoyment cannot always be a strong and lasting motivator, especially when it comes to language learning, where huge investments are expected to result in desirable outcomes rather than in pure interest in learning (Papi, 2013; Reeve, Nix, & Hamm, 2002). This concern with the concept of intrinsic motivation and motivational categories was voiced by Noels in 2009:

I puzzle, however, over the notion of ‘interest’ – surely an activity cannot be itself inherently interesting, but rather interest must be derived by the person.

Moreover, to be interested in something suggests that one makes, or at least would be inclined to make, meaning of that activity. If this is true, then intrinsic motivation is defined quite similarly to internalised extrinsic motivation, in that one’s motivation derives from that which one finds personally meaningful. (p. 308)

Interest could thus be a long-lasting motivational force when it is coupled with valuable consequences which could result from the target activities. Considering the goals of learners as critical components of their motivational profiles and how they attach meaning to those goals—in a prevention or promotion manner as proposed in the regulatory focus theory – thus, could help us grasp a better understanding of their motivational dynamics. In addition, interest in doing tasks has been found to be promoted through creating regulatory fit (e.g., Freitas & Higgins, 2002; Higgins et al., 2010). In other words, pursuing a meaningful activity in a way that fits the

regulatory focus of individuals could result in higher enjoyment of the activity; prevention-focus individuals enjoy the activity more when they are doing it in a vigilant rather than in an eager manner; on the other hand, promotion-focused individuals take more interest in the activity when they pursue it in an eager rather than in a vigilant manner. Applying regulatory focus and fit theories to the learning process can thus add another dimension to the way the SDT looks at motivation. One of the objectives of the present study is to see how doing the language learning task in a vigilant or eager manner would influence participants' enjoyment of the task.

The L2 Motivational Self System

The L2 motivation theory closest to the idea that learners have different regulatory foci is Dörnyei's (2005, 2009) theory of the *L2 motivational self system*, which is in fact based on Higgins's (1987) *self discrepancy theory*. The basic tenet of the L2 motivational self system (and the self-discrepancy theory) is that individuals are motivated to decrease the discrepancy between their here-and-now or actual (L2) self and their desired futures (L2) selves, which in Dörnyei's terms are *ideal L2 self* and *ought-to L2 self*. The ideal L2 self has a promotion focus (i.e., sensitive to the presence or absence of positive outcomes) while the ought-to L2 self has a prevention focus (i.e., sensitive to the presence or absence of negative outcomes). For example, if a person wants to be able to speak an L2 like the native speakers of the language, the perceived discrepancy between their actual self and this desired or expected future self motivates them to pursue the goal of learning the language. This goal can be either an ideal L2 self or an ought-to L2 self. The ideal L2 self is the representation of one's personal desires and aspirations concerning language learning. The ought-to L2 self, on the other hand, is the representation of one's duties, responsibilities, and obligations, and characterizes the image the person's

significant others (e.g., family members, friends, teachers) expect him or her to realize. There is a third component to this model, which is called L2 learning experience and concerns the attitudes of learners towards the immediate learning context (e.g., teacher, course, materials).

The motivation for the proposal of the L2 motivational self system came from the desire to replace the concept of integrativeness with a broader construct that could be generalized to different contexts. It was more than a decade that Gardner's theory had been refuted by many motivation researchers but there was still no comparable alternative to replace the theory. It was time to switch to a new framework that could cover the limitation of the previous model and offer new insights into motivation for learning a second language. This desire was coupled with the results of a nation-wide Hungarian survey by Dörnyei and his colleagues on two different occasions. In the first phase of the study, which was conducted in 1993 and before the collapse of the communist dominance in Hungary, Dörnyei and Clément (2001) collected data from 4,765 eighth grade students living in different geographic locations in Hungary. The study resulted in the emergence of five motivational dimensions including *integrativeness*, *instrumentality*, *direct contact with L2 speakers*, *media usage*, and *vitality of L2 community*. The most striking result of their study was that integrativeness explained almost the same amount of variance in the criterion measures (which were *language choice* and *intended effort*) than all the other factors together. According to the authors, these results confirmed that “integrativeness represents a certain ‘core’ of the learners’ generalized attitudinal/motivational disposition, subsuming or mediating other variables, which is in complete accordance with Gardner’s (1985) motivation theory” (p. 423).

The second phase of the study was conducted by Dörnyei and Csizér (2002) using the same questionnaire. They compared the survey data collected in 1993 (i.e., Dörnyei & Clément, 2001) and data collected from 3,828 students from the same cohort but in 1999, when “the

closed, post-communist society was radically transformed into an open, market-oriented democracy” (Dörnyei & Csizér, 2002, p. 421). The results of the second study also strongly confirmed the pervasiveness of the concept of integrativeness for the learning of different target languages among students of different socio-educational characteristics. The strength of the integrativeness in the new dataset was again almost equal to the amount of variance explained by all the other variables together. Rather than attesting to the validity of the construct of integrativeness, nonetheless, the authors took a different position.

In order to interpret the results of their studies as well as the results of many other studies in which integrativeness emerged as the strongest predictor of motivation for language learning regardless of the characteristics of the learners and learning context, Dörnyei and Csizér argued that the construct of integrativeness had to be redefined. Their argument was based on the fact that in the foreign language learning contexts, where there is minimum direct contacts with the target language community, identification could be generalized to the cultural and intellectual values associated with the language, the language itself, and the people who speak the language, as evidenced by the emergence of related orientations in the previous and their own study (e.g., media use, cultural interest, vitality of the L2 community). The speculation that they put forth was that “the motivation dimension captured by the term is not so much related to any *actual*, or metaphorical, *integration* into an L2 community as to some more *identification process* within the individual’s self-concept” (Dörnyei & Csizér, 2002, p. 453). They argued that such a reconceptualization would broaden the scope of the construct, would generalize it to different learning contexts, and would make more sense considering the global status of English and the ambiguities regarding the target community associated with the language. They pointed out that their new proposal would be based on the theory of *possible selves* (Markus & Nurius, 1986) and

Higgins' (1987) *self-discrepancy theory* in order to propose a broader self-related construct, which was empirically supported in their next study (i.e., Csizér & Dörnyei, 2005). We turn to that study now.

Csizér and Dörnyei (2005) used structural equation modelling (SEM) to re-analyze all the data they collected in 1993 and 1999 for their previous studies (i.e., Csizér & Dörnyei, 2002; Dörnyei & Clément, 2001) in order to re-examine the internal structure of L2 motivation and redefine the construct of integrativeness.. SEM allowed them to hypothesize a model with multiple variables and see which variables simultaneously contributed to the construct of integrativeness, which in turn was hypothesized to result in the criterion measures (i.e., language choice and intended effort). The results of the SEM analysis showed that *instrumentality* and *attitudes towards L2 speakers* respectively predicted 45% (for both 1993 and 1999 data) and 12% to 13% of variance in integrativeness. *Cultural interest*, *vitality of L2 community*, *milieu*, and *self-confidence* also indirectly contributed to integrativeness, which turned out to be the only variable that significantly affected language choice and intended effort. Whereas the authors gave credit to Gardner for his formulation, they made a case for the reconceptualization of the integrativeness based on the notable contribution of instrumentality on the variable. They proposed that integrativeness and a promotion-oriented dimension of instrumentality are respectively the personal and professional aspects of another construct, which they labeled *the ideal L2 self*. The construct of the ideal L2 self is based on Higgins (1987) concept of ideal self (reflecting the person's hopes, aspirations and desires) and is the representation of the L2 attributes that one would ideally like to possess. If a learner desires to become a fluent speaker of a language, for instance, that image would be his or her ideal L2 self. A fully-rounded ideal L2 self would include the desires to be both personally agreeable (referring to the integrative and

attitudinal aspects of L2 learning) and professionally successful (referring to the instrumental benefits of learning a language). The prevention-focused counterpart of the ideal L2 self is the ought-to L2 self, which also has both personal and professional aspects. The personal dimensions concerns sustaining the approval or significant others (i.e., friends, family, partners, colleagues) and the professional aspect concerns avoiding immediate negative consequences that may damage our sense of security such as failure in a course and getting fired from a job (for thorough reviews of the L2 motivational self system see Dörnyei, 2005, 2009).

After Dörnyei fully proposed his model (2005), many empirical studies have been conducted all around the world to put to test the main tenets of this framework. The main purpose of some of these studies was to examine how the ideal L2 self predicts variance in L2 motivation compared to the classic concept of integrativeness. This was of crucial importance for the acceptance of the model especially since the integrativeness had long dominated L2 motivation research by often predicting largest amounts of variance in L2 motivated behavior and achievement. A collection of these studies has been published in a volume edited by Dörnyei and Ushioda (2009). Here I review a few of the most important ones.

In one of the first and largest studies on the components of the L2 motivational self system, Taguchi, Magid and Papi (2009) collected survey data from nearly 5,000 participants studying English in Japan ($n = 1586$), China ($n = 1328$), and Iran ($n = 2029$), which represent three very different socio-cultural environments. The questionnaires included items from the previous motivational and attitudinal scales (e.g., integrativeness, attitudes towards the L2 community, cultural interest) and two versions of instrumentality, one with a prevention focus (which concerns avoiding negative consequences) and the other with a promotion focus (which concerns approaching positive outcomes). The survey also included items related to the three

components of the L2 motivational self system (i.e., ideal L2 self, ought-to L2 self, and L2 learning experience). Separate correlation and SEM analyses were performed for each country. Given the construct of ideal L2 self was based on the concept of integrativeness (in terms of personal/social aspects), correlations were run between the two variables with the resulting figures ranging from .51 to .59, suggesting moderate correlations between the two. In addition, the correlations between the ideal L2 self and the criterion measure (i.e., intended effort) were marginally higher ($r = .68, .55, .61$ for Japan, China, and Iran, respectively) than the ones between integrativeness and the criterion measure ($r = .64, .52, .58$ for Japan, China, and Iran, respectively). These correlational figures were good news for the authors who hoped to find equally strong or stronger figures for the newly proposed construct. Therefore, they argued for the superiority of the ideal L2 self based on these figures as well as the conceptual scope and generalizability of the concept. They also found that, as predicted, instrumentality promotion was more strongly associated with the ideal L2 self than with the ought-to L2 self, and instrumentality prevention showed stronger correlation with the ought-to L2 self than with the ideal L2 self.

The results of the SEM analysis on separate datasets also confirmed the speculations of the authors concerning the model: a) all three components of the model significantly predicted intended effort although the influence of the ought-to L2 self was much lower than the ones from the ideal L2 self and L2 learning experience; b) instrumentality promotion and attitudes towards L2 culture and community significantly contributed to the ideal L2 self; c) instrumentality prevention and family influence had significant effects on the ought-to L2 self; d) there was a small but significant correlation between the instrumentality measures; e) the ideal L2 self strongly contributed to the L2 learning experience. The authors concluded that based on the

findings of the study integrativeness could be relabeled as the ideal L2 self, and instrumentality could be categorized into two versions, one with a promotion and the other with a prevention focus.

Ryan (2009) examined the motivational characteristic of 2,397 learners of English in the EFL context of Japan and found similar and even stronger results especially for the ideal L2 self. He also found a moderate correlation between the ideal L2 self and integrativeness ($r = .59$), but the correlation between the ideal L2 self and intended effort ($r = .77$) was stronger than the correlation between integrativeness and intended effort ($r = .65$). In other words, the ideal L2 self explained about 60% of the variance in the criterion measure but integrativeness explained 42% of the variance. Another interesting result of Ryan's study was a stronger correlation between intended effort and attitudes towards speaker of English as an international language ($r = .51$) than American English speakers ($r = .31$); this result provided support for the global and broader scope of the ideal L2 self compared to integrativeness, which only concerned native speakers of English. The international element of the ideal L2 self has also been supported by the findings of some previous studies (Csizér & Kormos, 2009; Yashima, 2009). Ryan did not reject the validity of the integrativeness but stated that it "may indeed exist in many contexts but it does so as part of a broader L2 self concept" (p. 137).

In another SEM study, I (2010) investigated the relationship between the components of the L2 motivational self system and L2 anxiety (as an affective criterion measure) and intended effort (as a motivational criterion measure). Based the SEM analysis of survey data collected from 1,011 Iranian secondary school students, he found that the ought-to L2 self resulted in higher anxiety and higher intended effort at the same time although the effect on the latter was much smaller. The contribution of the ought-to L2 self to intended effort was both direct, and

indirect through L2 anxiety. On the other hand, a stronger ideal L2 self was found to be associated with lower anxiety and largely better L2 learning experiences. Finally, L2 learning experience and the ideal L2 self predicted much higher variance in the motivational criterion measure than the ought-to L2 self, whose effect was almost negligible.

In a recent study, I and my colleague Teimouri (2014) re-analyzed part of the data that the first author collected for a previous study on the L2 motivational self system (Taguchi et al., 2009). The data were collected from 1,278 secondary school students learning English as a foreign language in the context of Iran. We used cluster analysis in order to categorize learners with different motivational characteristics into different learner groups. In other words, we thought this statistical technique could help us put learners of similar motivational characteristics together in the same groups. The cluster analysis resulted in the identification of five motivational groups that not only varied in terms of the measured motivational and attitudinal variables (e.g., ideal L2 self, ought-to L2 self, L2 learning experience, instrumentality promotion, instrumentality prevention, attitudes) but also in terms of their motivated behavior, anxiety, self-reported English proficiency, and their attendance in private language institutes. More relevant to the present study, there were two groups (Groups 4 and 5) who were both highest on the scale of ideal L2 self. However, whereas Group 4 had the lowest scores among all the groups in terms of the ought-to L2 self, Group 5 had high scores on the ought-to L2 self. In terms of their criterion measures, both groups were equally strong in their motivated behavior. However, the ideal-self-driven group (Group 4) had significantly higher scores on English proficiency and attendance in private language schools. In addition, while Group 5 was the second most anxious group, Group 4 had the lowest levels of anxiety among all the groups.

The results inspired the us to draw on Higgins' (1997) regulatory focus theory and divide the sample into promotion-oriented and prevention-oriented learners based on their endorsement of the ideal L2 self (which has a promotion focus) and the ought-to L2 self (which has a prevention focus). We then used partial correlation in order to see what antecedent variables are more associated with motivated behavior for each group. Interestingly, whereas for the promotion-oriented group, only the ideal L2 self and instrumentality promotion were associated with motivation, for the prevention-oriented group both ideal and ought-to L2 selves, and both instrumentality measures were found to have significant correlations with motivated behavior. We concluded that the promotion-focused individuals seem to be more strongly motivated to learn English in Iran; and that anxiety seems to have a facilitative role for prevention-oriented individuals but a debilitating effect on promotion-oriented learners. We also recommended L2 motivation researcher to consider the application of chronic motivational differences such as Higgins' regulatory focus theory.

In another recent and large scale study based on the L2 motivational self system, You and Dörnyei (2014) collected data from 10,413 learners of English in different geographical regions and socio-educational contexts in China. They administered a questionnaire survey which included the components of the L2 motivational self system, two promotion-oriented variables – *promotional instrumentality* and *cultural interest* – and two prevention-oriented variables – *preventional instrumentality* and *parental expectations*. The results of their study showed that L2 learning experience ($r = .67$) was most strongly associated with intended effort, followed by the ideal L2 self ($r = .51$), preventional instrumentality ($r = .50$), the ought-to L2 self ($r = .38$), and parental expectations ($r = .22$), respectively. The results showed more or less the same pattern across different socio-educational contexts and subsamples. While both preventional

instrumentality and the ought-to L2 self showed moderate correlations with intended effort, the authors argued that their results challenge the propagated picture of Chinese learners of English as being primarily instrumentality-oriented. In addition, based on the relatively lower correlation of the ought-to L2 self with intended effort in their study as well as other studies, the authors reiterated Dörnyei and Chan's (2013) argument that the ought-to L2 self and related variables in many contexts "lack the energizing force to make a difference in actual motivated learner behavior by themselves" (Dörnyei & Chan, 2013, p. 454).

The studies that have been conducted on the L2 motivational self system have given applied linguists a picture of the motivational characteristics of language learners in different socio-educational contexts. However, I believe that without considering the regulatory focus of language learners, the L2 motivational self system may as well lead us to an incomplete and even inaccurate understanding of L2 learners' motivational dynamics. The two future self guides are based on Higgins' (1987) work on self-discrepancy theory. Based on this theory, differences between the person's actual self and his or her ideal or ought-to self create the necessary motivation for the person to reduce the discrepancy and reach his or her future self. Higgins' self-discrepancy theory was the basis of his regulatory focus theory. Over time, he came to the realization that the differences in people's future self guides reflect deeper differences in their regulatory focus. Employing the regulatory focus theory could thus give a better understanding of how people are motivated than focusing on the future selves.

