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Oral communication strategies and multiple intelligences: Exploring the relationship

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Abstract

This study explored the relationship between the use of oral communication strategies (OCSs) and multiple intelligence(s) (MI) of Iranian EFL learners. In addition, it investigated what type of intelligence(s) could act as the best predictor of OCSs. To these ends, Nakatani's (2006) Oral Communication Strategy Inventory and Armstrong's (1994) MI Inventory were used to collect data from 120 homogenous intermediate EFL participants selected from a larger sample at Shahrekord and Arak universities. The data were analyzed descriptively and inferentially using correlation and multiple regression procedures. Results showed that among strategies for coping with speaking problems, the participants perceived themselves higher at 'message-abandonment', 'nonverbal', and 'message reduction and alteration' strategies, and among strategies for coping with listening problems, they perceived themselves higher at 'word-oriented' and 'nonverbal' strategies. Also, logical intelligence was the leading intelligence type and musical intelligence was the least common type of intelligence. Moreover, there was a positive relationship between spatial intelligence and OCSs, with the spatial intelligence as the best predictor of the use of OCSs.

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1. Introduction

After a prolonged emphasis on teachers and teaching over the last two decades, the tide has turned, and attention has been paid to learners and learning (Kumaravadivelu, 2006). Parallel to such a shift of focus, attempts have been made to further explore strategies learners use to learn new linguistic data. These strategies, known as learning strategies, are behaviors and thoughts used by learners to improve the learning process and influence the decoding process (Weinstein & Mayer, 1983). They involve "an ability to monitor the learning situation and respond accordingly" (Williams & Burden, 1997, p. 145). Vann and Abraham (1990) hold that the difference between successful and less successful language learners is learners' ability in using strategies in their own learning situations. In addition, given that an oral command of a foreign/second language (L2) can be the main focus of language learning in many places in the world, some researchers (e.g. Bialystok, 1990; Dörnyei, 1995) assert that L2 learners can improve oral communicative proficiency by developing strategies in communication that enable them to compensate for their target language deficiency. Communication strategies (CSs) are "potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular communicative goal" (Faerch & Kasper, 1983, p. 36). Helping L2 speakers to handle communication breakdowns, communication strategies can be useful means for successful communication (Dörnyei, 1995; Dörnyei & Scott, 1997). In fact, as Bialystok (1990) states, "communication strategies are an undeniable event of language use, their existence is a reliably documented aspect of communication, and their role in second language communication seems particularly salient" (p. 116).

Realizing the fact that the knowledge required to use language includes more than the knowledge of grammatical rules and language skills, some researchers (e.g. Canale & Swain, 1979; Dörnyei, 1995; Dörnyei & Scott, 1997; Faucette, 2001; Nakatani,

2010) have tried to find out viable ways to help learners communicate effectively in L2. But the point is that there are other variables which can affect communicative ability of L2 learners. Among them, learners' intelligence has taken on an increasing importance in L2 learning. It is important to know how being intelligent will help language learners establish an effective communication.

Just until 1980s, among the sources which addressed individual differences in L2 learners, little reference was made to this learner variable (i.e. intelligence) and, as Akbari and Hosseini (2008) state, "if intelligence was mentioned, it was, in the majority of cases to refute its existence and argue against its importance" (pp. 142-143). However, in 1980s, Gardner (1983) proposed a model/theory of intelligence, labeled as *Multiple Intelligence*(s) (*MI*), which expanded the traditional view of cognitive intelligence. In this more recent theory, *intelligenc*e is defined as "the ability to solve problems, or to create products, that are valued within one or more cultural settings" (Gardner, 2011, p. xxviii). MI theory has viewed intelligence as a combination of different components, more or less independent of one another, and as such, Gardner initially postulated seven intelligences: linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and naturalist. The application of MI can be influential since it can "affect students' behavior in the classroom simply by creating an environment where individual needs are recognized and attended to throughout the school day" (Armstrong, 2009, p. 120). It "provides a context for envisioning positive channels through which students can learn to deal with their disabilities" (Armstrong, 2000, p. 105).

As Gardner (1993) states, if we can identify learners' different strengths (i.e. dominant intelligences), it is possible to accommodate different learners' capabilities more successfully and use effective strategies based on their orientation to learning. Moreover, effective CS use or successful oral communication in L2 requires using a degree of reaching beyond the self to understand the other person's affective and cognitive states, which may relate to his or her individual intelligences. In addition, interaction in a class

where diversity exists can be influenced by the individual characteristics of listeners and speakers. Thus, it is potentially worth shedding some light on the relationship of MI with oral communication strategies and recognizing its contribution to this kind of strategy use in an L2 context, given that there is some evidence (e.g. Dörnyei, 2005, Haley, 2004; Huang & Van Naerssen, 1987, Oxford, Park-Oh, Ito, & Sumrall, 1993; Paribakht, 1985) that both strategy use and MI can result in differential outcomes in L2 learning. Investigating the relationship between communication tactics by L2 speakers and MI, and the extent to which MI can contribute to oral communication strategies can help us see which aspects of individual intelligences can correspond to the strategies taken by L2 speakers or listeners and how much mapping the two can be useful in problem solving in L2 learning.

