



Investigating the Possible Relationship between Multiple Intelligences and Self-efficacy: The Case of Iranian EAP Instructors

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Abstract

The current study aimed to investigate the possible relationship between Iranian English for academic purposes (EAP) instructors' interpersonal and intrapersonal intelligences and their self-efficacy beliefs. To this end, 120 language and content English for academic purposes instructors were asked to complete the excerpted items from McKenzie's (1990) Multiple Intelligences Questionnaire and Tschannen-Moran and Woolfolk Hoy's (2001) Teachers' Sense of Efficacy Scale. The results of the Pearson product-moment correlation showed that there was a positive significant correlation between personal intelligences and self-efficacy. Furthermore, using an independent t-test, the researchers found that there was no significant difference among language and content instructors regarding their self-efficacy beliefs in EAP classrooms. Moreover, the results of a paired t-test revealed that language instructors would feel more efficacious in English for general purposes than in EAP classrooms. The conclusions and implications of the current study are discussed in light of the earlier findings.

1 Introduction

Teachers play a significant role in moving students toward their desired educational goals (Anderson, 2004). Nevertheless, paying attention to teachers merely as sources of knowledge does not, by any means, guarantee the students' success, because numerous variables might make an impact on the way they organize instruction (Chasón, 2005). In this regard, teachers' multiple intelligences have received less attention compared to some other variables, such as emotional intelligence and so forth (Chan, 2004; Moafian & Ghanizadeh, 2009; Rastegar & Memarpour, 2009).

On the other hand, with the growing attention given to learners' needs and interests in recent educational settings as a consequence of the advent of communicative language teaching, teachers should be sufficiently competent and efficient to meet the variety of students' needs (Tschannen-Moran & Woolfolk Hoy, 2001), and consequently to promote the level of the students' achievement (Cantrell, Young, & Moore, 2003). In this regard, deepening our understanding about the variables which might influence the efficacy beliefs of teachers might be helpful in enhancing their efficacy and promoting their willingness for (Allinder, 1994) and commitment to teaching (Co-

ladarci, 1992). The teacher's job is even more delicate in the context of English for academic purposes (EAP hereafter) with its higher degree of emphasis on learners' specific needs. Today, teachers' duty is not only instructing but also evaluating, observing and judging (Gökçe, 2000, cit. in Yenice, 2009). Hence, empowering teachers and raising their awareness regarding their strengths and weaknesses in terms of multiple intelligences seems to be of great help.

Bearing this in mind, the main interest of the current study was to probe the possible relationship between EAP instructors' personal intelligences, interpersonal and intrapersonal intelligences, and their self-efficacy beliefs. Moreover, EAP instructors from both content and language (English) departments were compared in terms of their self-efficacy in EAP classrooms. EAP language instructors' self-efficacy beliefs were also compared between the two contexts of general English (EGP) and EAP classes.

2 Literature review

2.1 Multiple intelligences theory

Intelligence was considered as a fixed construct (Smith, 2001) and was operationally defined as one's ability to answer the items of IQ tests (Lin, 2006). People have thought for years that higher scores on IQ tests would predict one's success in the learning process. Nevertheless, almost eighty years after the development of the first intelligence test, Gardner (1983) challenged the prevailing view towards intelligence and put forth the multiple intelligences theory. He redefined intelligence as "the ability to find and solve problems, the ability to respond successfully to new situations and the capacity to learn from one's past experience" (Gardner, 1983, p. 21). He identified seven types of intelligence including verbal/linguistic, musical, logical/mathematical, spatial/visual, bodily/kinesthetic, interpersonal, and intrapersonal, to which natural and existential types were added later.

MI theory was formed based on two main claims: (1) that all human beings have at least eight types of intelligence; and (2) that no two people, even identical twins, are of the same profile (Gardner, 2005). Gardner presented a set of criteria to distinguish between what was called aptitude or talent and what he defined as intelligence (Armstrong, 2003).