Based on the regulatory focus theory, individuals with a promotion focus are motivated by their ideal L2 self whereas people with a prevention focus are motivated by their ought-to L2 self. However, Higgins never specified what the ideal or ought-to selves would be like for people since every individual has a different picture of their ideal or ought-to self. What is an ideal self

for someone with a promotion focus could be an ought-to self for a person with a prevention focus. Defining the ideal and ought-to L2 self in terms of language learning and having people rate their endorsement of those items might not really reflect their regulatory focus. The way Higgins and his associates did research on the future self-guides was in deed different than the way these are used in L2 motivation research. Higgins and his colleagues asked their participants to, say, write down their own ideas of what their ideal or ought-to selves were, then continued their research from there as the basis of their work. They never defined in advance what they thought would be the ideal or ought-to selves of different individuals.

One might wonder that if the constructs do not really represent different regulatory focus, then what these constructs that result in motivated behavior are. The answer would be that the ideal L2 self and the ought-to L2 self do represent different language learning goals with different levels of strength that could result in different degrees of motivation but they may not represent different regulatory foci. They thus may not discover anything fundamental about motivation as the regulatory orientations proposed by Higgins do. In addition, there is evidence that while ideal and ought-to future selves are more accessible to the individuals in a promotion and prevention focus, respectively, they are not the same as chronic promotion and prevention orientations and have different correlations with different target measures (e.g., Haws, Dholakia, & Bearden, 2010; Higgins, Friedman, Harlow, Idson, Ayduk, & Taylor, 2001; Higgins, Shah, Friedman, 1997). Ideal self and ought-to self represent goals that motivate promotion and prevention oriented people respectively. They are symptoms of the existence of deeper motivational differences. But they do not represent all the aspects of those differences. In addition, promotion-oriented people could tactically be motivated by the ought-to self and prevention-oriented people could tactically be motivated by ideal self (Scholer & Higgins, 2008).

Table 1. Motivational strategies emerged in the two studies in Hungary and Taiwan

Taiwanese survey	Rank in the Hungarian survey
1. Set a personal example with your own behaviour.	1,4
2. Recognize students' effort and celebrate their success.	-
3. Promote learners' self-confidence.	5
4. Create a pleasant, relaxed atmosphere in the classroom.	2
5. Present the tasks properly.	3
6. Increase the learners' goal-orientedness.	9
7. Make the learning task stimulating.	6
8. Familiarize learners with L2-related values	10
9. Promote group cohesiveness and set group norms.	-
10. Promote learner autonomy	7

Considering the regulatory orientations instead of the future selves could give a better understanding of L2 motivation dynamics.

Motivational Strategies

L2 motivation researchers have not exclusively been obsessed with what motivation is. There have been attempts on classroom applications of research on L2 motivation. Some have put forth frameworks or proposals for the employment of motivational strategies in language classrooms (e.g., Dörnyei, 2001; Oxford & Shearin, 1994; Williams & Burden, 1997). Some others have conducted empirical studies on the use and effectiveness of those strategies (e.g., Alarabi, 2014; Bernaus & Gardner, 2008; Dörnyei & Csizér 1998; Cheng & Dörnyei, 2007; Guilloteaux & Dörnyei, 2008; Moskovsky, Alarabi, Paolini, & Ratcheva, 2013; Papi & Abdollahzadeh, 2012). The latter are reviewed here.

The studies conducted on the use of strategies in order to motivate language learners could be divided into three groups. The first group contains two early survey studies by Dörnyei and Csizér (1998) in Hungary and Cheng and Dörnyei (2007) in Taiwan. The two studies asked teachers how important they considered a selection of motivational strategies and how frequently they used them in their teaching practice. The results of the study showed that while some of these strategies were culture-specific, some others could transcend cultural boundaries and be considered global strategies.

The authors of the two studies categorized different strategies under 10 general guidelines or “Ten Commandments” for motivating language learners. Table 1 shows the ranking of these strategies in Hungary and Taiwan. As can be seen, *setting a personal example with teacher behavior, promoting learners’ autonomy, promoting learners self-confidence, creating a pleasant classroom atmosphere* and *proper task presentation* were listed as top five positions in both studies. Cheng and Dörnyei argued that these strategies can be generalized to various contexts. On the other hand, there were differences between the two lists. For instance, whereas *recognizing students’ efforts and celebrating their success, promoting group cohesiveness, and setting group norms* were rated highly by Taiwanese teachers, Hungarian teachers did not endorse these strategies as belonging in the Top 10 list. This can support the assumption that there are cultural differences in what teachers consider motivating.

The second group of studies used observational techniques to investigate how teachers’ motivational practice influenced their students’ classroom motivation. The studies by Bernaus and Gardner (2008), Guilloteaux and Dörnyei (2008), and Papi and Abdollahzadeh (2012) fall in this category.

Bernaus and Gardner (2008) examined how teachers' frequency of use of 26 motivational strategies was related to the motivation and achievement of 694 EFL students taught by 31 teachers in Catalonia, Spain. They asked both teachers and students to complete a survey showing how frequently the strategies were used in the classrooms. The results of the study did not show any relationship between teachers' perceptions of the frequency of the use of those strategies and the students' attitudes, motivation, anxiety and achievement. However, the students' perceptions of the frequency of use of those strategies were found to be related to their attitudes and motivation. It seems teachers and students do not see eye to eye on what is considered motivational teaching practice.

The two other studies by Guilloteaux and Dörnyei (2008), and Papi and Abdollahzadeh (2012) employed similar instruments and data collection techniques. They both used an observational scheme to document *teachers' motivational teaching practice* and *learners' motivated behavior* in classrooms. They also utilized a student self-report motivation questionnaire, and a post-lesson teacher evaluation scale (which was completed by teachers), in order to measure students' motivation and teachers' evaluation of their own teaching. The study by Guilloteaux and Dörnyei (2008) included 1300 learners from 40 ESL classes in South Korea, and the study by Papi and Abdollahzadeh contained 741 students from 26 ESL classes in Iran. The results of both studies confirmed a positive correlation between teachers' use of motivational strategies and students classroom motivated behavior. Also, students' perceptions of the goal structure of their classes had a significant relationship with their level of motivation. The authors concluded that language teachers could employ various motivational techniques and strategies in order to motivate their students.

In a master's thesis study that I conducted under the supervision of Abdollahzadeh, my thesis advisor (Papi & Abdollahzadeh, 2012), we also examined how the components of the L2 motivational self system relate to the students' classroom behavior. They found that while the ideal L2 self was not related to the classroom motivated behavior of the students, the ought-to L2 self was negatively related to their motivated behavior. We argued that whereas students' active participation in classroom activities might be more related to factors other than their long term goals, the anxiety associated with the ought-to L2 self (Papi, 2010) might have made the students hesitant to participate more actively in class activities, and volunteer asking and answering questions, which were two of three components of student motivated behavior in both studies.

Finally, Moskovsky et al. (2012) and Alarabi (2014) are the only two studies that have used quasi-experimental designs in order to see the effects of motivational strategies on student motivation. The authors of the studies included a treatment and a control group and spanned over an academic period of eight or 10 weeks. Participants in the former study included 14 EFL teachers and 296 EFL learners, and 14 EFL teachers and 437 EFL learners participated in the second study. While the control groups were taught using what the authors called "the traditional teaching method," the experimental group received special instruction with teachers employing a list of motivational strategies. The two studies found that teachers' use of motivational strategies significantly increased learners' motivation in the experimental groups compared to the control groups. In the study by Alarabi, the motivational interventions were also found to be significantly related to L2 achievement.

The employment of the motivational strategies in quasi-experimental studies is promising news for research in the area. However, what these (and other survey and observational) studies define as motivational strategies seems to include any behavior that teachers show in a

classroom. The strategies used in the study by Moskovsky et al. (2013), for instance, included “Show students that you care about their progress” (p. 41). It is difficult to imagine how they have controlled for such strategies in the control group. Did they ask the teacher not to care about students’ progress? If so, how? What makes caring about students’ progress a strategy? In addition, the authors told the participants that that “the research project was about the role that teachers’ motivational strategies play in enhancing learner motivation” (Moskovsky, 2013, p. 38). One may wonder how revealing the purpose of the study influenced the way students completed their questionnaire surveys at the end of the experimental period.

Research on motivational strategies is good news especially for language educators. However, the research studies that have been done in this area are based on the assumption that motivational strategies are motivating the same way for everyone. In other words, the strategies are of one-size-fits-all type. This assumption is contested by regulatory fit theory (Higgins, 2001), according to which individuals are best motivated when there is fit between their motivational orientation and the way they pursue their goals. Promotion-oriented individuals use eager strategic means but prevention-oriented people use vigilant means in order to pursue their goals. In the present study, regulatory fit is created through manipulating the way the incentive structure of a task and students’ performance feedback are framed. Gain-framed task instructions and feedback are expected to result in better motivational and learning outcomes for the promotion-oriented learners while loss-framed instructions and feedback are predicted to benefit prevention-oriented learners. The application of regulatory focus and regulatory fit theories could thus notably further our understanding of how to motivate language learners and how to make learning motivating for learners of different motivational orientations.

Task Motivation

“When task characteristics are the focus of attention in motivation, the term *task motivation* can be used” (Julkunen, 2001, p. 33) [*italics original*]. Given the present study concerns the relationship between chronic and task-specific motivational variables, the scholarly work on task motivation deserves attention here. Although Julkunen (1989, 2001) was the first to highlight the importance of task motivation in second language learning, it was theoretically explicated in Dörnyei’s (2003) *motivational task processing system*, which is equivalent to the actional phase of his process-oriented model (Dörnyei & Ottó, 1998). The motivational task processing system includes three interrelated mechanisms: *task execution*, *appraisal*, and *action control*. Task execution concerns learner’s engagement in task supportive learning behaviors, following a predetermined action plan. Appraisal refers to the learners’ continuous evaluation of the execution process in order to give proper response to environmental stimuli and keep track of progress towards the completion of the action. And action control refers to the self-regulatory mechanisms that learners use in order to improve, scaffold, or reinforce the execution and learning process. Dörnyei believes that the quality or quantity of any L2 task outcome will depend on the interplay of the three mechanisms since, in practical terms, “these involve the students’ continuous monitoring and evaluating how well they are doing in a task, and making amendments if something seems to be going amiss” (Dörnyei & Tseng, 2009, p. 119).

In an attempt to relate the concept of motivation to Gass’s work on interaction (e.g., Gass, 1997; Gass & Mackey, 2006), Dörnyei and Tseng (2009) tested the hypotheses laid out in Dörnyei’s motivational task processing model among 259 Mandarin-speaking learners of English from Taiwan and China. Task execution was measured as the participants’ *vocabulary learning achievement* (their scores on their size and depth of their vocabulary knowledge), and the quality

and quantity of their *strategic learning* behaviors. Action control was operationalized as *self-regulatory capacity* (Dörnyei, 2001), which includes four subcomponents: *Commitment control*, *metacognitive control*, *satiation control*, and *environmental control*, which were measured using a questionnaire survey. Appraisal was also operationalized in terms of *satisfaction*, *helplessness*, *skillfulness*, and *self-efficacy*. The authors explained that the first three subcomponents of appraisal are concerned with “the specific appraisal regarding the actual use of tactics, whereas self-efficacy is associated with the appraisal of vocabulary learning in general” (Dörnyei & Tseng, 2009, p. 125). In order to analyze the data, they divided the sample into three sections based on the results of the vocabulary test. Then they left out the middle section and chose the top scoring third as *expert vocabulary learners* and the bottom third as *novice vocabulary learners*. They then used SEM to analyze their data separately for each group.

There were three hypothesized path in each SEM model, which showed a circular pattern of relationships. The models included one arrow from task execution to appraisal, a second one from appraisal to action control, and a third one from action control back to task execution. These paths were supposed to provide support for the proposed mechanisms in the task processing model. The results of the analyses showed that all the three paths were significant for both novice and expert groups. However, there was a big difference in the amount of loading on the path from task execution to appraisal between the expert and novice groups, with the former explaining 24% but the latter accounting only for 4% of the variance in appraisal. To interpret these results, the authors suggested that compared to the expert learners, the novice learners fail to properly monitor and evaluate their task execution processes. That is, “their appraisal is out of line, and therefore it simply cannot facilitate the activation of effective action control mechanisms to enhance, scaffold, or protect learning-specific action” (p. 130). Although the way

the components of the task processing model were operationalized did not really match the original definitions of the constructs, but it was a good starting point for examining task motivation within a specific theoretical model.

Task motivation, however, is not as simple as this model depicts. Rather, it is a complex and dynamic process which is influenced by many social and motivational factors which exist at different individual, group, course, school, and even larger societal levels. Below, the empirical studies that have examined the role of the social and motivational variables in language learning and task performance are reviewed.

In the first study on task motivation in foreign language learning context of Finland, Julkunen (1989) investigated the effects of open and closed vocabulary learning tasks on the situation specific motivation of 593 learners of English in three task situations, individualistic, competitive, and cooperative. In the closed tasks, which was called “Three of a Kind,” the students were given a sheet of paper with 48 words arranged in three columns (each 18 words) and were asked to choose one word from each column to make a group of three words that had one thing in common. For example, “blue,” “red,” and “yellow” were all colors and put together in one group. The vocabulary items were picked in a way that made only one meaningful possibility (hence “closed”). In the open task, called Categories, there were two columns on the sheet. One column was labeled “Traffic” and the other one was labeled “Adjectives describing people”. The columns were divided into eight rows each including a letter. The students wrote as many words as they could in each box starting with that letter. For example, if the letter for the first row was “B,” they could write “bike,” “bus,” “bridge” for the Traffic column, and “brave,” “brilliant” and “bold” for the Adjectives columns. Students’ task motivation was measured before and after the task to see how their initial motivation changed as a result of performing the

task. The students were divided into high-achievers and low-achievers according to their English scores in their schools. The results of the study showed that in the individualistic and competitive (which was also done individually) tasks, high-achievers' motivation increased especially in the closed task. In the cooperative situation, on the other hand, motivation for both tasks and both high and low-achievers improved. The open task was also found to be more motivating than the closed task. The authors concluded that the cooperative situation was the most motivating possibly because the collective competence of the students was used in completing the task, and/or the success/failure feedback was provided by group members resulted in their higher motivation.

Dörnyei and Kormos (2000) conducted another study on the relationship between learners' motivational variables and their task performance in Hungary. They asked 46 English learners from eight classes to do an oral argumentative task and measured their immediate and general motivational characteristics. In order to complete the argumentative task, the participants were given a role in an imaginary scenario (e.g., being on a school student committee who is going to have student help with the district's social life) and were asked to rank-order a list of items (e.g., publishing a local newsletter, helping out in the library, providing tourist information) based on their priorities and through negotiation and mutual agreement in order to fulfill the expectation of the imaginary role. The participants' linguistic behavior was then measured in terms of the number of words they produced and the number of turns they took during the task performance. The motivational and social characteristics of the participants were also measured using a survey questionnaire and their proficiency level was measured using a C-test. The motivational variables included educational/cultural orientation, attitudes towards English native speakers, incentive value of English proficiency, attitudes towards the English

course, language use anxiety, linguistic self-confidence, effort, need for achievement, and attitudes towards the task. The social factors included social status in group, perceived group cohesiveness, relationship with the interlocutor, and willingness to communicate (WTC).

The results of the study showed that out of the 14 target variables only WTC and situated motivational factors, which included attitudes towards the English course, linguistic self-confidence, and attitudes towards the tasks were significantly correlated with one or both of the target communicative measures (i.e., number of produced words and number of turns taken) with the strongest correlation ($r=.48$) being between attitude towards the tasks and the number of turns. Unhappy with the results, they divided the sample into two groups, high task-attitude and low task-attitude. The results of the re-analysis showed that for the high-task-attitude group, WTC, linguistic self-confidence, need for achievement, and status were significantly correlated with the number of words produced (and the number of turns only for WTC). Surprisingly, the incentive value of the proficiency and L2 proficiency were negatively correlated with the number of words produced, and attitudes towards the tasks was no longer a significant correlate. For the low-task-attitude group, there was a positive and significant correlation between attitudes towards the English course and the number of produced words but a negative correlation between status and number of turns. The authors found some of the results difficult to interpret and attributed those to the small sample size and the lack of qualitative measure of linguistic production.

