

The Experience of the Psychological State of Flow: The Relationship between Flow and Undergraduate Reading in English as a Foreign Language

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As a fundamental concept in Flow Theory, flow experience is characterized by a balance between challenge and skills. Together with intense focus, control, and interest, these experiences lead to enhanced performance on a given task. Only in the last few years have teachers and researchers begun to test the relevance of flow experiences to second language acquisition. Whether, to what extent, and with what effects undergraduate students learning English as a foreign language (EFL) also experience flow is yet unknown. The purpose of the present study was to examine possible flow experiences perceived by undergraduate EFL students while reading different texts in English. A secondary aim of the study was to examine possible associations between flow experiences and reading comprehension ability. A sample of two EFL reading classes including 54 sophomore learners (40 women and 14 men) with the age range of 19 to 22 years participated and provided the necessary data on flow experiences on a flow perception instrument. Their on-task flow experience was measured through a standard flow perceptions questionnaire (The FPQ) administered immediately after the completion of each reading task. To complement this data, selected participants also provided follow-up interview data on reasons for not experiencing in reading. The analyses of reported flow experiences indicated that the learners did experience some levels of flow during the performance of all reading tasks. Mean reading comprehension scores were significantly associated with scores on perceived on-task flow experiences. The findings imply that, in optimally balanced design and teaching of reading tasks, helping students to read with flow will arouse their interest in what they read and ultimately lead to more successful reading comprehension in English as a foreign language.

Keywords: flow Theory, EFL reading, English as a foreign language, teaching reading, reading comprehension.

As a powerful theory in psychology, Csikszentmihalyi's flow theory of human performance (Csikszentmihalyi, 1975, 1990, 1997) revolves around the complex interplay of many dimensions of human behavior including a) the balance between the difficulty of an activity and an individual's ability level, b) clear objectives of the activity, c) timely feedback for the performance of the activity, d) the harmony of action and awareness, e) focused concentration on the activity, f) decreased self-consciousness during the performance of the activity, g) the perception of control of the activity at hand, and h) decreased awareness of the passage of time while doing the activity.

The central concept of Flow Theory, 'flow', was described by Csikszentmihalyi (1990) as the state in which people are so intensely involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it. Whether people performing tasks develop anxiety for the magnitude of their challenges or they feel bored for the high levels of their skills is a subjective experience that is the function of two variables: the perceived challenges of the task at hand and the perceived skills that they possess. In the postulated Flow Theory, there are other variables that contribute to flow experiences such as an individual's intense focus, control, and interest that collectively determine conditions which may lead to optimal learning.

In this theory, one of the well-known theories of human intrinsic motivation, skill and challenge are two central variables and the balance between the two is one of the first and most important dimensions of human performance. This dimension of the theory is based on the relationship between challenges presented to people by given tasks, on the one hand, and skills needed to meet those challenges on the other (Csikszentmihalyi, 1990, 1997). In the description of the skill-challenge relationship, the theory explains different psychological states that people can experience as variations occur in their level of skills and the level of challenges they need to meet with those skills. As the balance changes

between people's skill levels, on the one hand, and the challenges of a task, on the other hand, they can experience anxiety, boredom, or flow in the performance of that task. An optimum skill-challenge balance is the central theme of the theory which is the most important precondition to experiencing flow (Csikszentmihalyi & Csikszentmihalyi, 1988; Hektner & Csikszentmihalyi, 1996; Shernoff, Csikszentmihalyi, Schneider & Shernoff, 2003; Whalen, 1997). This implies that learners need to continually face new challenges as their skills increase and that they need to develop higher skills to meet increasing levels of challenge.

The learning of a second language and the performance of activities designed for this purpose are complicated and arduous tasks, during which motivating learners, sustaining motivation, reducing anxiety, avoiding boredom, and generating flow become the key determiners of success. Motivated task engagement in second language learning can improve performance (Dornyei, 2005) and can enable learners to overcome both boredom and anxiety resulting from imbalance in the difficulty levels of learning tasks. This paper, therefore acknowledges that flow theory provides a further lens through which to consider second language learning and to explore learner disposition towards language learning. This is to say, the theoretical constructs of flow theory in psychology can inform second language learning not at linguistic but at pedagogical dimensions.