2. Literature Review

2.1 (Oral) Communication Strategies

Selinker (1972) initially proposed the concept of *communication strategy*, which he defined as a by-product of a learner's attempt to express meaning in spontaneous speech through a limited target language system. Since then, various definitions and taxonomies of CSs have been proposed by many researchers (e.g. Bialystok, 1990; Faerch & Kasper, 1984; Tarone, 1980). However, more recently, Nakatani (2006) has used the term oral communication strategies (OCSs) instead of CSs to refer to "strategic behaviors that learners use when facing communication problems during interactional tasks" (p. 152). That is to say, the term is used to "highlight interlocutors' negotiation behavior for coping with communication breakdowns and their use of communication enhancers" (p. 118). Nakatani has described OCSs in terms of two broad categories: strategies for coping with speaking problems and strategies for coping with listening problems. The first one consists of eight subcategories of *social affective*, *fluency-oriented*, *negotiation for meaning while speaking*, *accuracy-oriented, message reduction and alternation*, *nonverbal strategies while speaking*, *message abandonment*, and *attempt to think in English*. The second one

consists of seven subcategories of *negotiation for meaning while listening*, *fluency-maintaining*, *scanning*, *getting the gist*, *nonverbal strategies while listening*, *less active listener*, and *word-oriented*.

Since the introduction of CSs or OCSs, which are often used interchangeably in the literature, this concept has been the subject of some investigation in L2 learning. One of the questions to which more empirical research has been devoted is the study of the relationship between the language learners' proficiency and their use of CSs. One the one hand, several studies (e.g. Bialystok, 1983; Li, 2010; Liskin-Gasparro, 1996; Paribakht, 1985; Rost & Ross, 1991) provided evidence of a relationship between the learner's proficiency and their choice of specific CS types or a positive relationship between L2 proficiency level and CS use. On the other hand, some other studies (e.g. Chen, 2009; Poulisse & Schils, 1989; Tuan, 2001) reported no relationship or an inverse relationship between proficiency level and CS use. For instance, Chen (2009), who examines the OSCs used by college English majors in Taiwan, reported no direct relationship between the speaking proficiency and OSCs. In contrast, speaking of the OCS use of students learning English in Taiwan, Li (2010) found that the highly proficient students utilized OCSs more often and relied more on social, negotiation for meaning, and accuracy-oriented strategies than those with mid or low English proficiency. The results of Li's study supported the results of earlier research by Paribakht (1985), Liskin-Gasparro (1996), and Ting and Phan (2008), who reported that CS use correlated with degree of proficiency.

The other line of research in the field of OCs has been the relationship between learning styles and personality with OCs. Littlemore (2001), for instance, related different communication strategy preferences to the L2 learners' holistic/analytic cognitive style dimension. Their research findings showed that holistic students used more CSs that were based on comparison, and analytic students used more strategies that involved focusing on individual features of the target item. Also, Guhlemann (2011) examined the relationship of personality (introversion/extroversion) of L2 Swedish learners with the CS use. Results showed that

extrovert students used more CSs. The above findings and the results from other studies in the field of CSs, are significant, but none of the studies on CSs, to the best knowledge of the present researcher, have addressed a learner-centered theory such as MI, the kernel of which is acknowledging differences between individuals.

Gardner (1983, 1999) has proposed that human brain is composed of different separate modules, or better to say, intelligences which work independently and, to some extent, autonomously one from the other. To Gardner, an intelligence is "a biopsychological potential that can be drawn on for a variety of skills or roles" (Gardner & Traub, 2010, p. 52). Gardner (1983, 1999) assumed eight distinct intelligences:

1. Linguistic/verbal: It refers to the ability to reflect on the use of language in everyday life.
2. Logical/mathematical: It demonstrates the expertise in calculation, reasoning, quantification, complex mathematical/logical operation, inference, and hypothesis testing.
3. Spatial/visual: It includes the capacity for accurate perceptions of visual world.
4. Bodily/kinesthetic: It encompasses the ability to use skillfully one's body for the expression of ideas and feelings.
5. Musical: It refers to the expertise in understanding sounds, rhythms, melodies, and rhymes.
6. Intrapersonal: It includes the knowledge and understanding which one may have about his/her self.
7. Interpersonal: It includes the knowledge and understanding which an individual may possess of other people.
8. Naturalist: It encompasses the recognition and classification of individuals, species, and ecological relationships.