In a follow-up study and using the same dataset, Dörnyei (2002) investigated how task motivation is co-constructed by fellow-participants. In other words, how the motivational characteristics of peers influence one another. He found that some motivational variables were related to the interlocutors' number of words produced and number of turns taken. However,

when he divided the sample into high task-attitude and low task-attitude, the effect remained only for the low task-attitude interlocutors. In other words, if someone with low task-attitudes was matched with a motivated peer, the person's performance improved as a result of his or her interlocutor's motivation. The high-task-attitude learners did not benefit from the task in the same way though. In addition, while moderate correlations were found between the motivational characteristics of the individuals and their performance on the task (explaining 35-40% of variance in the target measures), the index of the motivational characteristics of the dyads (means of both partner's scores) explained 69% to 81% of variance in the criterion measures (i.e., number of words and number of turns). The author concluded that a) motivation is a better predictor of behavior than achievement; b) motivational variables at different levels (i.e., personality, general goals and attitudes, course-specific factors, situation-specific attitudes and motives) affect learner's behavior at a task; and that c) task motivation is co-constructed by task participants.

The studies conducted by Dörnyei and Kormos (2000) and Dörnyei (2002) focused on the relationship between the motivational characteristics of language learners and the quantity of their task performance. In attempt to extend this line of research to the quality of L2 learners' task performance, Kormos and Dörnyei (2004) employed qualitative measures of the learners' linguistic production in order to re-analyze the same data (as the two previous studies). These measures included accuracy, complexity, lexical richness, the number of arguments and counter arguments in the participants' linguistic productions. The results of the study confirmed that motivation was related to the quantity of language performance. However, generally limited evidence was found for associations between the motivational variables and the quality of communicative production; only course attitudes were correlated with the accuracy of the

produced language. The authors argued the lack of association between the motivational and qualitative measures “is in fact consistent with theories of motivation, which see motivation as the force that determines the magnitude of behavior rather than the quality of the behavioral outcome” (Kormos & Dörnyei, 2004, p. 10), which is itself related to many other factors including but not limited to the learners’ aptitude and quality of instruction.

The studies conducted by Dörnyei and his associate have been valuable contributions to the field especially given the importance of motivation in task-based language learning. As pointed out by Dörnyei and Tseng (2009), “it is not too much of an exaggeration to propose that the quality of motivational processing is indicative of the quality of the SLA” (p. 132). However, research in this area has also been done from the limited previously-discussed motivation-as-quantity perspective. Employing the regulatory focus and regulatory fit theories could shed light on how learners with different motivational differences approach tasks differently and how manipulating task elements can influence learners’ motivation, engagement, learning, and performance in such tasks. These objectives motivate the present study.

Motivation-Cognition Gap in Task-Based Language Learning

Similar to other areas in the field of SLA, task-based language learning has been influenced by the motivation-as-energy perspective described in the beginning of this manuscript. The frameworks that have been proposed for understanding language learning tasks follow a predominantly cognitive approach to tasks with motivation either being ignored or given a marginal role. Here I describe two major frameworks which have been proposed by Skehan (1996, 1998), and Robinson (2001) in order to develop criteria for developing and

sequencing pedagogical tasks and argue how the regulatory focus and fit theories could broaden the scope of these frameworks.

Skehan (1996, 1998) proposed a framework for understanding and implementation of task-based instruction. His proposal outlined three factors that he argued contribute to the difficulty of tasks. These factors include code complexity, cognitive complexity, and communicative stress. Code complexity refers to the level of syntactic and lexical difficulty of the task. Cognitive complexity is concerned with the content of the task and has two aspects which are called processing and familiarity. Processing is concerned with the amount of online computation or thinking that learners invest in understanding the content of the task; familiarity, on the other hand, involves the extent to which the task requires learners to access their existing schematic knowledge to perform the task. Communicative stress, which is the third factor in Skehan's framework, includes a group of factors that influence the communication pressure. These factors include time pressure, modality (speaking/writing or listening/reading), the scale of the task (i.e., number of participants and relationships involved), the extent that the participants have control on the task and how it is done, and finally stakes, which "depend on how important it is to do the task, and, possibly, to do it correctly" (Skehan, 1996, p. 52). The stakes are low when there are no consequences that follow from task completion but they are high when it is important to complete the task. This last factor is the only motivational aspect of Skehan's framework of task-based instruction. In other words, consequences or outcomes of task completion are seen by Skehan to be the only source of motivation for doing the task. Not only does this model ignore other sources of motivation such as motivation from the enjoyment in doing the task itself, motivation from the confidence in one's ability to do the task, or motivation from long-term L2 learning goals, but it puts motivation on a single scale that could be high or

low, reflecting the tradition view of motivation as quantity. The present study not only considers the motivational consequences of task completion (through the incentive structure of the task) but also examines how the interaction between regulatory orientations and the way those consequences are framed could result in different task performance outcomes.

Robinson (2001) proposed his Triadic Componential Framework of learning task, which outlines three dimensions of L2 learning tasks that he believes contribute to the eventual effectiveness of the tasks. These three levels include task complexity (cognitive factors), task difficulty (learner factors), and task conditions (interactive factors). He argues that the first dimension, task complexity, is determined by information processing demands most notably attentional, memory, and reasoning demands, which are imposed by the structure of the task on the language learner. The second dimension, task conditions refers to interactional factors. These include participation variables such as whether the task is one-way or two-way, and participant variables such as their gender, level of familiarity, and power dynamics. The third dimension, task difficulty, refers to learner differences in terms of cognitive and affective factors. The cognitive factors include learner's aptitude, intelligence, and proficiency; whereas motivation, anxiety, and confidence are among the affective factors. He describes the cognitive factors as "the limits" or "inherent ability differentials" (p. 32) that could result in differences in task performance and perception of task difficulty. Affective factors such as motivation, on the other hand, are described as "temporarily limiting factors" which "can result in temporary expansion of resource pools currently available to meet the demands of a particular task (e.g., heightened attention to and rehearsal of input in working memory)." (p. 32).

From Robinson's perspective, difficulty variables such as task motivation, "are often impossible to diagnose in advance of task performance" (Robinson, 2003, p. 57). It seems that

Robinson views task motivation as a factor that is only influenced by a number of random factors that exist in the task situation and does not even consider more stable types of motivation which have been shown to exert influences on learners' task performance (Dörnyei & Kormos, 2000; Kormos & Dörnyei, 2004; Dörnyei & Tseng, 2009). Similar to Skehan's position, this perspective is in line with the motivation-as-energy approach that I discussed earlier, which although not invalid, does not give an accurate picture of motivational influences on task performance and learning. In the present study, I aim to show how learners' chronic and situational motivation could be matched to result in improvements in task performance, highlighting the motivational impacts of regulatory focus on the cognitive, interactional, and learner factors outlined in the Triadic Componential Framework.

Incidental L2 Vocabulary Learning

The term incidental and intentional learning is defined differently by different experts. But generally speaking, learning is *incidental* when learners are not aware that they are supposed to learn specific elements but it is *intentional* when learners are aware of that (Grey, Williams, & Rebuschat, 2014). When it comes to vocabulary learning, it is intentional when it involves the explicit memorization of vocabulary for an upcoming test and it is incidental when the learning of the new vocabulary items happens during meaning-focused activities (Hulstijn, 2003). Thus, the incidental-intentional learning dichotomy seems to represent the desire to distinguish between the more externally-imposed test-oriented and the more internally-driven meaning-oriented types of learning. Given the more self-driven nature of incidental vocabulary learning, this type of learning is arguably the one in which we can find the largest individual differences in which learner factors such as motivation play a big role. That is why I decided to apply the

regulatory fit theory in the context of incidental vocabulary learning, which is the major way for developing knowledge of L2 vocabulary (Nagy, Herman, & Anderson, 1985; Cho & Krashen, 1994).

Task-Induced Involvement

In order to create a task that would allow a good level of variance in its outcome, the task should have had a flexible level of involvement load, a concept that was proposed by Laufer and Hulstijn (2001) in their construct of task-induced involvement, which is one of the rare constructs in the field of SLA that has integrated both motivational and cognitive aspects to explain the second language learning process at the level of vocabulary learning. According to this construct, higher involvement load in terms of *need*, *search*, and *evaluation* results in more effective incidental vocabulary learning. Laufer and Hulstijn drew on Schmidt's noticing hypothesis, and Craik and Lockhart's (1972) depth of processing hypothesis, and proposed that the noticing and depth of processing of new L2 vocabulary items depends on the degree of a learner's involvement with those items, which in turn depends on the strength of need, search and evaluation required for their processing and learning. The need dimension is a motivational one and reflects the learner's perceived usefulness of a target linguistic element for his/her communicative/learning objective. The search and evaluation aspects are cognitive. Search concerns an attempt on the part of the learner to find a target vocabulary item or learn about its features including its meaning. Evaluation concerns judging the semantic and formal appropriateness of the target word in a certain context. Need is moderate when it is externally imposed (e.g., by the teacher) on the learner, and it is strong when it is intrinsically motivated. Search is strong when there are numerous options to choose from and it is non-existent when the

items are given. Evaluation is moderate when the learner has to decide about the differences between some words or their meanings. It is strong, when a decision has to be made about how the word should combine with others to form a new sentence. The general hypothesis is that the stronger these elements are in an L2 learning task with new vocabulary items, the more attention learners will pay to, the more deeply they will process, and the better they will retain those items.

Laufer and Hulstijn (2001) are highly commendable for considering the integrated role of motivation in the cognitive processes involved in incidental vocabulary learning and moving beyond the misrepresentation of learners as mechanical processors. However, as pointed out by Schmitt (2008), the drawback of their construct is that it only focuses on the elements of learning task and do not consider learner's motivational and attitudinal characteristics, among other things. Ignoring the role of students' motivation and attitudes would result in an incomplete understanding of any learning process including L2 vocabulary learning. This is because at the end of the day, it is the students who decide to learn or not, and "even the best materials are little good if students do not engage with them" (Schmitt, 2008, p. 338). In the present study, I aim to extend the theoretical basis of vocabulary acquisition from the task-induced need to the level of learner's motivation. The assumption here would be that it is not only the degree of need induced by the task but also learner's level of motivation that influences their engagement in the task. For this purpose, I will investigate how a motivational manipulation which involves a higher level (chronic regulatory focus) and a lower level (task framing to induce regulatory fit) of motivational processing can influence learners' quality and quantity of cognitive involvement in an integrated reading/writing task designed to promote incidental vocabulary learning. I will also examine the affective and attitudinal outcomes of motivational learning during this process. To be more specific, I aim to test how creating regulatory fit between the way the incentive structure

of a task is framed (i.e., gain-oriented vs. loss-oriented) and the chronic motivational orientation of learners (promotion vs. prevention) can result in higher levels of learning, and positive emotions and attitudes compared to those learners who will be placed in mismatching regulatory conditions.

The task the participants do in the present study includes reading an authentic article presenting the pros and cons of animal testing. Participants are supposed to read the article while they can use dictionary to find the meaning of new words and phrases and then write an essay expressing their own opinions about the points brought up in the article. They will thus have the option to go back to the writing and use the new vocabulary items, which means the need can be either strong or moderate depending on how motivated they are to understand the article and write a good essay. The search can also be weak or strong depending on whether they want to look up the new items in a dictionary. Finally, the evaluation can also be weak or strong depending on whether the participants will actually use the new items. In other words, the present study could highlight the higher importance of the learner compared to the task in understanding engagement in learning tasks.

Research Objectives & Questions

The main purpose of the present study is to see how regulatory fit predicts the quality of ESL learners' learning experience and the quantity of their vocabulary learning outcomes during an integrated reading/writing activity. The quality of their learning experiences will be measured using a post-task questionnaire. Given regulatory fit is said to increase engagement and enjoyment through making individuals feel right about what they are doing, it would also be interesting to see how regulatory fit influences learners' feelings and attitudes about the activity

and their perception of how they actually performed on the task. The quantity of the vocabulary learning will be measured using a pre-test and a post-test of the more infrequent vocabulary items in the article. Based on the discussion above, I seek to answer the following research question:

- 1) How does regulatory fit affect ESL learners' incidental learning of novel vocabulary items during an integrated reading/writing task?
- 2) How does regulatory fit affect ESL learners' enjoyment of and interest in the task, task anxiety, perceived success in doing the task, and inclination to perform similar tasks, as measured by self-report questionnaires?

CHAPTER 2

METHOD

The study had an experimental design that aimed to see how the interaction between two types of framing instruction (loss-framed vs. gain-framed) for two types of motivational orientations (promotion vs. prevention) influenced their learning experience and vocabulary learning in an integrated reading/writing task. The participants were thus randomly assigned to either a gain-framed or a loss-framed instructions condition and their performance was measured in each condition and examined in relation with their regulatory focus.

Participants

A sample of 189 English language learners studying at a large university in the United States participated in the present study. Students studying at this institute are conditionally admitted by the university and have to meet the English requirements before they officially start studying either at the undergraduate or graduate level. The institute classifies language learners into five levels based on their Test of English as a Foreign Language (TOEFL, see www.ets.org) score and their performance on the placement test they administer annually. Participants for the current study were recruited from the two top proficiency levels: Level 4 and Level 5. Level 4 students are enrolled in the Intensive English Program, where they take a course titled “Writing Content” among other courses. Level 5 is also called the EAP (English for Academic Purposes) class, in which students learn more advanced skills for academic writing. Teachers in the Intensive English Program informed me that Level 4 students are typically at the Intermediate-high level of proficiency according to the American Council on the Teaching of Foreign

Languages (ACTFL) scale (see www.actfl.org), while Level 5 students are typically Advanced low on the same scale. Descriptive statistics for the sample has also been presented separately for each condition in Table 2. As shown in the table, the students were from different linguistic backgrounds and the two conditions are fairly balanced in terms of their proficiency placement level, first language, and also length of residence in the US.

Procedures

After getting permission from the authorities in charge of the language learning institute where I collected my data, I individually contacted the teachers who taught Level 4 and Level 5 classes since the content of their classes (i.e., reading and writing) were related to the activities that this research study involved and there was thus a higher chance of willingness for participation on the side of both teachers and students. The study was framed in the form of an essay contest to enter a drawing to win three \$100 gift cards. Having been informed of the procedures and objectives of the study, many teachers willingly accepted to do the research study as a class assignment. The students were, however, given the choice to let me use their data or not. If they let me use their data, their names were entered into the drawing for the gift cards. Otherwise, their data would not be used and their names would not be entered in the drawing. Everyone agreed to let me use their data.

I visited the participating classes once for a vocabulary pretest and once for the main data collection session. In my first visit, I initially explained the procedures of the study to the students and informed them of their rights to refuse to participate, or to discontinue participating in the study at any point during the data collection. Then they took a multiple choice pre-test, which measured their knowledge of the target vocabulary items. They were told that the test

measured their general level of vocabulary knowledge and was only meant to help me know whether the article they were supposed to read was easy enough. They were also assured that their performance would not have any effects on their scores in the essay contest, and they would even be given a dictionary including the definitions of all those words at the time of the experiment. The pre-test administration took about 15 minutes on average.

Table 2. Descriptive statistics for participants in each condition

Condition	Age range (Mean/SD)	Gender	Level	First language	LOR range in months (Mean/SD)
Gain-Framed (N: 87)	18-45 (21.95/5.5)	Female: Male:	Level 4: 29 Level 5: 58	Chinese: 46 Arabic: 15 Portuguese: 12 Other: 14	1-96 (14.9/16.1)
Loss-Framed (N:102)	18-43 (21.4/4.0)	Female: Male:	Level 4: 42 Level 5: 60 Missing: 1	Chinese: 47 Arabic: 24 Portuguese: 14 Other: 15	1-66 (13.5/13.1)

The main data collection session happened one week or so after the pre-test data were collected. Groups of participants were invited to a computer lab and performed the related activities online using qualtrics, which is an online data collection tool. The session included six steps: First, the participants were randomly assigned to either a gain-framed or a loss-framed task. Second, they completed a background questionnaire (Appendix H) and the composite regulatory focus questionnaire. Third, they read the article about animal testing and answered a set of 10 True/False reading comprehension questions (worth 30/100 points) on which they received predetermined feedback on their performance either in a gain (i.e., You have gained 21 points) or a loss frame (i.e., You have lost 9 points) in order to sustain the fit induction (see below) (20 minutes). During the reading stage, the participants had access to an English-to-English dictionary (which included all the target words) and were allowed to take notes. Fourth,

once they read the article, they wrote their essays, explaining their position towards the topic drawing on the points discussed in the article (40 minutes). During the writing process, they had access to the article, their notes, and the dictionary. Fifth, they took the unannounced vocabulary post-tests after the notes and the dictionary were taken away (10 minutes). Sixth, they completed the post-task questionnaire (Appendix I) (5 minutes). The entire data collection session lasted about 80 minutes on average.