Apart from its theoretical underpinnings, MI theory was welcome in educational settings with the hope of putting more students on the right track by considering their strengths and weaknesses (Gardner, 1998/2004). In Armstrong's terms, "MI theory essentially encompasses what good teachers have always in their teaching; reaching beyond the text and the blackboard to awaken students' minds" (2000, p. 39).

Due to the groundbreaking innovations of MI theory, some researchers made attempts to investigate the theory and its applications in educational settings. Nevertheless, in most of the relevant studies, the focus was mainly on language learners. Coleman et al. (1997) and Haley (2002) showed the positive impact of implementing MI theory in classroom activities on the degree of students' success. Their findings suggested that taking advantage of MIs in institutional presentations would promote the students' underutilized intelligences.

Some other scholars have paid particular attention to the way MIs could be applied to writing classrooms. Grow (1990) maintained that employing MI theory in writing classrooms would allow for some innovative ideas and would add theoretical depth to pedagogical practices. In a similar vein, Borek (2003) tried to cast further light on the pedagogical application of MI for developing the students' ability in outlining and drafting a persuasive essay. Some years later, Marefat (2007) investigated the possible relationship between the students' MI profile and their writing product, and found kinesthetic, existential and interpersonal intelligence types to be most useful for predicting students' writing scores. Furthermore, Eng and Mustapha (2010) found that incorporating MI theory into writing classrooms would positively contribute to the student's overall writing ability.

Additionally, aiming at establishing a link between the students' MIs and their reading skill, McMahon, Ross and Parks (2004) found only logical-mathematical intelligence as a predictor of reading achievement. In a more recent attempt, Akbari and Hosseini (2008) investigated the possi-

ble relationship between learners' multiple intelligences and their language learning strategies. The findings revealed that metacognitive learning strategies are a close correlate of MIs. However, they came up with no correlation between musical intelligence and any type of strategy, while they found a significant relationship between kinesthetic intelligence and memory strategy use type.

Despite the large body of research done with regard to learners' multiple intelligences, no study has yet been conducted or reported considering teachers' multiple intelligences. A recent study pointed to the relationship between three intelligence types, including linguistic, interpersonal and intrapersonal ones, and ELT teachers' self-efficacy beliefs in the Iranian context (Tajeddin & Saidi, 2011). However, no study has so far touched upon EAP instructors' multiple intelligences. In the current study, interpersonal intelligence as "the ability to perceive and make distinctions in the moods, intentions, motivations, and feelings of other people" and "sensitivity to facial expressions, voice, and gestures," and intrapersonal intelligence as "having an accurate picture of oneself (one's strengths and limitations)" and "the capacity for self-discipline, self-understanding, and self-esteem" (Armstrong, 2000, p. 2) were considered, since previous studies have revealed the relationship between self-efficacy and emotional intelligence as a concept akin to the concept of personal intelligences (Gardner, 2005).

2.2 Self-efficacy beliefs

Since Bandura (1977) defined perceived self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required producing given attainments" (p. 3), the concept came to the forefront in educational settings. Consequently, giant strides were taken to reveal the relationship between a teacher's sense of efficacy and students' motivation (Ross, 1992) and their achievement (Caprara, Babaranelli, Steca, & Malone, 2006). Moreover, efficacy has been shown to be of utmost importance in the amount of effort teachers make in teaching (Tschannen-Moran & Woolfolk Hoy, 2001). In this line, Allinder (1994) proved the invaluable importance of a strong sense of efficacy in leading teachers to higher levels of planning. This group of teachers has also exhibited a much greater tendency to try out innovations in their methodology (Guskey, 1988). Besides, a host of studies have demonstrated a higher sense of efficacy to be predictive of teachers' willingness for teaching (Allinder, 1994; Guskey, 1984), their commitment to teaching (Coladarci, 1992), and the probability of them staying in the profession (Glickman & Tamashiro, 1982).