Gardner's MI theory has made it easier to discern a relationship between intelligence and language and, as such, some studies (e.g. Akbari & Hosseini, 2008; Razmjoo, 2008; Razmjoo, Sahragard, & Sadri, 2009; Saricaoğlu & Arikan, 2009) emerged in L2 contexts as regards MI and a number of variables relating to language learning and teaching, including language learning strategy. For instance,

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Akbari and Hosseini (2008) explored the relationship between the language learning strategies and MI among Iranian EFL high school students. They reported significant relationships between the language learning strategy use and MI. The highest correlation was between metacognitive strategy use and almost all intelligence types. Social strategies, on the other hand, had a low positive correlation with interpersonal, intrapersonal, and naturalistic intelligences. Also, interpersonal and interpersonal intelligences had a weak positive correlation with all strategy types. Furthermore, it was found that linguistic, naturalistic, and interpersonal intelligences acted as positive predictors of language learning strategy use. In a similar study with Iranian EFL high school students, Hajhashemi, Parastesh, and Yazdi Amirkhiz (2011), found a low relationship between MI and language learning strategy use, in general. But linguistic, spatial, and mathematical intelligences were significantly correlated with all language learning strategy types except memory strategies in their study. Moreover, interpersonal intelligence failed to show any relationship with the strategy types.

In general, MI studies have underscored the importance of intelligences in the process of language learning, and tried to show that language should not be seen as limited to a linguistic perspective. However, a perusal of the studies conducted so far reveals that there is a dearth of research regarding the relationship between MI and OCSs profiles of EFL learners. Then, it can be hypothesized that there might be a relationship between MI and OCSs since, as Akbari and Hosseini (2008) have stated, both MI and language strategies of them deal with the concept of problem solving. Further studies on the individual differences in the use of oral communicative strategies would allow us to recognize the patterns of communication strategy use. In addition, as Littlemore (2001) points out, the identification of relationships between psychological (i.e. MI) profiles of learners and the use of communication strategies would be another step toward the discovery of the psychological processes underlying the use of

communicative strategies. Therefore, this study is designed to address the following research questions:

1. What are the Iranian EFL learner participants' OCS profiles?
2. What are the Iranian EFL learner participants' MI profiles?
3. To what extent is there any relationship between Iranian EFL learner participants' MI and OCSs?
4. What type of intelligence(s) can act as the best predictor of OCSs among Iranian EFL learner participants?

3. Method

3.1 Participants

The participants of this study consisted of 120 EFL learners, including 38 males and 82 females. All the participants, aged 20-25, were native speakers of Farsi. They were selected non-randomly from a larger sample of 180 EFL learners majoring in English translation and teaching of English at Shahrekord and Arak universities, where they were available and could be accessed by the researcher. The sampling selection was done based on the scores on the Oxford Placement Test (Allen, 2004). To ensure homogeneity of the participants, following the scoring guidelines by Allen (2004), the participants who scored just between 120-149 out of the total possible score, i.e. 200, were considered as the intermediate-level participants and were interviewed later. All were junior and senior EFL students who had studied English as a foreign language for at least eight years in secondary, high, and pre-university schools and university.

3.2 Instrumentation

For data collection, the following instruments were used.

3.2.1 Oxford Placement Test (OPT)

This test, which was used to select the intermediate level participants, includes two parts: 100 multiple-choice listening and 100 multiple-choice grammar items, each having three choices. Tahriri and Yamini (2010) state that the performance on the

listening section is based on applying knowledge of sound and writing systems at a speed within the native speakers' competence. As to the grammar section, they state that the test measures grammatical knowledge of test takers in contextualized items. Allen (2004), the developer of the test, claims that the OPT is capable of being utilized with any number of students of English to ensure efficient, reliable and accurate grading and placing of students into classes at all levels from elementary to advanced. According to Allen, the OPT has been calibrated against the proficiency levels based on the Common European Framework of Reference for Languages (CEFR), the Cambridge ESOL Examinations, and other major international examinations such as TOEFL. Having utilized the OPT to determine proficiency level of participants, Birjandi and Sayyari (2010) also established the concurrent validity of the OPT using a version of paper-based TOEFL. The results revealed a very high correlation between the OPT with TOEFL subskill and total scores. The reliability of the test as measured by Cronbach's alpha in the current study was found to be 0.85.

3.2.2 Oral Interview

In addition to the OPT test, an oral interview was conducted to select the intermediate level EFL participants. Although the OPT test scores were shown to have positive linear correlations with the scores from the proficiency tests such as TOEFL and Nelson English Test (Birjandi & Sayyari, 2010), an oral interview test was carried out to further increase the homogeneity of the EFL participants in terms of speaking ability. The interviewees were asked to answer some general and specific questions face-to-face, for example, about their homes, families, jobs, studies, interests, and other similar topic areas. Following, Underhill (1987, cited in Brown, 2004), the grading criteria for assessing the interview were pronunciation, vocabulary, and fluency. Following American Council on the Teaching of Foreign Languages (1988) and Underhill (1987, cited in Brown, 2004), the interview consisted of five stages: the warm-up, level checks, probes, role-play, and wind-down, lasting for 15-20 minutes. The oral interview was recorded

during each individual administration of the test. Meanwhile, the inter-rater reliability of the speaking test was calculated to be 0.87 in the present study.