After the entire data collection process was completed, they were also debriefed about the hidden aspects of the study including the motivational framing, their performance on the True/False questions, and also the fact that they would be entered in the drawing regardless of their performance on the activities. Again, they were given the chance to choose let me use their data or not. Since they all agreed to let me use their data their names were entered in a drawing for three \$100 gift cards regardless of their performance.

Regulatory Fit Induction

Regulatory fit can be created incidentally or integrally (Cesario, Higgins, & Scholer, 2008). To create incidental regulatory fit, the induction happens in an irrelevant task right before the main task. The effect of fit is then expected to carry over to the next activity which is the target task. For example, participants might be asked to write an essay about their hopes and aspiration or their obligations and responsibilities in order to create fit or non-fit with their chronic regulatory focus (e.g., Freitas & Higgins, 2002). Promotion-oriented individuals would feel regulatory fit when they write about their hopes and aspirations while prevention-oriented people would experience regulatory fit when they write about their responsibilities and obligations.

In integral regulatory fit induction, on the other hand, participants will experience regulatory fit as an integral part of the task structure they are involved in. Given there is evidence for the effects of integral fit induction on learning and task performance (e.g., Markman, Baldwin, Maddox, 2005; McAuley, Henry, & Tuft, 2011; Worthy, Maddox, & Markman, 2007), the incentive structure of the task will be used in the current work in order to create regulatory fit and non-fit. To create fit and non-fit conditions, I randomly assigned half of the participants to a gain-framed and the other half to a loss-framed task condition. In the gain-framed task, they were instructed that they start the contest with zero points but their names would enter a drawing for three \$100 gift cards if they obtain 75 points out of the total score of 100 points. They were instructed they could gain 30 points on reading comprehension questions and 70 points on the quality of their writing. In the loss-framed condition, participants were instructed that they started the contest with 100 points but they would have to not lose more than 25 points if they want their names to stay on the list for the drawing. In order to maintain the influence of regulatory fit and non-fit on the participants during the task, pre-determined performance feedback on the True/False reading comprehension questions was given to the participants immediately after they responded to the questions. For the participants in the gain-framed condition, the feedback was also gain-framed: they were told they gained 21 out of the 30 possible points in the section. For the participants in the loss-framed condition, on the other hand, the feedback was framed as loss versus non-loss. That is, they were told that they have lost 9 out of the 30 possible points (see Appendix J for full descriptions).

Apparatus, Materials & Instruments

Questionnaires

Although Higgins et al.'s (2001) regulatory focus questionnaire (RFQ) has been the classic instrument with a strong predictive power, I used Haws et al.'s (2010) composite regulatory focus scale (CRFQ; Appendix A), which includes items from Higgins et al.'s (2001) RFQ, Carver and White's (1994) BIS /BAS scale, and the Lockwood scale (Lockwood, Jordan, & Kunda, 2002). While RFQ is exclusively oriented towards the past, the composite scale includes items related to the past, present and future, as well as emotion-related items. More importantly, the composite RFQ has been shown to have better predictive power than the RFQ (see Haws et al., 2010). The scale contains 10 items, five measuring the prevention regulatory orientation and five measuring the promotion regulatory orientation.

I employed a second questionnaire based on the common scales in L2 motivation research. The rationale behind doing this was that regulatory-fit may not explain all there is about motivation. Regulatory-fit contributes to motivation through increasing the value of a goal but it may not create completely new values. The motivation for language learning can thus be boosted through regulatory fit. Including L2 motivation in the study can help us get a more accurate picture of how motivation works for language learning. It could enable me to investigate how the ideal and ought-to L2 selves (Dörnyei, 2005, 2009), which are based on Higgins' self discrepancy theory (1987), match with either of the regulatory focus orientations and if those could be combined to obtain a more accurate understanding of the participants' motivational profiles. The variables measured in the study (Appendix B) included the three components of the L2 motivational self system (i.e., language learning experience, the ideal L2 self, and a modified version of the ought-to L2 self). L2 motivational intensity (Gardner, 2004)

and intended effort (Taguchi et al, 2009) were also included as measures of motivated behavior. Items for these measures were either adopted from previous studies (Taguchi et al., 2009) or were newly developed (especially for the ought-to L2 self) in order to add to its predictive and content validity.

Following Freitas and Higgins (2002), I also administered a post-task questionnaire asking questions about how interesting, enjoyable and exciting they found the task to be, how anxious they felt during the task, how well they thought they performed on the task, and their willingness to try the task again given another chance. As shown in Appendix C, the questions could be answered on two 10-point scales with either 0 = *not at all* and 9 = *extremely* or 0 = *definitely not* and 9 = *definitely* anchoring the end points of the scales.

Reading Comprehension Materials

Although, it has been estimated that 98% (Hu & Nation, 2000; Schmitt, Jiang, Grabe, 2011) vocabulary coverage is necessary for second language learners to comprehend written texts, in the present study I presented participants with an authentic article. The assumption for selecting an authentic text was that learners are able to read and comprehend an authentic text with even higher rates of novel vocabulary when they are provided with a more ecologically valid reading environment in which they could take notes and use a dictionary in order to comprehend the text. This of course again depends on the motivation of the learners, which is the factor we are interested in in the present study. The authentic article was titled *Using Animals for Testing: Pros Versus Cons*, which was written by Murnaghan and published on a British website (www.aboutanimaltesting.co.uk/). The article discusses the pros and cons of animal testing and is 675 words long (Appendix D). Measures were taken to make the reading process as natural as

possible. Participants had unlimited time for reading. They were able to use an English-to-English dictionary and take notes on a blank sheet of paper during reading. Then, they were asked to answer 10 True/False comprehension questions (Appendix D). The reading comprehension True/False statements were not meant to test the actual understanding of the participants but only to give them a sense of losing or winning and promoting the regulatory fit/non-fit induction. The statements were thus written in a way that could be answered only by making subjective inferences based on the text. Therefore, the participants would not rule out the possibility of their answers to be wrong and the predetermined feedback would not come to them as a demotivating surprise. Participants were also given a predetermined feedback on their performance on these statements. Next, they wrote an essay expressing their opinions about whether they support animal testing or not, and why. In addition to the reading time, participants were able to go back to the reading, use the dictionary and take notes, as they do in real life situations while answering the comprehension questions, and writing.

L2 Vocabulary Pre-Test & Post-Tests

I used Range with the BNC/COCA lists (25,000 words) to analyze the text in terms of its frequency measures. As shown in Table 3, the analysis showed 91.36% of the words were in the first two base lists: 530 word tokens (182/273 types) were in the first base list (each base list includes 1000 words) making 80.30% of the text, and 73 tokens (57 types) were in the second base list making 11.06% of the text (Appendix E). Since my target population included upper-intermediate to advanced learners of English, I included the 9.64% of the words that were on the range between 3,000 and 7,000 words (with the exception of “HIV,” which was on the 31st list) as my target words for the vocabulary test. After removing the words that were from the same

word family but appeared in the same list (e.g., experimental, experimentation, experimented), I had 24 words in the third list, four words in the fourth, seven words in the fifth, three words in the sixth, one word in the seventh, and one word in the 31st base list. The four technical (i.e., cancer, antibiotics, vaccines, and insulin) were not kept in the list due to their generic nature but they were included in the dictionary. I also relied on my intuition to add four words from the second list (i.e., breed, expose, typical and aid) that I thought might not be known by some learners at this level of proficiency. The final list included 44 vocabulary items.

Table 3. The number/percentage of types and tokens

Word list	Tokens/%	Types/%
one	530/80.30	170/62.27
two	73/11.06	57/20.88
Three	36/5.45	29/10.62
Four	8/1.21	5/1.83
Five	8/1.21	7/2.56
Six	3/0.45	3/1.10
Seven	1/0.15	1/0.37
thirty first	1/0.15	1/0.37

The final list of 40 vocabulary items were all included in a multiple choice pre-test which was developed based on the guidelines proposed by Carr (2011). On the pretest (Appendix G), participants are instructed to pick the synonym or the closest match in meaning for each target word out of four options presented to them. I also added one option “*I don’t know*” in order to minimize the effect of guessing and making participants feel comfortable admitting that they do not know an item. One extra blank box was also added for the cases when a participant knows a meaning of the word, but that meaning is not included among the four options presented to them. They could use that blank box to write the meaning or L1 translation of those words. The same

test was also used as the post-test. In calculating the vocabulary, the right answer was given a 1 and the wrong answer was given a 0. If the option “I don’t know” is chosen, that was given a 0 as well. If an alternative definition or correct translation was given, the item was given a 1.

Data Analysis

After data screening and checking the assumption, multiple regression analysis was employed to see how regulatory orientations predict vocabulary learning in gain versus loss-framed conditions. The steps are explained below.

Outliers

Following the guidelines presented in Field (2009), in order to check for the outliers, I employed two measures: a) Cook’s distance, which measures the overall influence of each case on the regression model, and b) Mahalanobis distance, which measures the distance of individual cases from the mean of the predictor variable.

For Cooks distance a value below 1 is considered acceptable. For a sample size of 189 and three predictor variables, Mahalanobis distance values lower than 20 seem to be acceptable. Finally, the acceptable values for standardized errors should be between -3 and +3. I found six cases had values that exceeded these one or more of these limits, and thus I removed them from the following analyses.

Reliability Analysis

I first ran a Cronbach reliability analysis on the results of the CRFQ for the participants. The alpha coefficient was .51 for the prevention scale (mean = 3.39, SD = .57) and .58 for the promotion scale (mean = 3.52, SD = .52). In order to increase the reliability of the scales, one item from the promotion scale (When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.) and one item from the prevention scale (Not being careful enough has gotten me into trouble at times.), which happened to be the only negatively worded items, were deleted. The reliability analysis was run on the new scales again. The final alpha coefficients was .58 for the prevention scale (mean = 3.39, SD = .66) and .66 for the promotion scale (mean = 3.59, SD = .61). Although the figure for the promotion scale is acceptable but the one for the prevention scale is on the border line. I proceeded with the analyses keeping in mind the limitation of the prevention scale.

Multiple Regression Analysis: Assumptions

Field (2009) listed several assumptions to be checked before running multiple regression (MR) analysis. The first assumption is that all predictor variables must be quantitative or categorical (with two categories). My data meets that assumption since there are two continuous (promotion and prevention scales) and one binary categorical variable (framing) for the analysis. The second assumption is non-zero variance, which means that the predictors should not have a variance of zero, which is true for the data in the present study. A third assumption is that there should not be any perfect correlation between any pair of predictor variables. As can be seen in Table 4, the highest correlation between the predictor variables is .45, which is far from perfect. In addition, the highest variation inflation factor was 1.26, which is far from the warning point of

10; and the tolerance was .79, which is higher than the concerning value of .2. A fourth assumption concerns correlations, but between the predictor and external variables. The only variable other than the regulatory orientation of the participants that might have influenced the result of the study was their learning motivation, which has been included in the model. Fifth, residual terms should also be uncorrelated. I used a Durbin-Watson test to check this assumption, and it showed an acceptable value of 1.65. Sixth, residuals in the model were normally distributed, as shown by their mean value of zero. Seventh, the values of the outcome variables were independent and coming from different participants. And finally eighth, the relationships between the predictor variables and the outcome variable were linear.

Table 4. Pearson correlations between predictor and outcome variables

	Promotion	Prevention	L2 Motivation
Prevention	.45**		
L2 Motivation	.34*	.24*	
Vocabulary gain	.16*	.16*	.15*

Note: * = $p < .05$, ** = $p < .01$

Multiple Regression Analysis

I used multiple regression analysis to see how regulatory orientation (promotion/prevention) as a continuous predictor variable predicted the participants' learning of new vocabulary items and length of writing. I calculated *Vocabulary Gain* scores by deducting the scores of the participants on the pre-test from their scores on the post-test. In order to examine the interactions between regulatory orientation and instructions (gain-framed vs. loss-framed) as a categorical predictor variable, I tested the model in the form of the following equation:

$$Y \text{ (outcome variable: vocabulary gain)} = A \text{ (promotion score)} + B \text{ (prevention score)} + C \text{ (framing: gain vs. loss)} + A * C \text{ (interaction between promotion score \& framing)} + B * C \text{ (interaction between prevention score \& framing)}$$

Because the level of student motivation for learning English might have influenced their performance on the task, an index of L2 motivation composed of motivational intensity, intended efforts and attitudes towards English learning was created and entered as another predictor variable. By doing so, the motivational level of the participants was controlled for as a covariance.

The model was tested for the gain-framed condition and for the loss-framed condition separately. For doing so, two dummy variables were created for framing condition with the reference category (either gain-framed condition or loss-framed condition) having a value of 1 and the baseline category having a value of 0. For example, to explore the effects the promotion scale in the gain-framed condition, a dummy variable was created with a value of 1 for those in the gain-framed condition and a value of 0 for those in the loss-framed condition. The promotion and prevention scales were then multiplied by the dummy variable (1 for those in the gain-framed condition and 0 for those in the loss-framed condition) to create two other variables, with the scores of those in the loss condition replaced with 0. The variables were then entered in the model to see how the promotion and prevention scales predict the outcome variables in the gain-framed condition.

Inversely, a dummy variable was created with a value of 1 for those in the loss-framed condition and a value of 0 for those in the gain-framed condition. The same procedures were followed and the variables were entered in another model to examine how the promotion and

prevention scales account for variance in the outcome variables in the loss-framed condition. The two models have been presented in Table 5.

Table 5. The models tested in the analyses

Analysis	Condition	Predictor Variables	Covariate	Outcome variables
Multiple Regression #1	Overall	Promotion Prevention	L2 Motivation	Vocabulary gain Task Experience
Multiple Regressions #2	Gain-framed	Promotion Prevention	L2 Motivation	Vocabulary gain Task Experience
Multiple Regressions #3	Loss-framed	Promotion Prevention	L2 Motivation	Vocabulary gain Task Experience

CHAPTER 3

RESULTS

Below the results related to vocabulary learning are presented first followed by the post-task evaluation survey results.

Vocabulary Learning

The means and standard deviations of the predictor and outcome variables by framing condition are presented in Table 6. As shown, the participants' mean scores for their promotion, prevention and motivation scales see approximately equal in both conditions. The vocabulary gain score for the gain condition seems to be higher than the one for the loss condition. In the following analysis, I will examine if the difference is statistically significant.

A multiple regression analysis for the entire data was run first in order to see how the promotion and prevention scales contribute to the outcome variables (i.e., vocabulary gain). To examine the effects of the framing conditions, multiple regression analyses were as well run for each condition separately. The two scales and also the two conditions were not expected to vary in terms of their contributions to the outcome measure because the participants were randomly assigned to the loss and gain conditions. The interactions between the scales (promotion vs. prevention) and the framing conditions (gain vs. loss), on the other hand, were expected to be significant in the sense that participants in the fit conditions (i.e., prevention focus individuals in the loss condition, and promotion focus individuals in the gain condition) were expected to perform better than those in the non-fit conditions (i.e., prevention focus individuals in the gain condition, and promotion focus individuals in the loss condition).

Table 6. Means and standard deviations for predictor and outcome variables

Condition (N)	Promotion Mean (SD)/ (Range)	Prevention Mean (SD) (Range)	Motivation Mean (SD) (Range)	Vocabulary gain Mean (SD) (Range)
Gain (85)	3.67 (.51)/ (2.25 – 5)	3.35 (.68) (1.75 – 5)	4.25 (.71) (2.93 – 5.6)	3.58 (4.3) (-7 – +15)
Loss (98)	3.5 (.65)/ (1.5 – 5)	3.4 (.64) (2 – 5)	4.17 (.77) (1 – 5.93)	2.13 (3.9) (-7 – +13)
Total (183)	3.6 (.60)/ (1.5 – 5)	3.4 (.66) (1.75 – 5)	4.2 (.73) (1 – 5.93)	2.8 (4.1)/ (-7 – +15)

For the first multiple regression analysis for the entire dataset, all the factors that were likely to contribute to the model including the promotion scale, the prevention scale, and framing (categorical variable) were entered as predictor variables, and vocabulary gain was entered as the outcome variable in the model. The motivation scale was also entered as a predictor variable in order to control for its effects. The results of the analysis using the entry method (presented in Table 7) showed L2 motivation did not emerge as a significant predictor of the outcome variable. This lack of significance was expected since all the students participating in the present study were from the same language learning institute and randomly assigned to the two conditions. This confirms that the effects of regulatory fit are independent from the individual participants' motivation for English learning. Because motivation did *not* emerge as a significant predictor of vocabulary learning, I removed it from the following analyses.