Some other studies have also been conducted with the aim of finding the possible link between teachers' emotional intelligence (EI) and their self-efficacy beliefs (Chan, 2004; Moafian & Ghanizadeh, 2009; Rastegar & Memarpour, 2009), and have come up with a significant relationship between the two concepts. While in Chan's (2004) study, positive regulation was recognized as a significant predictor of general self-efficacy and empathetic sensitivity as an important correlate of self-efficacy toward helping others, Moafian and Ghanizadeh (2009) ascertained the predictive role of emotional self-awareness, interpersonal relationship and problem-solving for teachers' self-efficacy. Rastegar and Memarpour (2009) have also found a significant positive correlation between EFL teachers' perceived emotional intelligence and their self-efficacy beliefs.

Goker (2006) tried to find out whether using a peer coaching training program rather than traditional supervisor visits would result in a greater improvement of self-efficacy beliefs. His study demonstrated the positive effects of peer coaching due to its reflective nature and its potential to establish a collaborative atmosphere. In the same vein, Schacher and Shmuelevitz (1997) showed the positive impact of cooperation among teachers on their sense of efficacy. In another study, the influence of contextual factors on student teachers' efficacy beliefs have been investigated (Knoblauch & Woolfolk Hoy, 2008). The findings revealed enhanced efficacy beliefs among the student teachers placed in urban settings after the student teacher experience.

Reviewing the extensive research on teachers' self-efficacy beliefs and their multiple intelligences suggests that a gap still exists regarding their possible relationship in general and in EAP contexts in particular. The findings of a seemingly similar study suggesting the positive contribu-

tion of linguistic and personal intelligences to EFL teachers' self-efficacy beliefs (Tajeddin & Saidi, 2011) might give rise to the question if these two concepts would be related in EAP contexts. Bearing this in mind, the following research questions guided the study:

- 1. Is there any relationship between Iranian EAP instructors' interpersonal and intrapersonal intelligence types and their self-efficacy beliefs?
- 2. Is there any significant difference between language instructors and content instructors within EAP contexts in terms of their self-efficacy beliefs?
- 3. Is there any significant difference among EAP language instructors' self-efficacy beliefs in terms of the two contexts of EGP and EAP?

3 Method

3.1 Context of the study

English for academic purposes instruction in Iran entails three distinct generations (Aai, 2002). In the first generation, EAP courses were offered with the cooperation of Western academic centers (e.g. Tehran University and the University of Illinois in 1974). In the second generation, the government planned and implemented some programs and a limited number of EAP textbooks were prepared. In the third generation, content specificity and the development of numerous EAP textbooks geared towards very narrow fields of study through the collaboration of content and language instructors received considerable attention. The overall goal of EAP courses was intuitively considered as developing reading skills to enable students to use various sources such as EAP textbooks and international journals of their own fields of study autonomously (Atai, 2002). According to Atai and Tahririan (2003), the current EAP courses mainly aimed at filling the gap between the students' general English competence and their ability to read texts related to their fields of study. These courses are mostly offered by content departments. However, in some universities, the English department is in charge of offering them. They are taught by either content or language instructors. It is worth noting that students are supposed to take a three-credit course, General English (English for General Purposes, EGP) prior to the EAP course.

3.2 Participants

120 EAP instructors (75 males and 45 females) teaching at state universities in Tehran in the academic year 2012-2013 participated in this study, and their age ranged from 31 to 50 years old. They reported having been in the teaching profession for 3 to 24 years. Participants were divided into two different groups. The first, Content Instructors (n= 60), reported holding postgraduate degrees in non-English majors, including Geography, Engineering, Philosophy, Law, Mathematics, Psychology and Sociology. The second group, Language Instructors (n=60), reported holding postgraduate degrees in English majors, including Teaching English as a Foreign Language, English Literature, and Translation Studies.