3.2.3 Oral Communication Strategy Inventory

To determine the use of OCSs by the participants, Oral Communication Strategy Inventory or OCSI (Nakatani, 2006) was employed. The OCSI, consisting of 58 items, is divided into two parts: *strategies for coping with speaking problems* (32 items) and *strategies for coping with listening problems* (26 items). The first part includes 8 categories: *social-affective* (6 items), *fluency-oriented* (6 items), *negotiation for meaning* (4 items), *accuracy-oriented* (5 items), *message reduction and alteration* (3 items), *nonverbal* (2 items), *message abandonment* (4 items), and *attempt to think in English* (2 items). The second part includes 7 categories: *meaning-negotiation* (5 items), *fluency-maintaining* (5 items), *scanning* (4 items), *getting-the-gist* (4 items), *nonverbal* (2 items), and *less active listener* (2 items) and *word-oriented* (4 items). The items are assessed on a 5-point Likert scale, ranging from *never or almost never true of me* (1) to *always or almost always true of me* (5). The reliability of the first part of the instrument, measured through Cronbach's alpha, was estimated to be r = .86, and the reliability of the second part was found to be r = .85 in the present study. As to the validity of the OCSI, Nakatani (2006) carried out the pilot study in two stages. First, he used an open-ended questionnaire to elicit a variety of strategy items to improve the content validity of the test. Second, based on this data, he used an initial exploratory factor analysis to select the most reliable items. Finally, he carried out another exploratory factor analysis on the data from 400 participants to establish the validity of the instrument.

3.2.4 MI Inventory

To determine the intelligence profiles of the participants, the MI Inventory for Adults, developed by Armstrong (1994), was used. The inventory includes 70 items in the form of Likert scale to assess

linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, intrapersonal and interpersonal intelligences. The inventory consists of ten statements for each specific intelligence type. The items are coded on a 5-point Likert scale, ranging from *strongly agree* (1) to *strongly disagree* (5). The score for each intelligence type ranges from 10 to 50. The reliability of the instrument, measured through the Cronbach's alpha coefficient, was computed to be 0.79, indicating that the instrument was reliable enough to be used for the purposes of this study. Also, Rivera (1996) established the validity of MI Inventory in a PhD study in Louisiana. She reported that the seven subscales of the test "did correspond with aspects of MI theory" (Rivera, 1996, p. 118), so it could be used as a valid test of MI.

3.3. Data Collection and Analysis

This study had an ex-post-facto design. First, the OPT test was used to have a homogenous group of participants for the purpose of the study. The participants were selected from a larger sample of 180 EFL learners. First, 130 participants from the Shahrekord and Arak universities whose score fell almost between 120 and 149, following guidelines by OPT rating levels chart, were selected. Second, these 130 were interviewed (for about 15-20 minutes) to increase the homogeneity of the participants in terms of oral proficiency. As Nunan (1992) pointed out, applying several data collection methods, i.e. triangulation, could help establish validity and reliability. Out of 130, 120 participants who met the component descriptors for the intermediate level in the oral interview (see Brown, 2004) were selected. Third, the OCSI (Nakatani, 2006) was administered to the selected participants (n = 120) to indicate the extent to which they utilize OCSs. Fourth, the 70-item MI Inventory (Armstrong, 1994) was given to the same participants in a separate session to measure the extent to which they possess the seven types of intelligences. Finally, descriptive statistics were obtained and Pearson product-moment correlation and multiple regression procedures were run through SPSS (Version 18.00) to address the

research questions of the study.

4. Results and Discussion

Descriptive statistics, including the means and standard deviations, for each category of OCSI were obtained to have the EFL participants' OCS profiles. As the number of items in the categories of OCSI was different, in order to compare the scores obtained from the seven categories of OCSI, each EFL participant's raw score on each category was divided by the number of the items composing the category. This provided us with the mean scores for strategy types on a 5-point scale. The results of the descriptive statistics of the first part of OCSI (i.e. strategies for coping with speaking problems) are summarized Table 1.

Table 1: Descriptive statistics of strategies for coping with speaking problems

Category	*N*	Min	Max	Mean[a]	Std. Dev.	Mean (on a 5-point scale)
Social-affective	120	7	19	10.98	2.21	1.83
Fluency-oriented	120	7	13	9.67	1.50	1.62
Meaning-negotiation	120	7	16	11.21	2.12	2.80
Accuracy	120	6	14	9.90	1.77	1.98
Message reduction and alteration	120	10	15	13.01	1.30	4.34
Nonverbal	120	5	8	7.50	0.82	3.62
Message-abandonment	120	13	20	17.45	1.64	4.36
Attempt to think in English	120	2	8	4.40	1.31	2.20
Total	120	80	100	84.12	3.82	2.84

[a] the mean of raw scores

As observed in Table 1, the total mean score was about 84.12. Given that the possible range of scores for 'strategies for coping with speaking problems' was 32-160 with 32 Likert-type items each

with five options, we come to 2.84 through dividing the mean score by the number of items in the 'strategies for coping with speaking problems' section This number is between the second (i.e. *generally not true of me*) and third (*sometimes/somehow true of me*) options on 5-point Likert items. This finding does not reflect the high use of strategies for coping with speaking problems. In other words, the EFL participants perceived themselves using strategies for coping with speaking problems occasionally. Furthermore, as demonstrated in Table 1, the mean scores ranged from 1.62 to 4.36, indicating that the performance on the different strategy types varied much. In other words, the participants perceived themselves differently with regard to each category of strategies for coping with speaking problems. They perceived themselves stronger at 'message-abandonment' strategies (M = 4.36), followed by 'message reduction and alteration' (M = 4.34), and 'nonverbal' (M = 3.62) strategies.