Table 7. MR results with vocabulary gain as the outcome variable

	B	Std. Error	Beta	T	Sig.
(Constant)	-5.21	2.41		-2.16	.03
Promotion	.76	.61	.11	1.24	.22
Prevention	.71	.55	.11	1.30	.19
Framing	1.37	.62	.17	2.20	.03
Motivation	.52	.45	.09	1.16	.25

Note: $R^2 = .08$

Regardless of the framing condition, there were no statistically significant main effects for either the promotion or the prevention scale, as expected. In other words, neither the promotion scale nor motivation predicted a statistically significant amount of variance in vocabulary gain. Framing, on the other hand, made a statistically significant contribution to the outcome variable, with the participants in the gain condition (mean: 3.58, SD: 4.30) having learned more vocabulary items than those in the loss condition (mean: 2.12, SD: 3.92).

I ran another multiple regression analyses to answer the first research question of this study: How does regulatory fit affect ESL learners' incidental learning of novel vocabulary items during an integrated reading/writing task? In other words, I investigate how the promotion and prevention scales account for vocabulary learning in each condition.

I expected that the promotion scale (but not the prevention scale) would predict a statistically significant amount of variance in the gain-framed condition whereas the prevention scale (but not the promotion scale) would predict a statistically significant amount of variance in the loss-framed condition. More importantly, interactions between the regulatory focus scales and the framing conditions were expected to be statistically significant. In other words, the promotion scale was anticipated to be a stronger predictor of vocabulary learning in the gain-

framed than in the loss-framed condition; conversely, the prevention scale was expected to be a better predictor of vocabulary learning in the loss-framed condition than in the gain-framed condition.

The results of the multiple regression analysis showed that there was a significant interaction between prevention and framing, $\beta = -.95$, $t(166) = -2.07$, $p = .04$, and no interaction between promotion and framing, $\beta = 0.12$, $t(166) = 0.21$, $p = .83$ (See also Table 8). Given this, the effect of prevention focus on vocabulary gain differed between the gain and loss framings, whereas the effect of promotion focus on vocabulary gain did not differ between the gain and loss framings.

To explore the prevention-framing interaction, I examined the simple slopes effects in each framing condition. The simple slope of the loss-framed condition was positive and significantly different from zero, $\beta = 0.31$, $t(166) = 2.5$, $p = .01$, such that participants gained more vocabulary as prevention focus increased under the loss-framed condition. In contrast, the simple slope of the gain condition was not significantly different from zero, $\beta = -0.09$, $t(166) = -0.85$, $p = .40$, indicating that participants' prevention focus had no relationship to vocabulary gains under gain-framed conditions (as shown in Figure 3).

For the promotion-framing interaction, I examined the simple slopes effects in each framing condition. The simple slope of the gain-framed condition was positive but not significantly different from zero, $\beta = 0.13$, $t(166) = .94$, $p = .35$, showing that participants did not gain more vocabulary as promotion focus increased under the gain-framed condition. Likewise, the simple slope of the loss condition was not significantly different from zero, $\beta = -0.09$, $t(166) = -0.85$, $p = .40$, indicating that participants' promotion focus had no relationship to vocabulary gains under loss frame conditions (as shown in Figure 4).

Table 8. MR results for the both conditions. Outcome variable: vocabulary learning

		B	Std. Error	Beta	T	Sig.
Gain-Framed Condition	(Constant)	1.08	3.39		.32	.75
	Promotion	.90	.96	.13	.94	.35
	Prevention	-.24	.73	-.04	-.33	.74
Loss-Framed Condition	(Constant)	-7.09	2.7		-2.6	.00
	Promotion	.64	.76	.09	.85	.40
	Prevention	2.01	.80	.31	2.5	.01
Interactions	Promotion × Framing	.26	1.22	.11	.211	.83
	Prevention × Framing	2.26	1.09	.97	2.07	.04

Note: $R^2 = .104$ for both models.

It terms of interactions between these scales and the framing conditions, similar results were found. There was no interaction between the promotion scale and framing condition; in other words, the amount of variance that the promotion scale predicted in the gain-framed condition was not statistically larger than the variance it explained in the loss-framed condition although there was a tendency. On the other hand, there was a statistically significant interaction between the prevention scale and framing condition; the prevention scale predicted a statistically more significant amount of variance in the loss-framed condition than in the gain-framed condition, as anticipated (as depicted in Figure 4).

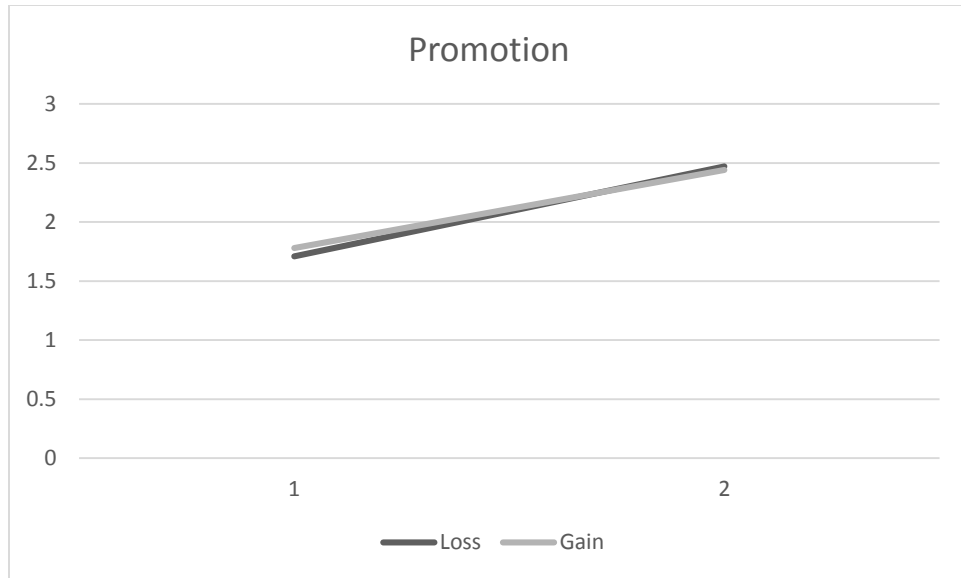


Figure 3. Schematic representation of MR results for the promotion scale

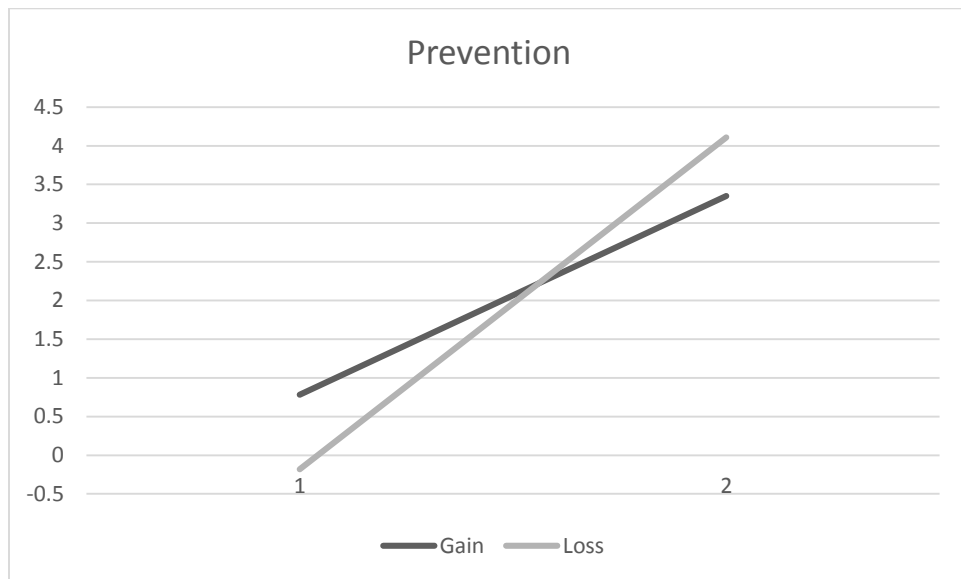


Figure 4. Schematic representation of MR results for the prevention scale

Post-Task Evaluations

Regression analyses were also run in order to answer the second research question: How does regulatory fit affect ESL learners' enjoyment of and interest in the task, task anxiety,

perceived success in doing the task, and inclination to perform similar tasks, as measured by self-report questionnaires? That is, I aimed to examine how the created regulatory fit versus non-fit experienced by the participants in each condition influenced their post-task evaluations.

As went above, the participants completed a post-task questionnaire that included seven items asking them how enjoyable/interesting/exciting the task was, how nervous they were while doing the task, how well they performed or would perform if they try the task again, and finally if they would like to try the task again. The mean score for the first three items asking “how enjoyable/interesting/exciting the task was” was computed to form an index of *task enjoyment*, which was entered into the regression analysis as a single outcome variable. The rest of the items were entered individually. Similar to the previous analyses, the predictor variables included the promotion orientation, the prevention orientation, the framing condition, and the interactions between the orientations and the framing conditions.

The expectations were the same. The promotion and prevention scales and the two framing conditions were not expected to predict variance in the target measures independently. But the interactions between the scales and the conditions were anticipated to be significant. That is, the promotion orientation was expected to predict more positive evaluations in the gain-framed condition than in the loss-framed condition; and the prevention orientation was expected to predict more positive emotions in the loss-framed condition than in the gain-framed condition.

The results of five multiple regression analyses for the entire data with the promotion scale, prevention scale, and framing condition as predictor variables are presented in Table 9. Contrary to expectations, the results showed that the promotion orientation emerged as a significant predictor of three out of the four positive evaluative measures. That is, the promotion scale accounted for statistically significant amounts of variance in task enjoyment (i.e., how

interesting/enjoyable/exciting they found the task to be), how well they thought they performed on it, and how likely they were to try the task again. On the other hand, the prevention scale emerged as the only significant predictor of the only negative evaluative measure. That is, it significantly predicted how nervous the participants felt during the task. Neither of the two variables predicted the participants' anticipation of their success if they were to repeat the task.

Table 9. MR results: Main effects for post-task evaluation measures

		B	Std. Error	Beta	T	Sig.
How interesting/exciting/enjoyable was the task?	(Constant)	.45	1.13		.40	.69
	Promotion	1.01	.32	.25	3.20	.002
	Prevention	.47	.29	.13	1.62	.11
	Framing	.17	.34	.04	.50	.61
$R^2 = .11$						
How nervous did you get while doing the task?	(Constant)	.69	1.40		.50	.618
	Promotion	.03	.39	.01	.09	.931
	Prevention	.82	.35	.19	2.31	.022
	Framing	.45	.42	.08	1.08	.282
$R^2 = .041$						
How well did you do on the task?	(Constant)	2.58	.98		2.64	.009
	Promotion	.76	.27	.23	2.78	.006
	Prevention	.02	.25	.01	.072	.943
	Framing	-.11	.30	-.03	-.370	.712
$R^2 = .051$						
If you do the task again, how well would you expect to do on it?	(Constant)	4.20	1.17		3.60	.000
	Promotion	.33	.33	.08	1.00	.315
	Prevention	.36	.30	.09	1.20	.233
	Framing	.61	.35	.13	1.73	.085
$R^2 = .040$						
Would you like to try the task again?	(Constant)	-1.64	1.57		-1.04	.298
	Promotion	1.40	.44	.25	3.17	.002
	Prevention	.39	.40	.08	.96	.340
	Framing	.30	.48	.05	.64	.526
$R^2 = .090$						

The results of the multiple regression analyses for each framing condition and the interactions between the regulatory orientations and the framing conditions are presented in Tables 10 through 14. The results of the analyses for each of the target evaluative measure as the outcome variable showed that the promotion orientation emerged as a statistical significant predictor of the same three positive evaluative measures in the loss-framed condition but

surprisingly not in the gain-framed condition. In the gain-framed condition, the promotion scale only predicted a significant amount of variance in one item which was about the participants' willingness to try the task again. The prevention orientation showed only two results approaching statistical significance, one for the participants' amount of nervousness in the gain-framed condition (Table 11) and the other for their expectation of success if they try the task again in the future (Table 12). However, none of the interactions even approached statistical significance, which means that while some results are significantly or almost significantly different from zero, they are not different across the framing conditions. In other words, the promotion orientation did not predict more variance in the loss-framed condition than in the gain-framed condition in terms of the evaluative statements; likewise, the prevention orientation did not predict more variance in the loss-framed condition than in the gain-framed condition.

Table 10. MR results. Outcome variable: "How interesting, enjoyable, exciting was the task?"

		B	Std. Error	Beta	T	Sig.
Gain-Framed Condition	(Constant)	1.01	1.85		.55	.58
	Promotion	.75	.50	.19	1.49	.14
	Prevention	.64	.40	.17	1.59	.11
Loss-Framed Condition	(Constant)	.38	1.44		.27	.79
	Promotion	1.21	.41	.30	2.92	.004
	Prevention	.28	.42	.08	.66	.50
Interactions	Promotion × Framing	-.46	.65	-.35	-.70	.48
	Prevention × Framing	.36	.58	.25	.61	.54

Note: $R^2 = .113$ for both models.

Table 11. MR results. Outcome variable: “How nervous did you get while doing the task?”

		B	Std. Error	Beta	T	Sig.
	(Constant)	1.70	2.27		.75	.453
Gain-Framed Condition	Promotion	-.19	.62	-.04	-.30	.762
	Prevention	.89	.49	.20	1.82	.071
	(Constant)	.46	1.77		.26	.796
Loss-Framed Condition	Promotion	.19	.51	.04	.36	.717
	Prevention	.73	.52	.17	1.42	.159
Interactions	Promotion × Framing	.37	.80	.24	.47	.643
	Prevention × Framing	-.16	.71	-.10	-.23	.819

Note: $R^2 = .042$ for both models.

Table 12. MR results. Outcome variable: “How well did you do on the task?”

		B	Std. Error	Beta	T	Sig.
	(Constant)	3.41	1.60		2.133	.034
Gain-Framed Condition	Promotion	.49	.44	.14	1.118	.265
	Prevention	.03	.35	.01	.093	.926
	(Constant)	2.08	1.25		1.666	.097
Loss-Framed Condition	Promotion	.925	.36	.27	2.577	.011
	Prevention	-.01	.37	-.00	-.017	.987
Interactions	Promotion × Framing	-.44	.57	-.39	-.770	.443
	Prevention × Framing	.04	.50	.03	.076	.939

Note: $R^2 = .055$ for both models.

Table 13. MR results. Outcome variable: “If you do the task again, How well would you expect to do on it?”

		B	Std. Error	Beta	T	Sig.
	(Constant)	6.52	1.90		3.44	.001
Gain-Framed Condition	Promotion	.212	.52	.053	.41	.684
	Prevention	-.03	.41	-.01	-.06	.949
	(Constant)	2.93	1.48		1.98	.050
Loss-Framed Condition	Promotion	.29	.43	.07	.68	.501
	Prevention	.77	.43	.21	1.78	.076
Interactions	Promotion × Framing	.08	.67	.06	.11	.911
	Prevention × Framing	.80	.60	.58	1.34	.183

Note: $R^2 = .052$ for both models.

Table 14. MR results. Outcome variable: “Would you like to try the task again?”

		B	Std. Error	Beta	T	Sig.
	(Constant)	-2.14	2.58		-.83	.407
Gain-Framed Condition	Promotion	1.53	.70	.28	2.17	.031
	Prevention	.48	.56	.09	.86	.391
	(Constant)	-1.12	2.01		-.56	.578
Loss-Framed Condition	Promotion	1.35	.58	.24	2.33	.021
	Prevention	.29	.59	.06	.49	.628
Interactions	Promotion × Framing	.18	.91	.10	.20	.841
	Prevention × Framing	.20	.81	.10	.24	.810

Note: $R^2 = .09$ for both models.