So far, flow theory has not been a very familiar one in research on teaching and learning English as a foreign language and little research has been carried out on the balance between learners' skills and the level of challenges faced by them in performing tasks in learning a language. The experience of flow as explained in the theory has not, for example, been tested in relation to listening, speaking, writing, and reading comprehension tasks that comprise a great portion of language learning activities. It is not, therefore, yet known whether, to what extent, and with what effects, learners of English as a foreign language experience flow in task performance in their reading, writing, listening, and speaking

activities. This has been the case in spite of the fact that flow theory has been claimed (e.g. Egbert, 2003) to provide an interesting platform for the research study of many aspects of second language acquisition including learning English as a foreign language.

Learners who read English as a foreign language are of heterogeneous levels of English proficiency and they are presented with texts of different difficulty levels. This implies that the idea of skill-challenge balance proposed in flow theory is relevant to reading in English as a foreign language. English texts of various genres (e.g. narrative, expository, and descriptive texts) sampled for classroom use represent different levels of challenge to the learners who accordingly requires different levels of skills to meet. The rationale for this study is that reading teachers and researchers have not shown whether and under what circumstances learners experience flow (as defined in flow theory) when they perform reading comprehension tasks in a second language. What consequences, if any, the possible experience of flow might have for language learning outcomes in this case.

It may sometimes happen that reading tasks used for or by lower-skill EFL learners present high levels of challenge that generate anxiety. High-skill EFL learners might be presented with low-challenge reading tasks that might lead to boredom. It may be the case that the imbalance between challenges and skills in this case has nothing to do with English as a foreign language (EFL) readers' success in learning. Flow studies of the 1980s and the 1990s have shown optimum task performance through flow experience in various domains such as dancing, child-raising, first language reading, Internet surfing, and communicating via computer, and have turned flow into an empirically well confirmed theory (Asakawa, 2004; Csikszentmihalyi & Csikszentmihalyi, 1988; Inghilleri, 1999; Massimini & Delle Fave, 2000; McQuillan & Conde, 1996; Shiefele, & Csikszentmihalyi, 1995).

In a state of peak performance in balanced skill-challenge, people have been shown to perform instances of above activities with a unique sense of

satisfaction of success (e.g. Asakawa, 2004; Csikszentmihalyi & Csikszentmihalyi, 1988; Inghilleri, 1999). However, we do not know whether such flow perceptions and experiences also occur in EFL reading classrooms. Grabe and Stoller (1997) claim that carefully planned activities can possibly lead to flow in language classrooms. Therefore, “If flow does have an impact on language learning, the format of reading texts for language learning should be examined in this light” (Egbert, 2003, p. 504).

This study was designed to examine flow in relation to reading EFL texts by undergraduate learners for the exploration of possible levels of flow perceived during reading texts in English. It also aimed to test possible relationships between the amount of on-task flow experiences reported by learners of English and their success in EFL reading. In addition to the scarcity of research in this domain as a starting point for this work, the rationale also was that if flow experiences are shown to pertain to reading in a second language as well, important implications would follow for EFL reading research and instruction.

Review of the Related Literature

The concept of flow as an optimal task performance experience characterized by an individual’s intense focus, control, interest, and skills-challenge balance (Abbott, 2000; Csikszentmihalyi, 1989,1994, 1996) has been described in the related literature as having different dimensions and occurring under different sets of conditions. Egbert (2003) explained that seven conditions were involved in flow experiences: a perceived skill-challenge balance, intense focus, clearly defined task objectives, immediate feedback, a sense of control, the opinion that time passes quickly, and a lack of self-consciousness.

Some other flow researchers like Marsh and Jackson (1999) stated nine different dimensions for flow experiences: enjoyment, transformation of time, merging of action and awareness, concentration on task at hand, lack of self consciousness, clear goals, unambiguous feedback, sense of

control, and skill-challenge balance. For a general understanding of what these conditions mean, one can visualize a competent musician playing his favorite instrument in a deeply involved sense and imagine his psychological state while performing. What the musician experiences may be experienceable by people who are trying to learn to play the instrument. Researchers have stressed that four of the dimensions of flow (clear goals, unambiguous feedback, sense of control, and skill-challenge balance) are prerequisites to experiencing flow during task performance (Hektner & Csikszentmihalyi, 1996). Skill-challenge balance is also considered as the most significant precondition for the generation of flow (Hektner & Csikszentmihalyi, 1996).