According to Nakatani (2006), when L2 learners encounter difficulties in implementing their original verbal plan, they abandon their message, or seek help from others. These 'message-abandonment' strategies are largely negative and are often used by low oral proficiency groups (Dörnyei & Scott, 1997; Faerch & Kasper, 1983). The higher mean scores of 'message-abandonment' and 'message reduction' strategies suggest that the EFL participants had a tendency to use strategies often employed by L2 learners who are not at higher levels of proficiency. Likewise, 'nonverbal' strategies, which include eye-contact, gestures, or facial expressions that learners utilize to imply their meaning, are often utilized by L2 learners at lower levels of proficiency. As Canale and Swain (1979) state, these strategies are part of 'strategic competence'; that is, "the verbal and nonverbal communication strategies that may be called into action to compensate for breakdowns in communication due to performance variables or due to insufficient competence" (pp. 40-41). The participants thus preferred to prevent a communication breakdown by utilizing the above-mentioned strategies; they were more likely to replace their intended meaning and resort to familiar and simple expressions in oral communication to compensate for their relatively low proficiency in speaking.

Furthermore, the 'fluency-oriented', 'accuracy-oriented', and 'attempt to think in English' strategies, as displayed in Table 1, received low mean scores, indicating that the EFL participants perceived themselves using these types of strategies less frequently. This finding is not surprising, given the L2 proficiency level of the participants, because, as Nakatani (2006) states, these types of strategies are mostly utilized by orally high proficient L2 learners who want to keep interactions going or would like to be like native speakers. Likewise, Huang and Van Naerssen (1987) states that highly proficient L2 learners use strategies such as 'attempt to think in English'. In addition, the low mean scores on the above strategies might be due to types of instructions, including formal or informal ones, the participants had in the contexts where they studied English. Perhaps, they did not have much opportunity to think in English or had not been asked to pay attention to the fluency or accuracy of conversational flow. A similar argument can be offered for the low mean score on the 'social-affective' strategy type for coping with speaking problems. Interactive and experiential learning, perhaps, was not promoted very much and student-oriented philosophy did not underpin the L2 curriculum in the context where the participants studied English. It is also possible that Iranian EFL teachers had encouraged their students implicitly to use other less effective strategies more than social-affective and meaning-negotiated strategies in the classroom. Perhaps, as Hong-Nam and Leavell (2006, p.409) argue, "Asian cultural mores … discourage public discussion of feelings", and meaning-negotiation strategies, which are crucial for improvement of both linguistic and pragmatic ability.

The results of the descriptive statistics of the second part of OCSI (i.e. 'strategies for coping with listening problems') are reported in Table 2.

Table 2: Descriptive statistics of strategies for coping with listening problems

Category	*N*	Min	Max	Mean	Std. Dev.	Mean (on a 5-point scale)
Meaning-negotiation	120	7	12	7.20	.83	1.44
Fluency-maintaining	120	5	19	6.1	1.35	1.52
Scanning	120	5	10	6.23	1.78	1.55
Getting the gist	120	7	10	6.33	1.77	1.58
Nonverbal	120	8	10	9.1	3.23	4.55
Less active listener	120	8	10	8.2	2.75	4.10
Word-oriented	120	14	20	17.86	1.35	4.46
Total	120	61	83	71.24	4.16	2.74

[a] the mean of raw scores

As observed in Table 2, the total mean score was about 71.24. Given the number of items (n = 26) in the 'strategies for coping with listening problems', we come to 2.74, which almost means '*sometimes true of me*'. Like the above finding on the strategies for coping with speaking problems, this finding on the listening strategies does not echo the high use of the strategies for coping with listening problems. That is, the EFL participants perceived themselves using strategies for coping with listening problems occasionally. Furthermore, the mean scores ranged from 1.44-4.55, indicating that the participants' performance on each category varied much, given that total standard deviation was a little high (4.16). These results indicate individual differences with respect to the strategies for coping with speaking problems.

The EFL participants rated themselves stronger at 'nonverbal' (M = 4.55), followed by 'word-oriented' (M = 4.46), and 'less active listener' (M = 4.10) strategies. The frequent use of 'word-oriented' strategy type cannot be considered as positive because by noticing every word, the L2 listeners may undermine their overall

comprehension. It might be that memorizing individual words has been one of the common learning methods among Iranian EFL participants. Furthermore, the participants' frequent use of 'nonverbal strategy' reveals that they tended to pay attention to nonverbal behaviors to improve comprehension. Moreover, they perceived themselves utilizing 'less active listener' strategies so frequently. As Nakatani (2006) points out, this can be attributed to the fact that L2 learners do not display expected positive attitudes towards using active listening strategies for interaction and want to avoid thinking in English. It is possible that the participants whose major at the university was English Translation would depend more on translation and their L1 than thinking in L2 as a way of coping with communicative problems. This is not positive since, according to Huang and Vann Naerssen (1987), less successful L2 learners tend to employ such strategies when facing language difficulty in communication.