CHAPTER 4

DISCUSSION & CONCLUSIONS

The regulatory fit theory predicts that “motivational strength will be enhanced when the manner in which people work towards a goal sustains (rather than disrupts) their regulatory orientation” (Spiegel, Grant-Pillow, & Higgins, 2004, p. 39). Individuals with a dominant promotion orientation will experience regulatory fit when they follow their goals in an eager manner, which is sustained through a concern with advancement, accomplishment, and gains. Individuals with a prevention orientation will experience regulatory fit when they pursue their goals in a vigilant manner, which is sustained through a concern with protection, responsibility, and losses. The motivational strength created through regulatory fit is in turn expected to result in better learning and performance (e.g., Maddox & Markman, 2010) and more interest and enjoyment in task performance (e.g., Freitas & Higgins, 2002; Higgins et al., 2010).

Following motivation researchers in the field of social psychology, in the present study I created regulatory fit through framing the incentive structure of the task, but I did this within a language-learning context. I introduced an eager strategy through framing a language-learning task in gain terms, and I introduced a vigilant strategy through loss-framed instructions. I expected that the gain-framed instructions and feedback would benefit individuals with a dominant promotion orientation in terms of the quality of their learning experience and their vocabulary learning outcomes. Similarly, I expected the those in the loss-framed instructions and feedback condition to enjoy better learning experiences and outcomes if they also had a dominant prevention orientation.

The results of the study showed that overall the participants in the gain-framed condition learned more vocabulary items than the participants in the loss-framed condition, which was

unexpected because the participants were randomly assigned to each condition. The prevention scale significantly predicted vocabulary learning in the loss-framed condition, but the promotion scale did not emerge as a significant predictor of vocabulary learning in either condition. More importantly, there was no interaction between the promotion orientation and framing condition. That is, the promotion orientation did not predict a significantly larger variance in vocabulary learning in the gain-framed condition than in the loss-framed condition. This result suggests that framing condition did not moderate the effects of the promotion orientation on vocabulary learning. The results for the loss-framed condition, on the other hand, were in line with the predictions of the study. The prevention orientation predicted a significant amount of variance in vocabulary learning in the loss-framed condition than in the gain-framed condition (see Table 7).

As I reviewed in the literature review, nine out of ten experiments in educational psychology demonstrated that regulatory fit has significant effects on task learning outcomes and experiences, the results in the present study are mixed. One explanation for the asymmetrical results could be related to the higher level incentive structure of the task. The task was presented to the participants as a class activity. The students thus were required to do the task as part of their daily classroom activities in order to prevent loss of participation credit, although they had the choice to *not* let me use their data. The higher-level prevention-focused incentive structure, thus, might have influenced the eager strategic inclination that the framing of the task in the gain condition was supposed to create. In other words, although the task was framed in gain (promotion-oriented) terms, it might have been perceived by the participants as an *obligation*, an expected class assignment. That might have resulted in a non-fit between the promotion orientation and the broader incentive structure of the task in the gain condition, putting the promotion focus individuals at a disadvantage. But if such an extra motivational layer existed,

learners in the loss condition should have performed better than those in the gain condition due to the match between loss instructions and the prevention orientation of this extra regulatory level. But that is not the case. In addition, the overall vocabulary learning rate was actually lower in the loss condition than in the gain condition. This explanation, therefore, does not help clarify why participants in the gain condition generally learnt more vocabulary items than those in the loss condition.

Another explanation for this unexpected outcome might be related to the regulatory nature of the task. Studies have shown that tasks can be categorized as having a promotion or prevention regulatory focus. Van Dijk and Kluger (2011) found that tasks such as generating ideas, creative problem solving, assimilating new technology, challenging decision making, and initiating changes, which require creativity and risk-taking, have a promotion-regulatory focus and benefit promotion-focused individuals, whereas tasks such as detecting errors, maintaining safety, bookkeeping, work scheduling, and maintaining quality control, which require attention to details, precision, and risk-aversion, have a prevention regulatory focus and benefit individuals in a prevention focus. The writing part of the task in the current study involved producing convincing arguments for or against a challenging decision: Should people use animals for testing? By writing an argumentative essay on animal testing, the participants needed to generate ideas, make a challenging decision, and maybe initiate some change. Writing such an essay may also require some level of creativity; that is, writers actually create something that would not otherwise exist. The task might thus have had a *promotion-regulatory bias* that benefitted the individuals in the gain-framed condition. If that is the case, a complex pattern of regulatory relations could be hypothesized as shown in Table 15.

Table 15. A hypothesized three-way pattern of regulatory fit relations between the chronic regulatory focus, framing conditions, and task type

Chronic Focus	Promotion		Prevention	
	Gain	Loss	Gain	Loss
Condition	Gain	Loss	Gain	Loss
Fit Relations	Chronic = Condition Task = Condition Chronic = Task	Chronic = Task	Task = Condition	Chronic = Condition

In other words, there might have been three layers of regulatory focus at play here: One layer related to the regulatory focus of the participants; a second layer related to the regulatory focus of the instructions (gain-framed vs. less-framed); and a third layer might have been related to the regulatory nature of the task (as a promotion-oriented task). If researchers assume a three-way interaction exists between these three motivational layers, then there are three regulatory fit relations for the promotion focus individuals in the gain condition and one regulatory fit relation for each of the other three groups. One would expect that in such a dynamic of relations, the promotion-focused individuals who performed a promotion-focus task in a the gain condition would perform better than all the other three groups. However, there is no significant difference between this group and promotion-focused individuals in the loss condition, who only have one fit relation which is between their chronic regulatory focus and task type. It might be the case that the outcome of the relations between these regulatory layers is not simply the sum of the parts, and a fit relationship between the chronic regulatory focus and task type might have trumped the other fit relations. This means that the promotion-focused individuals in the gain condition and the promotion-focused individuals in the loss condition might have performed equally because they both enjoyed a fit between task type and their chronic regulatory focus. Also in the case of prevention-focused individuals, it might be the case that in the loss condition

the fit relation between the chronic regulatory focus of the participants and framing condition might have trumped the fit between task type and framing condition in the gain condition, resulting in better performance for the former group.

In other words, the fit relations between these elements could be ranked in terms of their strength, with the fit between chronic regulatory focus and task type being the strongest, followed by the fit between chronic regulatory focus and framing condition, and finally the fit between task type and framing condition as shown in Figure 5. If such a dynamic of fit relations exist, it may have influenced the participants' task experiences, as measured by the post-task evaluation survey, in the same way.

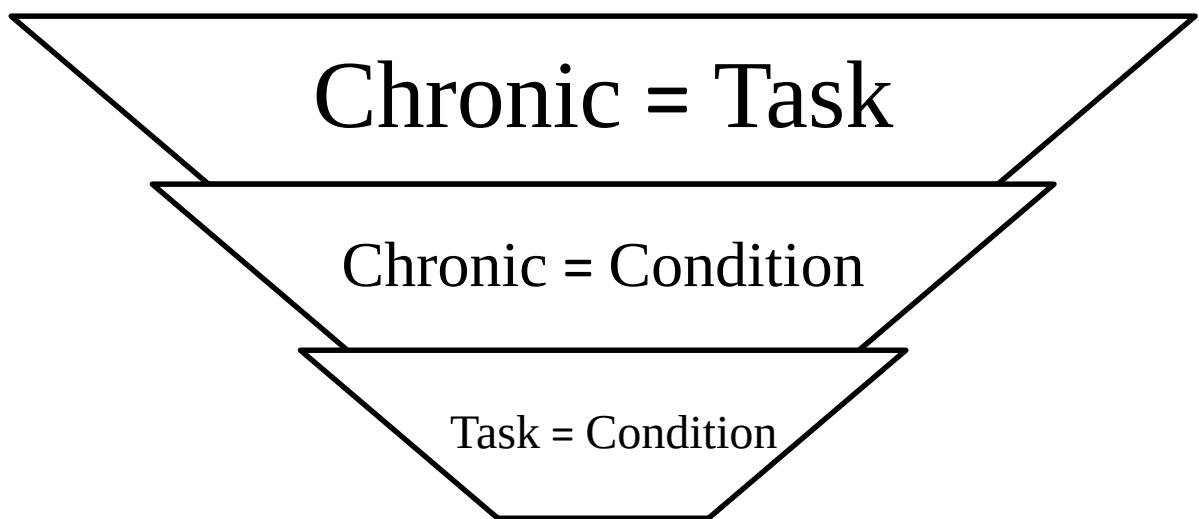


Figure 5. The hypothesized hierarchy of regulatory fit relations between chronic orientation, framing condition, and tasks

The results for the students' evaluations of their task experience in fact did show an advantage for the promotion-oriented individuals compared with the prevention-oriented individuals for the entire sample, and also in the loss-framed condition. Whereas the prevention

orientation predicted a significant amount of variance in how nervous the participants were during the task, the promotion orientation significantly predicted their levels of interest, enjoyment, excitement, perceived success, and likelihood of doing the task again, both overall *and* when the instructions were framed in loss terms. However, there was no interaction either for the promotion scale nor for the prevention scale. That is, the prevention scale was not a better predictor of the target measures in the loss condition than in the gain condition. Likewise, the variance explained by the promotion scale was not significantly stronger in the gain-framed condition than in the loss-framed condition. These results again might have been because of the strength and number of fit relations between the regulatory elements involved in this experiment as depicted in Table 15 and Figure 5. The existence of the fit relation between the chronic regulatory orientation of the participants and the presumably promotion-oriented task might be the reason why the promotion scale predicted an overall stronger amount of variance in terms of the positive evaluative scales. If we agree that the fit relation between the chronic orientation and the task type to be the strongest ones, as shown in Figure 5, this explanation makes sense. The same argument could be presented regarding why the promotion scale predicted more positive experiences in the loss condition than the prevention scale: The fit between the chronic promotion orientation and task type in the loss condition might be stronger than the fit between the chronic prevention orientation and the (loss) framing condition. Therefore, although the results do not perfectly match with the results for vocabulary learning, they provide support for hypothesized fit relations proposed in Figure 5.

Considering different layers of fit relations is in line with the current thinking in research on regulatory fit theory. For example, Maddox and Markman (2010) proposed a three-way interaction between global incentives, local incentives and task demands in their motivation-

cognition model. Global incentives include promotion and prevention priming. Earning a \$50 lottery ticket and avoiding the loss of the ticket are examples of promotion and prevention global incentives, respectively. Local incentives are more integral to the nature of the task. Maximizing performance indices and minimizing error during task performance are examples of local incentives. Task demands and “the types of strategies necessary to perform well” (p. 106) constitute the third dimension of the interactive framework. Based on the results of the previous studies (reviewed in Introduction), Maddox and Markman speculated “whether a combination of global and local incentives yields good or bad performance in a particular situation depends on whether the task requires [cognitive] flexibility” or “active, effortful exploration of a set of strategies” (p. 106). Writing an argumentative essay is a type of task that might necessitate an active, effortful exploration of convincing arguments that could produce an impact on the readers. Considering the regulatory effects of the writing task as an explanation for the asymmetrical results of the present study, therefore, is not unsubstantiated.

In sum, the asymmetrical results of the study partially confirmed the basic predictions of the regulatory focus theory regarding vocabulary learning. That is, the prevention orientation learned more vocabulary when the participants were primed to do the task in a vigilant manner (loss-framed instructions) than in an eager manner (gain-framed instructions). However, the results for the promotion orientation did not follow the predicted pattern. In terms of the post-task evaluations, the results did *not* confirm the predictions of the regulatory fit theory. But generally, the participants learned more vocabulary in the gain-framed condition, and the promotion-focused individuals had more positive task experiences. These results suggest that there might be more to the motivational fabric of the experiment than what was originally assumed. The promotion regulatory focus of the writing task (see Van Dijk & Kluger, 2011),

which requires creativity and an eager strategic inclination, is likely one of the main factors that influenced the results of the study.

Theoretical Implications

The field of second language acquisition has been dominated by a cognitive perspective. Whereas some applied linguists have called for a complementary social emphasis in the field (Firth & Wagner, 1997; Swain, 2013), the motivational aspects of the process have been mostly neglected. This shortcoming has been mainly due to a limited view towards motivation as some energy on which learner's differences is a matter of quantity rather than quality. The approach has dominated not only mainstream SLA research, but also the scholarly work on L2 motivation, and has presented an incomplete picture of how motivation could influence second language learning processes and outcomes. Given the focus of the present study on the motivational influences of regulatory fit on task-based experience and performance, below I discuss how adopting a motivation-as-quality approach, as demonstrated in Higgins's regulatory focus theory (1997) and regulatory fit theory (2001), could contribute to a better understanding and implementation of task-based language learning, broaden the scope of the construct of task-induced involvement (Laufer & Hulstijn, 2001), and set a new agenda for research on L2 motivation.

Motivational Influences in Task-Based Language Learning

From a regulatory-focus perspective, motivational influences on task experience and performance are not limited to the stakes of task performance (Skehan, 1996) or the random

“temporarily limiting factors” (Robinson, 2001, p. 32) that influence task experience and performance. A learning task can be influenced by motivational factors at at least four levels: (a) the regulatory focus of the participants, (b) the reward structure of the task, (c) the feedback structure of the task, and (d) the regulatory focus of the task itself.

The chronic regulatory focus of the participants not only influences the goals they are motivated by, but also the way they approach those goals. Individuals in a promotion focus are motivated by desirable endstates such as hopes, aspirations, and gains and pursue their goals in an eager manner that maximizes matches to those desirable endstates. If a task is framed in a way that does not match their eager strategic inclination, they are not going to feel right about it; nor will they do as well as compared to a task that is perceived as a step towards those desirable endstates. In contrast, individuals in a prevention focus are motivated to avoid undesirable endstates by meeting responsibilities and obligations and pursue their goals in a vigilant manner, which minimizes matches to the undesirable endstates. Prevention-focused individuals are motivated the best when the task is perceived as a step away from those undesirable endstates. Many studies (e.g., Crowe & Higgins, 1997; Förster, Higgins, Idson, 1998; Shah, Higgins, & Friedman, 1998) have shown that learners with differences in their chronic or situationally induced regulatory focus show different task performance behaviors. Förster, Higgins, and Bianco (2003), for instance, found that learners with a chronic or situationally induced promotion focus result in higher speed but lower accuracy in task performance, whereas learners with a chronic or situationally induced prevention focus show higher accuracy but lower speed in performing their tasks. The authors argued that their findings run against the common assumption that there is built-in trade-off, where “people trade speed for accuracy or vice versa” (p. 149) and show that regulatory focus is responsible for why some individuals are faster while

others are more accurate. In other words, whereas task complexity theories such as those of Skehan (1998) and Robinson (2001) see variance in the complexity, accuracy, and fluency of individual's language production as a cognitive phenomenon which is influenced by the relationship between the cognitive demands of the task and the cognitive resources of the learners, the motivation-as-quality perspective, and more specifically the regulatory focus theory, moves the discussion to a new level, where learner's motivational system plays a major role in their task-based learning and performance.

No only do learners approach the same task differently depending on their motivational orientations, the reward structure of the task could also influence how they feel about the task and can increase or decrease their motivation to perform well. As it was partially confirmed in the present study, if the reward structure of the task matches the regulatory orientation of the participants, they will feel right about what they are doing, enjoy the experience more, and perform better than when the reward structure mismatches their orientations. When it comes to language learning tasks, this could translate in the form of the type of rewards that teachers consider for success in a task. This reward could be also be a serious reward (e.g., grades) in the case of serious tasks such as a financial task or a fun reward (e.g., candy) in the case of more fun tasks such as a speed dating task (Bianco, Higgins, Klem, 2003; Higgins et al., 2010). The type of reward (fun vs. serious) and the way it is framed (loss vs. gain) could thus influence the cognitive involvement and the performance of learners and result in better learning experiences and outcomes that are not predicted only by the cognitive demands of the task or the cognitive abilities of the learners.

In addition to the reward structure of the task, the feedback that learners receive on how they are doing could have positive or negative effects on their motivation. Performance feedback

could be positive in the sense that learners are told that they are succeeding and moving towards their objectives, or it could be negative, meaning learners are told they are not doing well or are failing. In two separate experiments, Van Dijk and Kluger (2004) found that the learners who are either chronically or situationally (e.g., imagining working in a job that one desires to have) oriented in a promotion focus feel more motivated when they receive positive (over negative) feedback, whereas chronically or situationally (e.g., imagining working in a job that one feels that one has to keep) prevention-oriented learners are better motivated when they receive negative (over positive) feedback on their performance. Giving positive or negative feedback could thus motivate or demotivate learners to invest their cognitive resources in L2 learning tasks depending on their chronic or situationally-induced regulatory focus.