3.3 Instruments

The Teachers' Sense of Efficacy Scale, devised by Tschannen-Moran and Woolfolk Hoy (2001), was used in this study due to "its comprehensiveness, integrity, and ease of administration" (Moafian & Ghanizadeh, 2009, p. 711). It has two versions: a long form (containing 24 items) and a short form (containing 12 items). The researchers used the long form with an overall reliability coefficient of 0.94. According to Moafian and Ghanizadeh (2009), "this scale seeks to capture the multi-faceted nature of teachers' efficacy beliefs in a concise manner, without becoming too specific or too general" (p. 712). The scale contains 24 nine-point Likert scale items with three subscales of efficacy in: (1) student engagement, (2) instructional strategies, and (3) classroom management. The reliability coefficients for the three subscales were reported as 0.87, 0.91, and

0.90, respectively. In the current study, the overall reliability of the scale was calculated via Cronbach's alpha and was found to be 0.90.

In order to determine the subjects' interpersonal and intrapersonal intelligences scores, relevant items were taken from McKenzie's (1999) questionnaire with an overall internal consistency of 0.85 to 0.90 (Al-Balhan, 2006; Hajhashemi & Wong, 2010; Razmjoo, 2008; Razmjoo, Sahragard, & Sadri, 2009), with 10 items measuring interpersonal intelligence and 10 items measuring intrapersonal intelligence. The items were five-point Likert scale ones from 1 (Completely Disagreed) to 5 (Completely Agreed). As far as the current study is concerned, the reliability coefficients for interpersonal and intrapersonal intelligences were calculated via Cronbach's alpha, which was found to be 0.89 and 0.91, respectively.

Respondents were asked to fill in the two questionnaires at a convenient time and place. The two instruments were not translated into Persian, the mother tongue of the participants, due to their proficiency level. It is worth noting that the participants were also asked to provide some demographic information, such as age, teaching experience, educational level, and so forth.

3.4 Procedures

The paper version of the surveys was distributed to the participants, who were given the opportunity to complete the questionnaires at a convenient time and place. After about one week, the questionnaires were collected by the researchers and entered into SPSS (version 16) for further analysis.

4 Results

Table 1 displays the descriptive statistics for interpersonal and intrapersonal intelligences and self-efficacy beliefs of both EAP language and content instructors.

		N	Minimum	Maximum	Mean	SD
Language instructors	Interpersonal intelligence	60	10	49	10.93	4.30
	Intrapersonal intelligence	60	11	52	11.04	4.19
	Self-efficacy	60	157	208	182.03	29.57
Content instructors	Interpersonal intelligence	60	12	48	9.85	4.18
	Intrapersonal intelligence	60	12	51	11.13	4.16
	Self-efficacy	60	148	207	180.45	29.38

Table 1. Descriptive statistics about personal intelligences and self-efficacy beliefs of language and content EAP instructors

With regard to the first research question about the correlation between Iranian EAP instructors' interpersonal and intrapersonal intelligence types, and their self-efficacy, a Pearson product-moment correlation was conducted. Analysis revealed that there was a significant positive correlation between both EAP language and content instructors' interpersonal (r=0.57, $p\le0.01$) and intrapersonal intelligences (r=0.52, $p\le0.01$), and their self-efficacy beliefs.

Moreover, to explore whether there was any significant difference between the EAP language and content instructors with regard to their self-efficacy beliefs, an independent t-test was conducted, but no significant difference was found between EAP language and content instructors in their self-efficacy.

With regard to the final research question about whether there was any significant difference among language EAP instructors' self-efficacy beliefs concerning the context of teaching, a paired sample t-test was conducted. The results (Table 2) reveal that the EAP language instructors' self-efficacy level was somehow higher in the EGP than in the EAP context.