Flow experience in flow theory is recognized by its operational definition which encompasses an optimum balance between challenge and skill (Hektner & Csikszentmihalyi, 1996; Massimini, Csikszentmihalyi & Carli, 1987). The idea in skill-challenge balance is that, in order for an individual to experience flow, the perceived challenges posed by a task must be in balance with the individual's level of skills and that these perceived challenges and the required abilities to tackle them must be at a high level (Massimini & Carli, 1988; Massimini, Csikszentmihalyi & Carli, 1987). Figure 1 is one of the different models of this challenge-skill balance. It illustrates the channel of flow as passing in between anxiety and boredom.

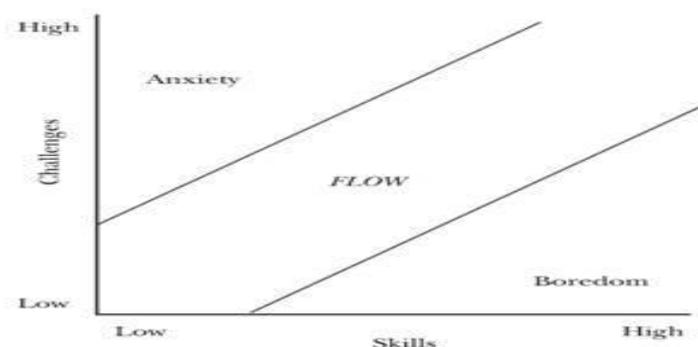


Figure 1. The “Flow Channel”: Where Skills and Challenges Are Balanced (Adopted from Egbert, 2003)

In a terminologically different conceptualization, Whalen (1997) uses the term ‘apathy’ for low challenge and low skill levels in different combinations of challenge level and skill level. The three basic skill-challenge balance conditions in flow theory are as follows:

1. When the level of challenge and the level of skills are balanced, flow happens as shown in the area between the two parallel lines in the figure. Focus on task, control of task and interest in task increase.
2. When the level of challenge is high but the level of skills is low, anxiety increases not allowing for peak performance on the task. Little control of (and interest in) the task may be displayed that reduces focus on task.
3. When the level of challenge is low the level of skills is high, boredom will increase impeding optimum performance of the task.

Research evidence in areas other than EFL has shown that positive correlations exist between flow experience and high challenge-high skill balance and that the imbalance between perceived levels of challenges presented by tasks on the one hand and individual’s skills on the other negatively affect task performance experiences (Montena & Csikszentmihalyi, 1996). It is important to note that flow is dynamic since individuals increase skill levels and face greater challenges with the passage of time if flow is experienced.

In the areas of research on learning EFL, the flow theory has recently been adopted in a few studies language acquisition. Three studies that have examined it in relation to second language acquisition are Schmidt, Boraie, and Kassabgy (1996), Egbert (2003), and Schmidt and Savage (1992). (No relevant local studies could be located in the literature review). These studies determine that different degrees of flow exist in the second language learning and that steps can be taken in this conceptual framework to further explore and to enhance language teaching and learning. Schmidt and Savage (1992) studied flow experiences in a voluntary English language learning program including 16 Thai English language learners

and reported that flow occurred both within and outside of class. Schmidt, Boraie and Kassabgy (1996) studied Egyptian learners of English and observed that they experienced flow in their learning contexts as well.

According to Egbert (2003), it seems reasonable to suggest that there is a relationship between flow and foreign language learning. Egbert argues that, in foreign language learning, task features and learners' skill levels can influence the individual's psychological state which, in turn, affects task performance. The performance also influences learners' skill levels. Through this study, I suggest that foreign language teaching (especially ELT) is already late in examining and applying the implications of Flow Theory. In Iran, almost now serious published research was located that could explain the relationship between flow and performance on foreign language skills.