In contrast, 'meaning-negotiated' strategies received the lowest mean score (M = 1.44). Despite the arguments for effectiveness of interacted negotiation in L2 contexts, meaning-negotiated strategies have not been frequently utilized in many EFL classes. In addition, the above result may pertain to the problem that many EFL learners have due to adequate exposure and access to native speakers as well as native-like EFL teachers with high level of communicative competence. Some EFL classes in Iran still favor methods which give less emphasis to the oral skills developed through negotiation. In fact, interactive and experiential learning is not fostered much in such classes which are less learner-centered.

As to the participants' MI profiles, the means and standard deviations for each type of multiple intelligences were obtained. The results of descriptive statistics for each intelligence type are reported in Table 3. The musical and logical intelligences received the minimum (14) and maximum (50) scores. Moreover, the mean scores on each type of intelligence were perceived as above average since most mean scores were between 30 and 40, that is, between the third (i.e. *neither agree nor disagree*) and fourth (i.e. *agree*) options. The total mean score was 239. When divided by the total number of items, it was 3.41, indicating that the EFL participants generally were found to have a medium to high level of MI.

Furthermore, as observed in Table 3, the logical intelligence (M = 37.35, St. dev. = 5.44) was the leading intelligence type, followed by bodily intelligence (M = 35.18, St. dev. = 4.28). Three types of intelligences (i.e. spatial, interpersonal and intrapersonal intelligences) received almost the same mean score (i.e. 34). However, the least commonly-held intelligence was musical intelligence (M = 29.95, St. dev. = 6.62).

Table 3: Descriptive statistics for seven types of intelligences

Category	N	Min	Max	Mean	Std. Dev.
Bodily	120	26.00	45.00	35.18	4.28
Linguistic	120	24.00	46.00	32.88	4.31
Logical	120	26.00	50.00	37.35	5.44
Spatial	120	22.00	45.00	34.13	4.50
Musical	120	14.00	41.00	29.95	6.22
Interpersonal	120	22.00	46.00	34.76	5.21
Intrapersonal	120	22.00	46.00	34.38	4.90
Total	120	186	308	239	23.43

The key abilities of logical-mathematical intelligence are being able to use and value abstract relations and being able to use numbers and logical thinking adeptly (Baum, Viens, & Slatin, 2005). The fact that logical-mathematical intelligence received a higher mean score, as Armstrong (2009) has argued, might be assigned to teachers' proclivity to develop this intelligence, perhaps owing to much reliance on the instructional textbooks used in schools. In the context of Iran, there are many teachers who consciously or unconsciously focus on this type of intelligence at the cost of ignoring others. Panahi (2011) also found logical-mathematical intelligence as the leading intelligence with 125 randomly selected students from different Iranian language institutes in Ardebil. Also, it might be that employing structural syllabus, still utilized in many

EFL classes in Iran with the focus on memorization, results in strengthening this particular intelligence.

Also, bodily intelligence turned out to be the second common intelligence type. The fact that the participants perceived themselves stronger at bodily intelligence, to some extent, would support the aforementioned findings in which the use of nonverbal strategies in oral communication was found to be so common. According to Smith (2001), nonverbal communication serves a fundamental role in the communication process, and bodily intelligence might reinforce learners' ability to make use of suitable body language. In addition, the ability to understand other people and communicate effectively is part of the interpersonal intelligence (Gardner, 2011), possibly benefiting learners' OCS use. On the other hand, the musical intelligence turned out to be low among the EFL participants. It is assumed that the low level of musical intelligence in the sample was reinforced by the insignificant role of music in Iranian schools. In Iran, music is not commonly taught at schools. Musical intelligence deals with the ability to understand melodic and rhythmic patterns, but musical activities are less executed in many EFL classes. The result showing that musical intelligence is not a popular type of intelligence among the EFL participants is also supported by the results on the OCSs; the EFL participants received a low mean score on 'fluency- maintaining' strategies', suggesting that the participants tended to pay little attention to suprasegmental features of speech, which "are more closely linked, say, to a theory of music than to a theory of linguistics" (Richards & Rodgers, 2001, p. 117).

The above findings are less challenged when we find support from other studies even though care should be taken in the wild generalization of the findings. The aforementioned findings on MI are consistent with the results obtained by Özdemir, Düneysu, and Tekayya (2006), who reported logical intelligence as the leading intelligence type, followed by bodily intelligence, and musical intelligence as the least commonly-held intelligence type in Turkish context. The results of the present study are also partially in agreement with Hashemi's (n.d.) results in that Iranian senior university students in her study were found to be strong at bodily intelligence. As to the musical intelligence, the results of the present

study are also in line with Saricaoğlu and Arikan's (2009) study, in which the musical intelligence was found to be the least common intelligence type among intermediate-level Turkish students. It seems that musical intelligence is not a popular type of intelligence among Iranian and Turkish intermediate-level EFL learners. However, this issue is due further investigation.