T Groups N M SD Df EGP context 60 197.86 30.57 -0.7159 EAP context 60 182.03 29.38

Table 2. t-Test analysis- Language instructors' self-efficacy beliefs in EGP and EAP contexts

5 Discussion

The current study attempted to shed light on the relationship between Iranian EAP language and content instructors' interpersonal and intrapersonal intelligences, and their self-efficacy beliefs. The results reveal a significant positive correlation between these variables. The findings indicate that high levels of interpersonal and intrapersonal intelligences were related to high levels of self-efficacy. The results of this study are consistent with those of previous studies, in which a strong link was found between EFL teachers' emotional intelligence and their self-efficacy beliefs (Chan, 2004; Moafian & Ghanizadeh, 2009; Rastegar & Memarpour, 2009), as this concept is akin to the concept of personal intelligences (Gardner, 2005). The findings are also in line with those of Tajeddin and Saidi (2011), in which EFL teachers' interpersonal and intrapersonal intelligences were found to be predictors of their self-efficacy. Moreover, it seems possible to postulate that the personal intelligences and self-efficacy beliefs belong to a general ability of being able to take advantage of one's capabilities and awareness of one's strengths and weaknesses to obtain the desired goals. It might further suggest that interpersonal intelligence and intrapersonal intelligence could enhance the instructors' ability to communicate with the learners well and to affect their motivation.

Furthermore, no significant difference was found between Iranian EAP language and content instructors' in their self-efficacy beliefs. One might speculate from these results that EAP instructors would be of the same level of self-efficacy irrespective of the department, language or content, to which they belong. This may also point to the possible effect of a number of other variables, such as content knowledge on their self-efficacy, and so forth.

Finally, it was revealed that Iranian EAP language instructors had higher levels of self-efficacy in EGP classes. This might provide a more comprehensive insight into the role of the instructors' level of content knowledge. In holding EAP classes, taking advantage of language knowledge does not, by any means, suffice.

6 Conclusion and implications

The current study explored the relationship between Iranian language and content EAP instructors' interpersonal and intrapersonal intelligence types, and their self-efficacy beliefs. The findings reveal a positive significant correlation between these two intelligences and the EAP instructors' sense of efficacy, as well as the seemingly similar nature of their personal intelligences and self-efficacy. The findings of the current research might suggest the incorporation of these intelligences in EAP teacher education programs in order to increase the instructors' self-efficacy in the EAP context. For instance, various workshops might be held in which the teachers are provided with ample opportunities to develop their MIs.

Furthermore, the results revealed no significant difference between Iranian EAP language and content instructors in their self-efficacy beliefs in the EAP context. One should try to keep this high level of efficacy among EAP instructors. To do so, according to Goker (2006) and Schacher and Schmuelevitz (1997), it is recommended to develop peer coaching training programs in order to enhance the cooperation between EAP content and language instructors. In this way, the level of their self-efficacy would remain high; thereby, the learners' motivation and achievement would increase (Caprara et al., 2006; Ross, 1992).

Furthermore, the findings also show that language instructors would feel more efficacious in EGP classes than in EAP ones. The findings of the current study might lead to the conclusion that

^a Significant

language instructors should delve more into the content knowledge which they are supposed to present in EAP classes. Moreover, it might suggest that educational programmers should consider some in-service training courses for language EAP instructors in the specific fields of study they are supposed to present in EAP classes.

The results of the current study, however, must be approached cautiously, since the findings are based on a specific sample of EAP instructors who were selected via convenient sampling. Applying a number of qualitative tools, such as observations, interviews and so forth is also recommended, since the results of the current study were merely based on self-report questionnaires. Nevertheless, it seems reasonable to say that no one can judge the instructors' self-efficacy and intelligences better than themselves. Additionally, the current study can be replicated to take the instructors' gender, age, and experience into account. Furthermore, exploring the possible influence of EAP instructors' content knowledge on their self-efficacy beliefs might be a topic of future studies. The current study addressed two personal intelligences. It can be replicated with other intelligence types, such as linguistic intelligence, to find out whether they would contribute to the EAP instructors' self-efficacy. Similar studies can be conducted to investigate the possible effect of teachers' socio-economic status on their MIs and self-efficacy. Furthermore, future studies may deal with the incorporation of MI theory in EAP classes.

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