Foreign language reading contexts are especially anxiety-provoking; they require learners' intense focus and present tasks that should be focused on preferably with interest. Therefore, I hypothesize that the principles of Flow Theory may apply to ELT reading classes and that research in this area can help teachers provide an optimal skill-challenge balance with purposeful opportunities for intense concentration, for learner interest and enjoyment, and for the necessary feedback. Related research literature (see Egbert, 2003) has shown that flow is experienced in native language reading and computer work, but there empirical evidence is lacking in the case of EFL reading. There were a few indications in a study by McQuillan and Conde (1996) that a number of participants who claimed had high proficiency in reading in English as nonnative speakers did report flow in reading in English.

Many ideas in flow theory seem similar to the ones adhered to in research on second language acquisition. In Table 1 below, the researcher summarized some of the ideas in flow theory and some ideas from research on language learning to draw attention to similarities. A thorough examination of these possible similarities is beyond the scope of the

present work and can be the preoccupation of a review article on the theory.

Table 1
Comparison of Ideas in Flow Theory and Research on Language Learning

Ideas in flow theory	Ideas in language learning research
Flow occurs when there is skill-challenge balance.	With interesting comprehensible input the learner may 'forget' that the message is encoded in a foreign language (Krashen, 1982)
Tasks have specific goals.	Tasks are stand-alone meaning-based activities with specific purposes (Bygate, Skehan, & Swain, 2001).
Challenge and skill both increase over time.	Language teachers should use "progressively complex tasks to push learner output" (Robinson, 1997, p. 5).
Focus on task is necessary.	Noticing principle calls for some degrees of conscious attention (Schmidt, 1995)
Meaningful feedback increases flow.	Feedback is key issue in learning to write in EFL
Interest in task increases flow.	Affect contributes to understanding input (Gass, 1997).

According to Krashen (1982), if language learners are given too difficult or too easy input, their learning will not be optimal, which is another way of stressing skill-challenge balance. Goal-orientedness of activities is underscored in both flow theory and in second language learning. Some degrees of attention and focus on task (Schmidt, 1995) are emphasized in both flow theory and in language learning research. Therefore, it seems that ideas are not far apart and probably not

incompatible. The number of studies of flow in English language teaching (ELT) research is, so far, too low to allow for the illustration of the general trend of past studies. It is also very difficult to generalize results or to compare them until further research evidence in this area is presented.

The Study

This study attempted to measure undergraduate learners' reported flow experiences while reading texts in English. During their studies, learners of English as a foreign language at this level read numerous texts that can include narrative, expository, descriptive, and other types of texts. In this study, the experience of flow was examined during reading performance on three different texts to address this variety within practical confines. The reading tasks (Appendix B) included a more descriptive text used to present a word picture of something, a more narrative text used to illustrate factual or historical events and a more expository text used to express cause-effect relationships (See Conlin, 1994 for definitions). The study involved the measurement of learner-perceived flow through a 'flow perception questionnaire' administered immediately after each reading experience. This data was complemented with follow-up interview data for further elaboration. The following research questions guided the study:

- How much flow do university-level learners of English as a foreign language experience while reading texts in English?
- Is the amount of perceived flow experience significantly associated with reading comprehension scores?

Participants

A total number of 54 sophomore English as a foreign language (EFL) learners from two randomly selected intact classes in the undergraduate program on English Translation at a state university in central Iran provided data for this study during the second semester of 2009 while attending their usual EFL reading classes. The participants included 40 (74.1%) female and 14 (25.1%) male learners. (The targeted

undergraduate learner population is presently female-dominated and that is why there are more female participants). The learners were in their second year of undergraduate studies. Of the 54 participants, 42 (77.8%) had experienced learning English in private language schools in addition to their formal education before entering the university, an indication of their intrinsic motivation for EFL learning. No participant reported a lack of interest in EFL reading. The participants had practiced basic EFL literacy as part of their national high school curriculum and found their way into undergraduate programs in English through a nation-wide matriculation exam that screens applicants for admission to higher education. Their reading comprehension scores on the tasks performed for this study was assigned by averaging their scores on 20 multiple-choice comprehension questions for each of the three tasks and the their recorded institutional reading comprehension scores. The average EFL reading comprehension scores ranged from 11 to 17 out of 20. It should be noted that the main concern in this study was not the participants' English language proficiency but reading comprehension ability and flow experience while reading.