To address the third research question concerning the relationship between OCSs and MI, Pearson product-moment correlation coefficients were obtained. As displayed in Table 4, the total correlation coefficient was found to be about 0.11, indicating a positive, but not significant (p =. 419), correlation between MI and OCSs. In addition, all correlation coefficients were found to be positive, but the degrees of correlations, in general, were not great. Also, the effect size was found to be 0.012 for the correlation of the MI with OCSs scores, indicating that the MI and OCS variables shared a small amount of variance. Following Cohen's (1992) guidelines on the effect sizes for R^2, this effect size for the correlation was small. The positive relationship is what was expected to be observed due to the idea that both variables would deal with certain aspects of language and some aspects of MI correspond to some aspects of OCS use, such as *social-affective* actions (interpersonal), *nonverbal* language (spatial), and *attempt to think in English* (intrapersonal) *negotiation for meaning* (interpersonal). Hence, those with higher level of MI can have a better strategy use in oral commutation, but this does not mean MI can result in high level of communication strategy use in speaking and listening.

Table 4: Correlation between types of intelligences and OCSs

Variables	**Bod.**	**Ling.**	**Log.**	**Spat.**	**Mus.**	**Inter.**	**Intra.**	**Total**
OCSs	.094	.002	.047	*.278	.192	.059	.009	.106
	(.477)	(.986)	(.723)	(.031)	(.087)	(.657)	(.946)	(.419)

*. Correlation is significant at the 0.05 level (2-tailed).

According to Table 4, the degree of correlation between OCSs and spatial intelligence was the highest, followed by the coefficient related to musical intelligence with OCSs. The positive correlation between the OCSs and spatial intelligence was statistically significant, r (59) = .28, $*p < .05$, even though, following Cohen's (1992) guidelines, the effect size for this correlation (R^2 = .08) was not large. This significant correlation between the two indicates that some aspects of spatial intelligence such as the sensitivity to visual cues and capacity for accurate perception of spatial relations and nonverbal cues can correspond to certain aspects of OCS use such as nonverbal strategy use in speaking and listening, nonverbal accompaniments to communication (such as miming), or mind-mapping in communication. As Brown (2000) maintains, nonverbal language and communication are interdependent, and nonverbal signals, such as gestures, spatial relations, facial expressions, and temporal relationships, have a key role in communication. Spatial intelligence and mental space, to some extent, can facilitate nonverbal language use and enable learners to communicate more interactively. Thus, it can be assumed that a person who has a high level of spatial intelligence can make use of nonverbal signals and visual cues more effectively in facing communication problems; spatial intelligence may then assist L2 learners, though not much, to adjust appropriately to the environment and communicate in the target language they would like to learn.

In order to answer the fourth research question regarding the type of intelligence which is the best predictor of OCSs, a multiple regression was conducted. To determine the more powerful predictor, scores on the intelligences were taken as predictor (independent) variables, and scores on the OCSs were considered as the criterion (dependent) variable in the regression. The results are summarized in Tables 5 and 6.

Table 5: Model summary of multiple regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.309	.095	.027	19.76

Table 6: Coefficients in regression analysis of the components

Model	Unstandardized coefficients		Standardized coefficients		
	B	Standard error	Beta	t	Sig.
(Constant)	154.888	33.055		4.69	.000
Bodily	.630	.729	.138	.86	.392
Linguistic	.257	.697	.057	.37	.714
Logical	.244	.534	.068	.46	.649
Spatial	1.329	.649	.307	2.05	.046
Musical	1.111	.477	.205	1.23	.081
Interpersonal	.174	.571	.047	.30	.762
Intrapersonal	.057	.605	.014	.09	.925

As displayed in Table 5, the R value was .309, indicating that there was a correlation between the variables concerned in this study. Also, the R square value was found to be .095, indicating that 9.5% of the variance in the OCS scores was accounted for by the individual intelligences. Moreover, none of the *t*-values for the coefficients, except one, were significant. The *B*-value for the standardized scores of spatial intelligence was significant, $t = 2.05$, $^{*}p < 0.05$; that is, spatial intelligence made a *statistically* significant contribution to the prediction of OCSs.