As discussed above, the task itself could have a regulatory focus which could match or mismatch the other levels of regulatory focus that influence the learners' task performance. Tasks with a promotion regulatory focus (e.g., generating ideas) are best performed when learners are in a promotion regulatory focus; whereas when the task is prevention-focused (e.g., proofreading), learners in a prevention regulatory focus feel more motivated and perform better on the task (Van Dijk & Kluger, 2004, 2011). In a task-based language classroom, different types of tasks and activities are done, including tasks that require creativity (e.g., make your dream land), which fall under promotion-oriented tasks, and tasks that require attention to details and avoiding errors (e.g., peer-editing or grammar lessons) which are categorized as prevention-oriented tasks. Learner's performance on such tasks, thus, is not only a matter of the cognitive demands of the tasks or the abilities of the learners, but also the learner's motivational state, which could change depending on the match or mismatch between their regulatory focus and the regulatory focus of the task.

These are a few levels at which learner's cognitive investment in task performance could be influenced by motivational factors. Motivational influences on task performance are not limited to the factors outlined by the regulatory focus theory though and could include a host of other sources which are not discussed in this single manuscript but highlight a more comprehensive approach towards task-based instruction. Presenting an almost purely cognitive perspective towards task-based language learning can result in an incomplete picture of the important approaches towards language learning. A model of task-based language learning has to include cognitive, social, *and* motivational aspects in order to meet the minimum requirements for comprehensiveness.

Task-Induced Involvement: Moving beyond the Task

Based on Laufer and Hulstijn's (2001) construct of task-induced involvement, a task with a higher involvement load in terms of *need*, *search*, and *evaluation* results in more effective incidental vocabulary learning through increasing learner's engagement. Whereas the construct is very helpful in developing vocabulary learning task, it does not tell the whole story about a learner's engagement in vocabulary learning tasks because as Schmitt (2008) stated, the construct only focuses on task elements and does not consider learner's motivational and attitudinal characteristics. In the present study, I showed the match between learner's chronic regulatory focus and the way the reward structure is framed could result in significantly different rates of vocabulary learning for prevention-focused individuals. The results also showed that framing the task in gain terms predicted a significantly higher learning rate than framing it in loss terms. In addition, learners with a promotion orientation showed more interest and enjoyment in performing the task. These findings show that there is more to inducing task involvement than

the task itself and the construct of task-induced involvement could be broadened to include higher level motivational influences such as the ones outlined by the regulatory focus and fit theories.

Language Learning Motivation Revisited: A Quality Perspective

It has been more than four decades since Gardner and his associates (e.g., Gardner & Lambert, 1972) proposed that the intensity of a language learner's motivation to learn a new language depends mainly on their desire to integrate into the target language community. Many other constructs and frameworks have been proposed since Gardner's seminal work, which I discussed in the literature review. The variety of constructs and frameworks that have made their way into mainstream L2 motivation research have one thing in common: They all look for the motives that energize learners to invest time and effort in learning the language. This perspective has been of great value to our understanding of L2 motivation. We as motivation researchers now know that a wide range of motives are at play when it comes to language learning. These motives could range from the social dimensions of language learning such as the desire to integrate in a new language community, to the psychological factors such as self-confidence (e.g., Clement & Kruidenier, 1983), to the situated motives such as intrinsic interest in doing a task (e.g., Noels, 2001), to instrumental and pragmatic ones such as getting a good grade in a course (Gardner, 1985), to the more hybrid and identity-based ones such as the desire to develop an ideal L2 self (Dörnyei, 2009). What these models and constructs have been missing though is the fact that learners with different motivational systems view and approach these motives differently. In other words, motivation not only concerns the amount of energy and effort but also the quality and texture of it. This view is more common in the fields of social and educational psychology.

Regulatory focus and regulatory fit theories are two of the theories that take a quality perspective towards motivation. According to the regulatory focus theory, learners can be in promotion or prevention regulatory focus either chronically or temporarily. According to the regulatory fit theory, when learners pursue a goal that matches these chronic or temporary regulatory focus, they feel right about what they do and the quantity of their motivation grows higher. To relate this to L2 motivation constructs, while individuals in a promotion focus may look at integration into a target language community, for instance, as a means for growth and advancement, prevention-focused individuals may look at it as an obligation or duty. They would thus feel right about the integration when it matches their dominant regulatory focus.

Adopting a quality perspective towards L2 motivation can thus complement the existing quantity perspective and shed light on our understanding of different facets of motivation to learn a second language. In addition, it would forge a link between motivation research and other theoretical and pedagogical models in the field including but not limited to task-based learning and teaching models.

Pedagogical Implications

Understanding regulatory focus and regulatory fit concepts can help teachers develop an understanding of why learners behave the way they do but also their awareness of how to increase their students' motivation to learn through creating the right regulatory match at different levels of teaching practice including but not limited to syllabus, classroom management, communication style, and developing and using task, and finally giving feedback.

In every class of students, there are normally students with varying degrees of prevention and promotion orientations. Some students might be high, moderate, or low on both the orientations whereas some others might be strong on one and weak on the other orientation. A balanced combination of prevention and promotion elements on the syllabus could thus benefit different types of learners. Some elements on a syllabus are by nature prevention-oriented. These especially include class norms and rules such as attendance and delay policy, class etiquettes, deadlines, and disruption policies. These prevention elements need to be treated as such, that is, motivated by negative consequences. For example, giving participation grade for class attendance, which is a type of gain and promotion-oriented, seems to mismatch the prevention regulatory focus of such an element. A study by Matalan (2000), for example, found that giving bonus for attendance increased absentism. That is for the same reason why traffic violations are penalized whereas not violating a traffic rule (e.g., for example, not passing a red light) is not normally rewarded. Whereas the prevention elements help a teacher keep the class structured, promotion elements help students see the value of learning activities and encourage active participation, creativity, and critical thinking in class. Letting students have a say in deciding on class content or designing class projects in a way that leaves room for and rewards innovation and self-expression could strengthen the promotion aspects of the class and result in the outcomes that a teacher would want to see in their class.

Teacher's communication style could also be promotion or prevention oriented. This could be influenced not only by the content of the messages that they communicate to their students (Lee & Aaker, 2004) but also by their body language. An open body posture could click with promotion focus individuals but a closed body posture would make prevention focus individuals feel right (Cesario & Higgins, 2008). When students are in a regulatory fit condition

they even rely more on the source's authority than the content of the message that they receive (Koeing et al., 2009). But the question is how can teachers decide what the motivational orientation of each learner is. A very convenient way of measuring learners' chronic regulatory focus is to use a questionnaire such as the one that I used in the present study (Appendix A) or the one developed by Higgins and his colleagues (2001). Identifying the regulatory focus of the students could help teacher develop an understanding what motivates them and how to communicate with them. Teachers could, for example, highlight responsibilities and duties for prevention-oriented students but emphasize aspirations and hopes for promotion-oriented students in order to motivate them. One may argue that whereas understanding the regulatory focus of the students could help teachers individually communicate with the students, it may not be as helpful when teacher communicates to the class as a group. In other words, if students could be roughly categorized as promotion or prevention-oriented, how can a teacher have a communication style that matches the regulatory focus of all the participants?

The solution for this problem is easily available. Researchers have long developed techniques that could situationally put learners in either of those regulatory conditions that could have similar effects as the chronic regulatory orientation. Different researchers employ different techniques in order to create such regulatory states, but the most commonly used ones include simple writing activities that could also be changed into oral communicative activities for language classes. Here I review a few of those techniques that have successfully been used in the past.

Freitas and Higgins (2002) used learner's ideal and ought-to selves in order to create those inductions. In order to create a promotion induction, they asked half of their participants to think about and make a list of one to three goals that they would ideally like to do (i.e., their hopes and

aspirations). To induce a prevention focus, they asked the other half to think about and list one to three goals they thought they ought-to do (i.e., their duties and obligations). They then asked the participants to make a list of five strategies to achieve those goals. In order to create promotion induction, Higgins et al., (2001) asked half their participants to write about a time when they felt (a) they made progress toward being successful in life, (b) they were able to get what they wanted out of life, (c) trying to achieve something important to them, they performed as well as they ideally would have liked to. To create the prevention induction, they asked the other half to write about a time in the past when a) being careful enough avoided getting them into trouble, (b) they stopped themselves from acting in a way that their parents would have disapproved of, and (c) they were careful not to get on their parents' nerves. To create promotion and prevention inductions, Higgins et al. (1994) asked their participants to think about how their current hopes and obligations or duties and obligations, respectively, were different from what they were when they were growing up. The studies reviewed above showed that regardless of the regulatory focus of the participants, if you have them do the above activities they will be put in the regulatory focus that those activities induce.

One of the very useful uses of such induction techniques is having students perform one right before doing a language learning task that could itself have a promotion or prevention regulatory focus. If a teacher wants their students show active voluntary participation, creativeness, and critical thinking in a task, a promotion induction right before doing the task could boost the performance of all the participants regardless of their chronic regulatory focus. If the teacher would like their students to show more careful behaviors such as attention to detail and accuracy of their productions, then a prevention induction right before the task would be more helpful. It is important, though, that the students are not aware of the original intention of

the teacher in having them do the induction activities to motivated them otherwise the effect might be eliminated (Cesario et al., 2004). Drawing on Dörnyei's constructs of ideal L2 self and ought-to L2 self, similar techniques have been employed in second language pedagogy in studies by Magid and Chan (2012) and Sampson (2012). Magid and Chan for example used techniques such as using guided imagery to draw ideal self trees; where learners were asked to think about the kind of person they desire to be in future and their plans to realize those ideal selves. Such techniques were shown to increase language learners' motivation. However, such techniques could be optimally effective if they are employed according to the principles of the regulatory fit theory and through considering the regulatory focus of the learners.

In addition to creating a match between the temporary regulatory focus of the participants and the task, the reward structure of the task and the feedback that students receive on their task could enhance or harm their motivation depending on how it is presented (e.g., Idson & Higgins, 2000; Van Dijk & Kluger, 2004, 2011). If the learners are in a promotion regulatory focus, having a gain-framed reward structure (e.g., you will gain point for performing well) and positive feedback (e.g., you have made interesting points in your writing! Keep making it more interesting!) could create regulatory fit and enhance learners' motivation and performance. If the task is a prevention-oriented one (e.g., writing accurately), on the other hand, it would be beneficial to the learners if the reward structure is loss-framed (e.g., you will lose points for making grammatical errors) and the feedback is negative (e.g., you have made some grammatical errors! Be careful not to lose more!).

Different courses emphasize different learning objectives which could influence the regulatory focus that a teacher would want to employ in their classes. An ESL Writing course, for example, might have the objective of having students fluently and creatively express their

opinions on a variety of matters. Such a course would benefit most from a teacher who employs a predominantly promotion-focus teaching style as reflected in their syllabus, management style, communication style, grading, feedback, and task types. A similar course that emphasizes linguistic accuracy and structured organization of writing, for example, might benefit more from a prevention-focused teaching style. These are only a few aspects where regulatory fit could be employed to improve students' learning. The approach has not been widely applied to learning and the classroom context and further research is needed to develop more robust strategies for turning classrooms into a more motivating learning environment. However, the scholarly work that has been produced in this area suffices to assure teachers that developing an understanding of how regulatory fit works could significantly contribute to the effectiveness of their language teaching practice.

Conclusion

The study was the first application of the regulatory focus theory (1997) and regulatory fit theory (2000) in the field of SLA which was conducted in order to initiate developing a more comprehensive understanding of second language learning processes and outcomes by highlighting the motivational dimension of the enterprise. The two theories highlight the dominant research approach in the field of social and educational psychology that views motivation as a quality that can explain why individuals pursue certain goals, the way they do it, and how those behaviors can be influenced. The theories highlight the existence of two motivational systems, promotion and prevention. Individuals in a promotion system are more motivated and perform better when they use an eager strategic inclination to accomplish a task. Individuals in a prevention system are more motivated when they pursue a goal in a vigilant manner. The results of the study provided partial evidence for the predictions of the regulatory fit

theory; that is prevention-focused learners learned more vocabulary items in the loss-framed condition than they did in the gain-framed condition. This pattern did not emerge for the promotion-focused individuals; that is they did not learn more vocabulary items in the gain-framed condition. In addition, learners overall learned more vocabulary items in the gain-framed condition, and promotion-focused individuals had more positive learning experiences. The asymmetrical results were discussed to be the outcome the regulatory focus of the writing task the learners performed. Even though the results did not confirm all my hypotheses, the fact that there were statistical differences in learning outcomes and experiences as a result of motivational differences provide support for the the effects of regulatory fit on language learning processes and outcomes. These differences were not all in the predicted direction, but they confirm the principal assumption underlying this study that there is a link between the motivational and cognitive aspects of second language learning. The results were not in line with the stated hypotheses probably because there is more to the motivational tapestry of the learning event than it was initially assumed. Considering the various levels at which regulatory focus could influence the results of future studies would help us get a better picture of the link between the motivational and cognitive aspects of second language acquisition.

Limitations

The main limitation of the present study was the same issue that was discussed might have influenced the results of the study. The writing task that was chosen for the present study seems to have been biased in favor of promotion-focused individuals. This created some complications that might have been responsible for the asymmetrical results of the present study. In future studies using this framework, it is recommended that researchers consider the

regulatory focus of the task they choose for their studies. Researchers could use tasks that do not favor either of the regulatory orientations. A task such as reading or memorizing a list of vocabulary items seems to be devoid of a significant regulatory bias. Alternatively, tasks with different regulatory foci than those of the learners could be employed. Either way, the important point here is that the regulatory focus of the tasks must be taken into consideration in order to get a clearer picture of the motivational dynamics of task-based language learning.

The participants' vocabulary test was administered as pre-test and post-test might have been influenced by the way it was framed. The students were told that the purpose of administering the vocabulary pre-test was only for me to know if they know enough vocabulary items. They were also told that a dictionary will be provided for them including the definitions of the vocabulary items that they are not familiar with. More importantly, it was established that their performance on the vocabulary pre-test would not affect their chances of winning the entry ticket to the drawing. The students might have not taken the test as seriously as desirable. For future research it might be helpful if participants are told that their performance would actually influence their chances of winning.

The study was framed as a class activity for the participants. Even though the instructions were given in loss or gain terms, the participants might have perceived the task as an obligatory class assignment, which would be another layer of regulatory focus that might have affected the results of the study. In other words, whereas an obligatory assignment might have benefitted the prevention-focused participants by adding to the prevention regulatory focus of the task, it might have put the promotion-focused individuals at a disadvantage. In future studies, researchers are recommended to take into consideration all the motivational layers and take proper measures to control for their effects.

The gender of the participants was not documented in the present study. Although given the random assignment of the participants to different conditions it is not very likely that the gender of the participants might have affected the results of the study, it might be interesting to see if gender plays a role in participants' performance and learning in similar studies.

Directions for Future Research

The study introduced the regulatory focus and regulatory fit theories to the field of SLA, focusing on the different ways that language learners with different motivational orientations pursue their learning goals. These theories have provided the theoretical basis for numerous studies in the field of social, educational, and consumer psychology that have found strong empirical evidence for the role of regulatory fit in enhancing the value of goals (e.g., Higgins et al., 2003), learners' engagement, motivational strength and persistence in the goal pursuit (Avnet et al., 2013; Cesario et al., 2008; Crowe & Higgins, 1997; Higgins & Scholer, 2009; Spiegel et al., 2004), their learning and performance (e.g., Markman et al., 2005; Worthy et al., 2007), their mental fluency in the processing of messages (e.g., Lee & Aaker, 2004), and their enjoyment of and interest in goal pursuit (e.g., Freitas & Higgins, 2002; Higgins et al., 2010). Researching the motivational aspects of second language acquisition from this perspective has the potential shed light on many controversial aspects of this enterprise.

Chronic motivational factors might be a contributing factor in many of language learners linguistic, communicative, learning, and behavioral differences. Promotion-focused individuals have a tendency for fluency and ignoring the details while prevention-focused individuals have an eye for details and tend to prioritize accuracy over speed while doing a task (see Förster et al., 2003). The observation that many learners speak their second language fluently but with lots of

errors while others speak very accurately but not as fluently might be due to their regulatory differences. Regulatory focus might play a role in how communicative some learners are whereas some others seem to be less willing to initiate interactions in their second language. Learning might be more successful for the learners whose dominant regulatory focus matches that of their teachers, syllabus, curriculum, and classroom context (Leung & Lam, 2003; Rodriguez et al., 2013). The effectiveness of corrective feedback could also be related to the chronic or situational regulatory focus (Van Dijk & Kluger, 2011). Regulatory focus might be partly responsible for differences in the kinds of strategies that learners employ in their learning experiences. It would be interesting to see how inducing chronic or situational regulatory fit could influence incidental and intentional vocabulary learning in different tasks and contexts. The performance of L2 learners on tasks with different regulatory orientation could also be a very interesting area of research.