Instruments

Flow Theory introduces its unique method for the measurement of flow experiences. Since flow experiences vary during various activities, the theory has developed an Experience Sampling Form (ESF) that measures levels of motivation, cognition, and affect in different experiences with Likert-type items and contrasting semantic items (e.g., happy–sad, excited–bored, and sociable–lonely) the responses to which are categorized into above or below average groups by level of challenge and skill (Csikszentmihalyi & Larson, 1987). Based on this, Egbert (2003) constructed a questionnaire (Appendix A) that was reused in this study to measure on-task flow experiences for three reading tasks (Appendix B). Permission to use the instrument was granted by the developer through email. The questionnaire was a 7-point Likert-scale instrument on which

the respondents indicated their degrees of agreement or disagreement with each statement by marking their appropriate choice on a scale from 7 (strongly agree) to 1 (strongly disagree). It consisted of a total number of 14 items reflecting the four dimensions of flow: interest, control, focus, and challenge-skill balance as explained by the developer (Egbert, 2003) and as confirmed by the panel of experts. The instrument was pilot-tested with a group of 22 undergraduate EFL learners to make sure the items and instructions were clear and comprehensible. The Cronbach's alpha reliability for the instrument was 0.87. In addition to the confirmation by the developer, positive views on the validity of the instrument also came from a panel of three EFL experts.

The participants reported their perceived flow experiences on this flow perception questionnaire three times. After reading each text and immediately before going on to the related 20 multiple-choice reading comprehension questions, they reported their perceived on-task flow experiences on the questionnaire. In scoring, the negative wording used for some items were also noted. Following Egbert (2003), the participants whose total flow score on a task was 70 or above on any administration of this survey (equivalent to an average of at least 5 for 14 items indicating agree on all questions) were regarded to have experienced flow while reading.

Procedure

The participants were members of two parallel EFL reading classes taught by the researcher and data were collected during their regular class hours that met once a week on the same day. In the first data collection session in the two reading classes, a demographic form was handed out to the learners to collect basic data on the number of reading courses studied, informal EFL learning experiences, and interest in reading. The selected reading texts were used in the classes as reading activities in two-week intervals. Immediately after performing each of the reading tasks assigned, the participants were asked to mark the 14-item 7-point Likert-scale flow

perception questionnaire to provide information about their experience of flow during that specific reading experience. They then demonstrated their comprehension of the text by answering multiple-choice comprehension questions. Table 2 shows the steps taken for data collection:

Table 2
Data Collection Schedule

Sessions	Group of participants	Reading Tasks	Data collected
Session1	Learners in class A	Usual activities	Demographic data
Session2	Learners in class B	Usual activities	Demographic data
Session3		Text A	Flow for reading task 1
Session4	Learners in class A	Text B	Flow for reading task 2
Session5		Text C	Flow for reading task 3
Session6		Text A	Flow for reading task 1
Session7	Learners in class B	Text B	Flow for reading task 2
Session8		Text C	Flow for reading task 3
Session9	5 No-flow learners in class A	Usual activities	Interview
Session10	5 No-flow learners in class B	Usual activities	Interview

Responses collected through the multiple administration of the flow perception questionnaire were entered into an SPSS database to allow for quantitative analyses of flow experiences during the three reading tasks. First, individual responses to all the 14 items on each administration were entered for each student. Then the averages of the responses for each task were calculated and entered for each student so that each participant had an average flow score on each of the three tasks. Finally, averages of flow scores on the three reading activities were added up and combined for all

students so that a total flow experience score was recorded for each student. This data provided the raw material for the quantitative analyses of flow in EFL reading. To better understand the participants' experience of flow during reading, the participants who were found not to have experienced flow in the quantitative phase were given a written interview question to provide possible "reasons for not being totally absorbed in reading" during these three tasks.

Results

How Much Flow Did EFL Readers in the Study Experience?

Descriptive statistics on all flow scores for the three reading tasks indicated that no one scored a mean on-task flow of near either of the two extremes of possible means of 1 and 7 on the flow perception questionnaire. The minimum average flow score was 2.64 for the narrative reading task and the maximum average was 6.86 for the expository reading task. (This is the average of responses to 14 items on a 7-point Likert scale). The mean flow scores were 4 or above out of 7 for all texts. Table 3 summarizes the flow experience perception statistics and the number of participants who did and did not report experiencing flow during performing the reading tasks.

