FRAMES OF REFERENCE MODEL OF SELF-CONCEPT AND LOCUS OF CONTROL AMONG A SAMPLE OF EMIRATI SCHOOL BOYS AND GIRLS

MAHER M. ABU-HILAL, Ph.D.

DEPARTMENT OF PSYCHOLOGY
UNITED ARAB EMIRATES UNIVERSITY
Abstract

The purpose of this study was to test predictions for I/E frame of reference model and extend this model to include locus of control. A sample of elementary (181) and junior high (191) students participated in the study. Structural equation modeling (SEM) analyses provided support to the external comparison predictions of the I/E frame of reference model for boys and more clearly for girls. Internal comparison predictions were also supported for boys and to a lesser extent for girls. Relations among achievement, self-concept, and locus of control were not the same across gender. Mathematics self-concept significantly predicted both internal and external locus of control only for girls. Verbal self-concept failed to predict internal and external locus of control either for boys or girls. Mathematics achievement had significant indirect effects on internal and external locus of control but verbal achievement did not have such effects. The present study confirmed previous findings for the I/E model with western samples, thus adding more to the universality of the model. However, the findings relating achievement, self-concept and locus of control may need more investigation with some emphasis be directed to the level of specificity at which each of the construct was measured. Whereas self-concepts were content specific, locus of control is rather general. The validity and reliability of locus of control in non-western settings should be investigated further to achieve more reliable and consistent results.
ملخص

هدفت الدراسة الحالية إلى اختبار مجموعة من الفرضيات المتصلة في نموذج الإطار المرجعي الداخلي/الخارجي كما اقترحه مارش (1988) (Marsh, 1988) وإضافة موقع التحكم إلى النموذج. شارك في الدراسة 181 طالبًا من المدرسة الإبتدائية و191 مدرسة الإعدادية. تم استخدام المعادلات الخطية البينانية التي قدمت دعماً واضحاً للفرضيات المتعلقة بالإطار المرجعي الخارجي للأولاد والبنات. كما تحقق الفرضيات المتعلقة بالإطار المرجعي الداخلي للأولاد ودرجة أقل للبنات. أظهرت معايير الارتباك بين التصنيف ومفهوم الذات وموقع الضغط تفاوتًا في العلاقات بين هذه المتغيرات لدى كل من الأولاد والبنات. يمكن مفهوم الذات (الرياضيات) من التنبؤ بموقع الضغط الداخلي والخارجي لدى البنات فقط. ولكن لم يتمكن مفهوم الذات اللغز من التنبؤ بموقع الضغط الداخلي أو الخارجي لأي من الأولاد والبنات. كما كان لمفهوم الذات (الرياضيات) تأثير غير مباشر على كل من موقع الضغط الداخلي والخارجي ولم يظهر ذات التأثير لمفهوم الذات اللغز. وقد بينت نتائج الدراسة الحالية أن النموذج يتمتع بدعم عبر تجافي. إلا أن الدراسة الحالية توصي بضرورة الاهتمام بمستوى التخصص أو التعليم عند التعامل مع المتغيرات، حيث قيس مفهوم الذات على مستوى من التخصص في حين قيس موقع الضغط بدون ذات التخصص، أي بدرجة من العمومية. كما توصي الدراسة بزيادة البحث في موقع الضغط لاسيما معناه وقياسه في المجتمعات غير الغربية.
Mathematics is stereotyped as a male domain (Fennema & Sherman, 1978) whereas reading and languages are stereotyped as female domains (Marsh, 1989; Parson, Meece, Adler, & Kaczala, 1982; Skaalvik & Rankin, 1994). In their review of research, Maccoby and Jacklin (1974) concluded that boys demonstrated higher mathematical ability and that girls demonstrated higher verbal ability. Results of empirical subsequent research have been mixed. Some researchers have shown that high school boys outperform girls on mathematics achievement tests whereas in elementary school boys and girls don't differ. (e.g., Ewers, & Wood, 1992, Marsh, 1989, Skaalvik, 1990). Meece, Wigfield and Eccles (1990) and Randhawa (1994) reported significant mathematics achievement difference in favor of boys. Skaalvik and Rankin (1994) found no significant difference in mathematics achievement between boys and girls for sixth and ninth graders, but found significant difference in verbal achievement favoring girls in the same two grades.