The above results indicate that multiple intelligences can positively contribute to OCSs. It is assumed that EFL learners with high levels of multiple intelligences are expected to be better users of OCSs even though the amount of contribution from MI cannot be very high. The small contribution of MI in the present study cannot totally be ignored since a small correlation in educational settings can sometimes mean a lot, given that individual intelligences in the

current study acted as positive predictors in the regression analysis and all had positive correlations with the OCS use. Nonetheless, we should be cautious about making strong generalization about the contributory role of MI in the OCS use. Meanwhile, the finding that spatial intelligence among other types of intelligences acted as a better predictor of OCSs was not against expectation. This finding was in line with the aforementioned results of correlation coefficients in Table 4. The positive contribution might suggest that some aspects of this intelligence type can be related to certain aspects of CSs, such as body and nonverbal language. Language learners employ CSs to compensate for their linguistic shortcomings in order to achieve a particular communicative goal; to avoid communication disruptions, nonlinguistic cues such as postures, eye contact, facial expressions, or hand gestures, enhanced by visual-spatial capacity, can be employed to bridge the gap between their own knowledge and that of the target language interlocutor in real communication situations. It can, then, be claimed that spatial-visual sensitivity is important for EFL learners to express themselves, particularly in nonverbal ways, in oral communication to avoid embarrassing miscommunication situations.

5. Conclusion and Implications

This study aimed at determining the Iranian intermediate EFL learners' use of OCSs and their intelligence profiles. Additionally, it explored the relationship of OCSs with MI and the extent to which MI could best predict the use of OCSs. Results showed that EFL participants of the study were stronger at logical-mathematical intelligence and weaker at musical intelligence, possibly because of development of logical-mathematical intelligence through the instructional materials and activities they used; many EFL teachers still prioritize logical-mathematical intelligence through their syllabi at the cost of other types of intelligences. As to the strategies for coping with speaking problems, the EFL participants were stronger at 'message abandonment', 'nonverbal', and 'message reduction and alteration' strategies whereas for the strategies of listening problems, the participants perceived themselves higher at the 'word-

maintaining', 'less active listener', and 'nonverbal' strategies. The findings indicate that the participants were inclined to reduce their original messages and replace them with familiar expressions when facing difficulty in oral communication; they preferred less to use more effective OCSs such as 'meaning-negotiation'.

Furthermore, the results obtained in the present study demonstrated that there was a positive and *statistically* significant relationship between spatial intelligence and OCSs, and further spatial intelligence acted as a better predictor of OCSs. It is assumed that aspects of spatial intelligence such as the capacity for the accurate perception of spatial relations and nonverbal signals can be associated with certain aspects of OCS use such as nonverbal language use in speaking or listening. Similar to verbal skills, nonverbal language skills are the important inputs influencing the process of communication (Odlin, 1989). Hence, developing spatial intelligence may help EFL learners to communicate more effectively in the target language. However, strong claims about the predictive power of MI, including spatial intelligence, in OCS use are far-fetched since the effect size of the correlation between the MI and OCSs was not generally great. Lastly, given the limitations of the present study, such as sample size and type of sampling procedure, further research is certainly required to see whether similar results with learners at lower and upper L2 levels can be obtained.

The findings of this study reveal that the EFL participants tended to employ less effective OCSs such as 'message-abandonment' and 'message reduction and alteration' strategies in speaking, and 'word-oriented' and 'less active listener' strategies in listening. This issue serves to highlight the important role that EFL teachers can have in the classroom as a source of L2 learning and partners in L2 interaction. Some of EFL teachers in Iran have obvious deficiency of linguistic knowledge that leads to using their own native language in the classroom (Rahmani & Yaqubi, 2010). In addition, some non-native EFL teachers are learners of the very language they are teaching to other learners. By implication, Iranian EFL learners need better models to learn how to make use of most

effective communicative strategies. As Faerch and Kasper (1983) state, "by learning how to use communication strategies appropriately, learners will be more able to bridge the gap between pedagogic and non-pedagogic communication situations" (p. 56). In other words, they bridge the gap between classroom and real-life communication.

MI theory can be used to celebrate diversity. According to Gardner (1999), culture might have a role in the development of intelligence. In fact, the context in which language is learnt might weaken or strengthen a type of intelligence. Thus, a low level of musical intelligence, which is observed in other studies (e.g. Saricaoğlu & Arikan, 2009) too, implies that this intelligence should be cherished more in EFL learning to foster OCSs such as 'fluency-maintaining' strategies because, as Richards and Rodgers (2001) argue, there are aspects of language that are closely linked to a theory of music. Musical intelligence might be reinforced by giving a significant role to musical activities, such as playing background music, using songs and poetry, in language schools. Also, EFL teachers can give their students musical options for their assignment and projects.

The significant relationship between visual-spatial intelligence and OCSs and the finding that spatial intelligences acted as a better predictor of OCSs in the current study imply that EFL teachers can familiarize students with spatial relations in the target (i.e. English) culture so that they can accommodate culturally suitable behaviors and nonverbal strategies. Using charts, graphs, and diagrams, videos/ DVDs, power point slides, movies, visual puzzles, imaginative storytelling, pictures, idea sketching, visual thinking exercises, mind mapping, and color cueing can be greatly helpful. Additionally, the contributory role of the MI to OCS use, in general, implies that developing EEL learners' MI capabilities, regardless of their dominant type of intelligence(s), can benefit the use of OCSs among learners, to some extent, in order to negotiate their meaning more successfully even though they are not linguistically proficient enough. Knowing diversities in the classroom, and suitable application of MI would serve EFL teachers to direct learners towards the better use of OCSs which suit their tendencies.

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