Table 3
Flow Experience for 54 Undergraduates on Three EFL Reading Tasks

Reading Tasks	Min	Max	Mean	SD	No flow^a	Flow^b
Text A (Expository)	3.50	6.86	4.54	.81	42(77.8%)	12(22.2%)
Text B Descriptive	4.00	6.71	4.70	.77	40(74.1%)	14(25.9%)
Text C Narrative	2.64	5.00	4.00	.52	52(96.3%)	2(3.7%)

^a Number of learners with a mean of <5 signifying almost no experience of flow.

^b Number of learners with a mean of ≥ 5 indicating the experience of flow.

The occurrence of flow experience was observed for 22.2% of the participants while reading the expository text, 25.9% while reading the

descriptive text, and only 3.7% while reading the narrative text. This is another way of saying that only 2 of the participants received a mean score of 5 or above on the flow perception survey administered immediately after the narrative reading experience. Moreover, the largest number of learners (25.9%) experienced on-task flow while reading the descriptive text. In response to the first research question the findings summarized in Table 3 indicated that most undergraduate learners who read texts in English as a foreign language experienced little flow (a mean of less than five on the instrument); whereas, the three tasks were truly flow-generating for only 22.2%, 25.9%, and 3.7% of the participants on the three tasks respectively. It is worth reiterating here that flow in EFL reading describes the experience during which the EFL reader is experiencing the joy of success in reading comprehension without even thinking that it is in a foreign language. It was observed in the collected data that a large number of mean scores were between 4 and 5 which can be another indication that flow can and does happen in EFL reading classes even though its magnitude may vary under different conditions.

The results of the coding and classifying of responses to the follow-up interview question with 10 of the participants who reported the lowest total flow experience helped the researcher to see the bigger picture for the quantitative results shown in Table 3. The participants, who did not experience flow, were asked to explain why they could not "be totally absorbed" in reading during the performance of these tasks. The content analyses of their transcribed responses and the identification of the main themes in the transcripts indicated four main categories of reasons blocking them from experiencing flow:

- a) Concern with linguistics aspects of the text that seemed above their level of knowledge (e.g. there were too many difficult words in there, the grammar in some parts was complex, sentence links could not be understood, etc.,
- b) Recurrent returns to earlier parts of the text (e.g. I had to go back to the earlier sections of the text to understand it),

c) Thinking about time and the following activities (e.g. I always feel I will be the last one to finish any assigned reading, and

d) Lack of confidence in their ability to catch up with the demands of the task (e.g. I think I need to go back and repeat some prerequisite courses).

In addition to the example of themes inserted above, the learners also sometimes compared the experience with reading in their mother tongue, Persian. One interviewee explained her reasons for “not being totally absorbed” in reading using this analogy: “... *if you mean in the way I read Farsi novels, poems in Farsi that I like, or newspapers, I should say no....It happens very seldom or not at all for me when reading English texts at the university. I think I still need to read children’s stories....Maybe...*”

Is Flow Experience Correlated with Reading Comprehension Ability?

Since it is hypothesized in flow theory that flow provides conditions for peak performance in human performance, a directional hypothesis corresponding to the second research question was whether a positive correlation existed between the flow magnitudes perceived by undergraduate EFL learners during reading, on the one hand, and their reading comprehension scores, on the other. To test this possible relationship, the significance of the correlation was statistically tested and the results were summarized in Table 4. The analyses revealed that there was a strong positive relationship between the total amount of flow reported for all EFL reading tasks and the participants’ average EFL reading comprehension scores derived from a composite of their comprehension scores on all the task and their institutional comprehension score records (total $r = 0.885$ $p \leq 0.05$). Moreover, all individual correlations between perceived flow scores on separate reading tasks and EFL reading comprehension scores were moderate to high significant correlations as well (Table 4).