These are only a few potential directions for future research using Higgins's regulatory focus and fit theories. This research perspective could basically be applied to any area of second language acquisition where learners are involved in the learning process. The time has come to broaden our perspective towards second language acquisition, not only by looking at *how* the process happens but also by exploring *why* the process does or does not happen the way it does or does not. Complementing the social and cognitive perspectives in the field with a motivational approach could help answer that question and present a more accurate understanding of the process of second language acquisition.

APPENDICES

APPENDIX A

Composite Regulatory Focus Scale

Promotion Focus (5 Measures)

1. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.
2. I feel like I have made progress toward being successful in my life.
3. When I see an opportunity for something I like, I get excited right away.
4. I frequently imagine how I will achieve my hopes and aspirations.
5. I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.

Prevention Focus (5 Measures)

1. I usually obeyed rules and regulations that were established by my parents.
2. Not being careful enough has gotten me into trouble at times.
3. I worry about making mistakes.
4. I frequently think about how I can prevent failures in my life.
5. I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.

APPENDIX B

L2 Learning Motivation Questionnaire

English Learning Experience items

1. I like the atmosphere of my English classes.
2. Learning English is really interesting.
3. Time passes faster while studying English.
4. I always look forward to English classes.
5. I would like to have more English lessons at school.
6. I really enjoy learning English.

Intended Effort items

1. I would like to spend lots of time studying English.
2. I would like to study English even if I were not required.
3. I would like to concentrate on studying English more than any other topic.
4. If an English course was offered in the future, I would like to take it.
5. If my teacher would give the class an optional assignment, I would certainly volunteer to do it.
6. I am prepared to expend a lot of effort in learning English.

Motivational Intensity (4 items)

7. I actively think about what I have learned in my English class.
8. When it comes to English homework, I work very carefully, making sure I understand everything.
9. If English was not taught in school, I would learn it in everyday situations (i.e., read English books and newspapers, try to speak it whenever possible, etc.).
10. I really try to learn English.

APPENDIX C

Post-Task Attitudes Questionnaire

Please answer the following questions based on your overall evaluation of the task that you just completed. On the scale below, circle the number that shows your response. On the scale below, “0” means “*not at all*” and “9” means “*extremely*”.

Not at all

0-----1-----2-----3-----4-----5-----6-----7-----8-----9

Extremely

1) How interesting was the task?	0	1	2	3	4	5	6	7	8	9
2) How enjoyable was the task?	0	1	2	3	4	5	6	7	8	9
3) How exciting was the task?	0	1	2	3	4	5	6	7	8	9
4) How nervous did you get while doing the task?	0	1	2	3	4	5	6	7	8	9
5) How well did you do on the task?	0	1	2	3	4	5	6	7	8	9
6) If you try the task again, how well would you expect to do it?	0	1	2	3	4	5	6	7	8	9
7) Would you like to try the task again?	0	1	2	3	4	5	6	7	8	9

APPENDIX D

Reading Text

Using Animals for Testing: Pros versus Cons

Author: Ian Murnaghan

There are many pros and cons to the practice of animal testing. Unfortunately, neither seem to fully tip the scale to a side that pleases everyone – including the general public, government and scientists.

Pros or Positives of Animal Testing

1. Helps researchers to find drugs and treatments:

The major pro for animal testing is that it aids researchers in finding drugs and treatments to improve health and medicine. Many medical treatments have been made possible by animal testing, including cancer and HIV drugs, insulin, antibiotics, vaccines and many more.

2. Improves human health:

It is for this reason that animal testing is considered vital for improving human health and it is also why the scientific community and many members of the public support its use. In fact, there are also individuals who are against animal testing for cosmetics but still support animal testing for medicine and the development of new drugs for disease.

3. Helps ensure safety of drugs:

Another important aspect to note is that animal testing helps to ensure the safety of drugs and many other substances humans use or are exposed to regularly. Drugs in particular can carry significant dangers with their use but animal testing allows researchers to initially gauge the safety of drugs prior to commencing trials on humans. This means that human harm is reduced and human lives are saved – not simply from avoidance of the dangers of drugs but because the drugs themselves save lives as well as improve the quality of human life.

4. Alternative methods of testing do not simulate humans in the same way

Scientists typically use animals for testing purposes because they are considered similar to humans. As such, researchers do recognize the limitations and differences but the testing is done on animals because they are thought to be the closest match and best one with regards to applying this data to humans.

Cons or Negatives of Animal Testing

1. Animals are killed or kept in captivity:

In animal testing, countless animals are experimented on and then killed after their use. Others are injured and will still live the remainder of their lives in captivity.

2. Some substances tested, may never be used for anything useful:

The unfortunate aspect is that many of these animals received tests for substances that will never actually see approval or public consumption and use. It is this aspect of animal testing that many view as a major negative against the practice, as it seems that the animal died in vain because no direct benefit to humans occurred.

3. It is very expensive:

Another con on the issue of animal testing is the price. Animal testing generally costs an enormous amount of money, as the animals must be fed, housed, cared for and treated with drugs or a similar experimental substance. On top of that, animal testing may occur more than once and over the course of months, which means that additional costs are incurred. The price of animals themselves must also be factored into the equation. There are companies who breed animals specifically for testing and animals can be purchased through them.

4. Animals and humans are never exactly the same:

There is also the argument that the reaction of a drug in an animal's body is quite different from the reaction in a human. The main criticism here is that some believe animal testing is unreliable. Following on that criticism is the premise that because animals are in an unnatural environment, they will be under stress. Therefore, they won't react to the drugs in the same way compared to their potential reaction in a natural environment. This argument further weakens the validity of animal experimentation.

Personal Choice

While there are numerous pros and cons of animal testing, the ethical aspect overshadows both of them, which means that emotion may be the ultimate determining factor in whether a person believes the benefits of animal testing outweigh the problems associated with the practice.

APPENDIX E

Reading Comprehension Questions

- 1) The text implies that animal testing can be justified because it has so many medical benefits. (True/False)
- 2) It could be understood from the text that everyone is against using animal testing for non-medical benefits. (True/False)
- 3) The text implies that animal testing can be useful because animals are similar to us. (True/False)
- 4) The author would not be happy about leaving ethical issues out of this debate. (True/False)
- 5) The author does not imply that all the drugs that are tested on animals are useful. (True/False)
- 6) The author does not have enough reasons to believe one way or another. (True/False)

APPENDIX F

Initial List of Target Words

Types Found in Base List Three (24 words)

Alternative, approval, aspect, cancer, consumption, criticism, data, ensure, equation, experiment, factor, initially, method, negative, numerous, potential, premise, prior, significant, substance, ultimate, validity, versus, vital

Types Found in Base List Four (4 words)

cons, ethical, gauge, simulate

Types Found in Base List Five (7 words)

antibiotics, in captivity, commence, cosmetics, incur, remainder, vaccines

Types Found in Base List Six (3 words)

insulin, outweigh, in vain

Types Found in Base List Seven (1 word)

overshadow

Types Found in Base List Thirsty first (1 word)

HIV

Non-words

Paniplines, wricety, evidoses, scrandidivist, canimat, liphor, flarrisation, perchants, redaster, lurgled, staveners

APPENDIX G

Vocabulary Knowledge Test

This test measures your general knowledge of vocabulary. For each vocabulary item you are presented with four options. Please circle the closest match in meaning. If you do not know the meaning of the word, choose option (e). If you know a different meaning, write that meaning or translation in option (f). Please do this individually and do not use a dictionary.

1. alternative					
a) attempt	b) access	c) piece	d) another	e) I don't know	f)
2. consumption					
a) illness	b) production	c) induction	d) use	e) I don't know	f)
3. ensure					
a) reject	b) specify	c) perceive	d) confirm	e) I don't know	f)
4. data					
a) option	b) information	c) force	d) area	e) I don't know	f)
5. gauge					
a) optimize	b) derive	c) measure	d) produce	e) I don't know	f)
6. cons					
a) reactions	b) minuses	c) wonders	d) biases	e) I don't know	f)
7. versus					
a) details	b) aspects	c) against	d) towards	e) I don't know	f)
8. in captivity					
a) classified	b) imprisoned	c) shocked	d) estimated	e) I don't know	f)
9. substance					
a) instance	b) recipe	c) persistence	d) material	e) I don't know	f)
10. ethical					
a) legal	b) moral	c) marital	d) illegible	e) I don't know	f)

11. cosmetic					
a) medical	b) plastic	c) domestic	d) decorative	e) I don't know	f)
12. aspect					
a) unknown	b) critical	c) superficial	d) feature	e) I don't know	f)
13. method					
a) option	b) suggestion	c) benefit	d) way	e) I don't know	f)
14. incur					
a) suffer	b) limit	c) insist	d) exhibit	e) I don't know	f)
15. ultimate					
a) warning	b) maximal	c) fruitful	d) final	e) I don't know	f)
16. criticism					
a) strength	b) solution	c) blame	d) growth	e) I don't know	f)
17. equation					
a) calculation	b) exhibition	c) adoption	d) information	e) I don't know	f)
18. experiment					
a) extract	b) test	c) conclude	d) calibrate	e) I don't know	f)
19. initially					
a) actually	b) critically	c) originally	d) rationally	e) I don't know	f)
20. significant					
a) important	b) privileged	c) clear	d) explicit	e) I don't know	f)
21. potential					
a) immediate	b) supposed	c) possible	d) minimal	e) I don't know	f)
22. premise					
a) a pledge	b) a statement	c) an advice	d) a contrast	e) I don't know	f)
23. numerous					

a) foremost	b) heavy	c) countable	d) many	e) I don't know	f)
24. in vain					
a) physical	b) useless	c) useful	d) repetitive	e) I don't know	f)
25. breed					
a) impose	b) incorporate	c) reproduce	d) incline	e) I don't know	f)
26. validity					
a) irrationality	b) cruelty	c) acceptability	d) seniority	e) I don't know	f)
27. factor in					
a) consider	b) build	c) estimate	d) expose	e) I don't know	f)
28. negative					
a) principle	b) question	c) weakness	d) conflicts	e) I don't know	f)
29. commence					
a) express	b) order	c) include	d) begin	e) I don't know	f)
30. overshadow					
a) dominate	b) compare	c) protect	d) discover	e) I don't know	f)
31. approval					
a) dissent	b) support	c) proof	d) critical	e) I don't know	f)
32. expose					
a) recover	b) delete	c) attack	d) uncover	e) I don't know	f)
33. typical					
a) normal	b) personal	c) gradual	d) reciprocal	e) I don't know	f)
34. aid					
a) weaken	b) help	c) create	d) sacrifice	e) I don't know	f)
35. vital					
a) final	b) moral	c) essential	d) lethal	e) I don't know	f)
36. prior					

a) necessary	b) previous	c) serious	d) superior	e) I don't know	f)
37. simulate					
a) provoke	b) irritate	c) expose	d) copy	e) I don't know	f)
38. remainder					
a) attempt	b) special	c) leftovers	d) keep	e) I don't know	f)
39. outweigh					
a) exceed	b) measure	c) increase	d) enlarge	e) I don't know	f)
40. enormous					
a) several	b) huge	c) intense	d) stressful	e) I don't know	f)

APPENDIX H

Language Background Questionnaire

Participant ID #: _____

General Information

1. Age: _____
2. ELC Level:
 - a. EAP (1)
 - b. Level 4 (2)
 - c. Level 3 (3)
 - d. I'm not studying at ELC (4)
3. Year in college: ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior ☐ MA/Ph.D.
4. Major field of study: _____
5. What is/are the language(s) you speak at home? _____
6. What other languages do you speak? _____
7. How long have you been living in the U.S.? _____(years)
_____(months)
8. Have you taken a standardized English proficiency test (e.g., iBT TOEFL, IELTS, TOEIC)?

☐ Yes ☐ No

If **NO**, go to question 9.

If **YES**, fill in the following table. Please list your reading test score(s) for test(s) that contains the reading test section (The most recent first).

Test	Total score	Reading test score

English Learning Background

9. At what age did you start learning English (this can include studying English in school)?

10. How long have you been studying English? _____(years)

11. In which contexts/situations did you study English? Check all that apply.

- ☐ At home (from parents, caregivers)
- ☐ At school (Primary, secondary, high school)
- ☐ At private institutions
- ☐ After immigrating to an English-speaking country
- ☐ At language courses during my study abroad in an English-speaking country
- ☐ Other (specify): _____

12. Please rate on a scale of 1-6 your current ability on English reading, writing, and listening (circle the number below).

(1= *beginner*; 2= *pre-intermediate*; 3= *intermediate*; 4= *upper-intermediate*; 5=

advanced; 6= *native-like*)

Reading	Writing	Speaking	Listening
1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6

13. How much do you know about the topic of animal testing?

I don't know anything 0 ----- 1-----2-----3-----4-----5-----6-----7-----8-----9 I know a lot

14. Is there anything else we should know about you or how you experienced the experiment?

THANK YOU!

APPENDIX J

Task Instructions

General Instructions:

A group of scholars at some North-American universities have decided to put to open discussion the topic of animal testing. They have asked many scientists to give their opinions. They are also interested in the opinions of American and international students on this topic. The following text includes the arguments for and against animal testing. Please read the text, answer the True/False questions, and then write your own opinions about animal testing on the blank page that will appear on the screen. You should indicate if you agree or disagree with animal testing and explain your reasons. You can use the dictionary sheet for this activity. You can also take notes on the blank sheet.

Loss-Framed Instructions at the outset of the experiment:

Thank you for participating in this study. The study includes three sections. In Section A, you will complete a background questionnaire and an event reaction questionnaire. In Section B, you will read an article about animal testing, answer some questions, and then write your opinion on the subject of animal testing based on the article. You will finish the study in Section C by completing some questionnaires and forms. You are starting the study with 100 points. Every time you get an answer wrong, you will lose points. If you maintain at least 75 points by the end of all the tasks, your name will be put on a raffle list for three \$100 Amazon Gift Cards. However, if you lose more than 25 points, your name will be deleted from the list for the raffle.

Loss-Framed Instructions before reading: Now please read the article and answer the 10 True/False questions, each worth 3 points. Your current score is 100. Remember you must not lose more than 25 points to remain in the list for the three \$100 Amazon Gift Cards. You must therefore maintain at least 75 points out of your current 100 points. Be careful!

Feedback on reading comprehension questions:

Your performance on the reading comprehension questions:

Wrong responses: 3

Points lost: 9

Not bad at all!

Right before the writing task:

Now please write an essay describing your opinion about animal testing to the people who want to make a decision about this subject. You will lose points for bad reasoning and bad writing quality. You will also lose points for copying sentences. This section is worth 70 points. Limit your essay to 1000 words. You have 30 minutes. Your current score is 91 points. You will be eliminated from the list for the \$100 Amazon Gift Cards if you lose more than 16 points from now on. Be careful not to lose too many points! Start writing:

Gain-Framed Instructions at the outset of the experiment:

Thank you for participating in this study. The study includes three sections. In Section A, you will complete a background questionnaire and an event reaction questionnaire. In Section B, you

will read an article about animal testing, answer some questions, and then write your opinion on the subject of animal testing based on the article. You will finish the study in Section C by completing some questionnaires and forms. You are starting the study with 0 points. Every time you get an answer right, you will gain points. If you gain at least 75 points by the end of all the tasks, your name will be put on a raffle list for three \$100 Amazon Gift Cards. However, if you do not achieve at least 75 points, your name will be deleted from the list for the raffle.

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Gain-Framed Instructions before reading:

Now please read the article and answer the 10 True/False questions. Each question is worth 3 points (total 30 points). Your current score is '0'. Remember you must gain at least 75 points by the end of the study to be entered in the raffle for three \$100 Amazon Gift Cards.

Feedback on reading comprehension questions:

Your performance on the reading comprehension questions:

Correct responses: 7

Points gained: 21

Good job so far!

Right before the writing task:

Now please write an essay describing your opinion about animal testing to the people who want to make a decision about this subject. You will gain points for good reasoning and good writing quality. You will not gain any points for copying sentences. This section is worth 70 points.

Limit your essay to 1000 words. You have 40 minutes. Your current score is 21 points. Your name will be put on the list for the three \$100 Amazon Gift Cards if you get 54 more points. It's time to win more points! Start writing:

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