Table 4
Correlations between Flow and Reading Comprehension Scores

Type of Reading	Mean	SD	Correlation with reading scores	Sig. (one-tailed)
Expository	4.54	.81	.667**	.000
Descriptive	4.70	.77	.404**	.002
Narrative	3.99	.52	.386**	.004
Total Flow	13.23	1.19	.885**	.000

** Correlation is significant at the 0.01 level (one-tailed).

To sum up, the analyses carried out on the data revealed two main findings. First, flow experience, as defined in flow theory and as operationalized here, does happen in undergraduate EFL reading classes. For the undergraduate EFL learner sampled in this study, its magnitude, however, may not be as great as what has been suggested in the literature in the case of native language reading experiences. In all reading tasks, more than 74 percent (Table 3) of the participating readers were outside the flow channel (Figure 1) struggling with the texts within the borders of either anxiety (high challenge) or less probably boredom (high skill). 2 to 14 percent were identified as doing the reading with the joyful experience of flow. Second, mean EFL reading comprehension scores were positively correlated with the amount of flow experienced (reported) during EFL reading task performance with better skill-challenge balance leading to higher scores.

Discussion and Conclusions

The results of the present study offered confirmatory evidence that flow theory may be applicable to second language learning situations and especially to EFL reading in this case. The study provided some preliminary empirical support for the idea that undergraduate EFL reading classes can also help learners generate flow and that students do not have to struggle with what they need to read outside the flow channel described

in flow theory. The experience of flow can happen especially when learners are engaged in reading descriptive texts. More descriptive texts can therefore be frequently used with learners of lower reading ability level to involve them in joyful reading. Further research on native language reading that EFL learners do for pleasure and that presents appropriate challenge to them can be expected to produce much greater magnitudes of flow. Krashen's (1982) idea of comprehensible input (I+1) and suggestopedic principles of relaxed language learning experiences (Richards & Rodgers, 2001) also imply that EFL reading experiences can be flow-generating. In other words, based on the observations of flow in this study, EFL reading research can look for ways of balancing skills and challenges as learner proceed from one stage of learning to the next, so that they can experience the optimal experience of flow at every stage. Research can also examine a greater variety of tasks and combine task type and task complexity levels in more elaborate research designs to explore possible effects of such variables.

EFL learning is complex and can produce high levels of anxiety or boredom in extremes of skill-challenge imbalance. This could have been one of the reasons why many participants of this study did not experience much flow in reading. The findings corroborate the results of the Wong and Csikszentmihalyi (1991) study that presents educational settings as not much flow generating. Moreover, the study shows that flow should not be seen as an alien in the EFL reading classroom. If learning activities emotionally arouse EFL learners and optimally involve them in balanced tasks, they can be much more flow-generating. The study results imply that more advanced EFL learners can be encouraged to seek more challenging tasks for comprehension in their pursuit of experiencing flow during reading and that less experienced readers can be helped to examine the skills that they think will help them experience flow while reading. The level of flow experienced by a highly skilled musician driven away by the joy of flow experiences may be too idealistic for the EFL reading classroom, but this study suggests that steps can be taken by the careful

choice of tasks geared to the flow needs of the learners to increase flow in EFL readers. The results of this study also strengthen the limited number of studies investigating flow in foreign language settings (e.g. Egbert, 2003; Schmidt, Boraie & Kassabgy; 1996; Schmidt & Savage, 1992) extending their scope to undergraduate EFL reading situations in particular.

Comparisons made between flow perceptions during different reading experiences provide support for the argument that flow is an experiential state that varies across tasks and activities as well as across people. Specifically, the results confirm Adlai-Gail's (1994) contention that certain people tend to experience flow consistently more often than others as in this study a few participants experienced flow during all the three EFL reading experiences. Sometimes, EFL readers are presented with reading challenges beyond their skills. It follows from the findings of the study that teachers of English should do their best to enhance flow experience for their students by occasionally assigning extensive EFL reading activities that conform to the principles of flow theory. According to Csikszentmihalyi (2008) "a teacher who understands the conditions that make people want to learn—want to read, write and do sums—is in a position to turn these activities into flow experiences" (p. 2). Since learners rarely experience flow in educational settings including EFL classes (see Wong & Csikszentmihalyi, 1991), EFL reading teachers can choose to help their learners find the right balance of challenge and skills in their activities to experience flow more regularly. This can, as the theory has it, arouse their interest, allow them to exert more control, ease their focus, and provide an optimum skills-challenge balance.

Researchers and instructors in EFL have long tried to make language learning and teaching easy and pleasant (e.g. by proposing suggestopedic methods or stress reduction techniques). In doing so, flow theory can possibly offer them a useful conceptual framework to help their learners become more intrinsically motivated to engage in learning (Hektner & Csikszentmihalyi, 1996). If EFL reading becomes a flow-generating

experience for university EFL learners, they might plan to devote less time to passive or unproductive leisure activities. The application of the theory to EFL teaching and Learning can also be a promising area for further research. Future studies can investigate flow in listening, writing, and speaking and explore the social and pedagogical conditions that can enhance flow experiences in EFL classroom. Further studies of flow in EFL reading can also try to investigate learner behavior on other types of tasks with controlled complexity levels, not explored here for scope limitations, and at other much wider ranges of EFL proficiency and EFL reading ability levels. The study of flow in native language reading activities across disciplines and genres can also come up with illuminating results.

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Appendix A
Flow Perceptions Questionnaire

Adopted from Egbert (2003)

Participants responded to each of the following items on a scale from 1 (Strongly disagree) to 7 (Strongly agree) immediately after the completion of each of the three tasks. Items 3, 4, 10 and 12 were reverse-scored.

1. This task excited my curiosity.
2. This task was interesting in itself.
3. I felt that I had no control over what was happening during this task.
4. When doing this task I was aware of distractions.
5. This task made me curious.
6. This task was fun for me.
7. I would do this task again.
8. This task allowed me to control what I was doing.
9. When doing this task, I was totally absorbed in what I was doing.
10. This task bored me.
11. During this task, I could make decisions about what to study, how to study it, and/or with whom to study.
12. When doing this task I thought about other things.
13. This task aroused my imagination.
14. I would do this task even if it were not required.

Appendix B
The Narrative, Descriptive, and Expository Reading Texts
(Source: Conlin, 1994)

A. Expository: Why Eat Junk Food?

We crunch and chew our way through vast quantities of snacks and confectionaries and relieve our thirst with multicolored, flavored soft drinks, with and without calories, for two basic reasons. The first is simple. The food tastes good and we enjoy the sensation of eating it. Second, we associate these foods, often without being aware of it, with the highly pleasurable experiences depicted in the advertisements used to promote their sale. Current television advertisements demonstrate this point. People turn from grumpiness to euphoria after crunching a corn chip. Others water ski into the sunset with their loved ones while drinking a popular soft drink. People entertain on the patio with friends, cook over campfires without mosquitoes, or go to carnivals with granddad munching away at the latest candy or snack food. The people portrayed in these scenarios are all healthy, vigorous, and good looking. One wonders how popular the food they convince us to eat would be if they would crunch or drink away while complaining about low back pain or clogged sinuses.

B. Descriptive: The Quiet Odyssey

In Los Angeles in 1950 we found many minority women working in sewing factories making garments of every sort for fifty cents an hour, eight hours a day. After several years, the wage went up to one dollar an hour. The sewing rooms were dirty and very dusty, with lint and dust filling the air like fog. The rooms had no air conditioning and no windows. The dust settling on the heads of the women made their hair look gray by the end of the day. The loud power-driven sewing machines working at full speed all at once made a thundering noise that deafened the ear. It was a frightful thing to listen to for eight hours every weekday. I tried it once for several months and the experience made me admire all those women who endured it for years in order to send their children to colleges and universities. I have seen those children return home as doctors, lawyers, and engineers, thus rewarding their parents for their sacrifices.

C. Narrative: Grandma's Last Day

The morning, Grandma worked on a quilt for a helpful neighbor who looked in on her often. Sometime she telephoned to a friend at a ranch, asking to be brought a fresh supply of eggs. In the afternoon there was a

funeral: Grandma did not go to the rites, but at the coffee hour held afterward at the Senior Citizens Club she helped with the serving and chatted with friends. Someone had driven her home, where she had her supper alone. In the evening, there was to be the weekly card party back at the Senior Citizens Club, and she phoned to ask for a ride with her best friend in the group. They had nearly arrived at the card party when, in the midst of something joked by one or the other of them, Grandma cut off in the middle of a chuckle and slumped, chin onto chest. The friend whirled the car to the hospital a block away. A doctor instantly was trying to thump a heartbeat-rhythm into Grandma, but could work no flicker of response from her. She had gone from life precisely as she had lived it, with abruptness and at full pace.

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