Several explanations have been offered to account for gender's difference. Some researchers have argued that sex differences in mathematics achievement, in particular, result from superior male mathematical ability (e.g. Benbow & Stanley, 1980, 1983; Jensen, 1980). Others have argued that the difference is due to the pattern of quantitative coursework taken by men and women (e.g., Ethington, & Wolfle, 1984, 1986, Pallas & Alexander, 1983). A third group of researchers argued that the difference between men and women in mathematics achievement is due to differential socialization processes (e.g., Abu-Hilal 1992; Eccles, 1987; Fennema & Sherman, 1978; Marsh, 1989, 1993; Randhawa, 1994).

**Gender, self-concept and achievement**

Marsh (1989) explained that sex stereotypes and differences in socialization patterns may reinforce boys' positive attitudes, motivation, and self-perceptions in mathematics and girls' attitudes, motivation and self-perceptions in language arts. Therefore, boys may show more confidence in their mathematical abilities than their verbal abilities, whereas girls may show more confidence in their verbal abilities than their mathematics abilities (Marsh, 1986, 1993;
Skaalvik, & Rankin, 1994). Consequently, it has been assumed that boys would have higher mathematics self-concept than girls and that girls would have higher verbal self-concept than boys (Eccles, 1987; Eccles, Adler, & Meece, 1984; Pallas & Alexander, 1983). Several empirical studies have provided support to such hypothesis (e.g., Eccles, 1987; Eccles, Wigfield, Harold & Blumenfeld, 1993; Marsh, Byrne, & Shavelson, 1988; Marsh, Parker, & Barnes, 1985; Marsh, Smith, & Barnes, 1985; Martin & Debus, 1998, Meece, et al., 1990; Skaalvik, 1994; Stevenson & Newman, 1986). However, some researchers have failed to provide support to the previous hypothesis (e.g., Marsh, 1989; Marsh et al. 1985; Parson, Meece, Adler, & Kaczała, 1982). Also, some researchers (e.g., Marsh et al., 1988; Marsh, Parker, & Barnes, 1985; Marsh, Smith, & Barnes, 1985; Stevenson & Newman, 1986) reported that verbal self-concept was higher for girls than boys, however, several studies have failed to support such result (e.g., Eccles et al., 1993, Marsh, 1989, 1986, 1993, Skaalvik, 1994, Wigfield, Eccles, MacIver, Rueman, & Midgley, 1991). Marsh, Barnes, Crains and Tidman (1984) found significant sex effect on reading self-concept but found no such effect on mathematics self-concept for children in primary grades. Marsh et al (1984) concluded that sex differences in math self-concept are not well established before junior high school. Later, Marsh (1989) however, found small gender differences (invariance among constructs' correlations) with high school subjects and concluded that his results didn't support the differential socialization hypothesis.

Researchers have focused not only on comparing boys and girls' achievement, abilities, self-perceptions, and attitudes, but some have also explored the pattern of relationship among these variables for boys and girls. For example Abu-Hilal (2001), Ethington, & Wolfe (1986) and Skaalvik (1994) have found that the pattern of relation is not the same across gender. Ethington Wolfe (1986) found that the magnitude of correlation between mathematics achievement and attitudes for boys was greater than the correlation for girls. Similarly, Randhawa, Beamer, and Lundberg (1993) found that attitude and self-efficacy in mathematics were related to achievement more strongly for boys than for girls.
Internal/External frame of reference.

Marsh, Walker and Debus (1991) argued that students use their performances in various domains and the performances of their classmates to establish frames of reference for self-evaluation. Specifically, Marsh and Shavelson (1985) stated that "students based their academic self-concepts in particular subjects on their ability in that subject compares with other students (external comparison) and how their ability in that particular subject compares with their abilities in other subjects (internal comparison)" (p. 120). External comparison process predicts that good verbal skills lead to higher verbal self-concept and good mathematics skills lead to higher mathematics self-concept. Internal comparison process, on the other hand, predicts that good mathematics skills lead to lower verbal self-concept and good verbal skills lead to lower mathematics self-concept. These predictions have received considerable attention and support by empirical research with western samples (e.g., Byrne & Shavelson, 1987; Hay, Ashman, & van Kraayenoord, 1997; Marsh, 1984, 1986, 1988, 1990, 1994; Marsh, Byrne, & Shavelson, 1988, Marsh et al., 1985; Marsh & O'Neill, 1984; Marsh Walker, & Debus, 1991; Marsh & Yeung, 1998; Moller, 2001; Skaalvik & Skaalvik, 2001).

Hay et al. (1997) tested predictions for the external comparison process and provided support for those predictions: As students' grades rose above class average, their self-concepts increased, and as students' grades fell below their class average their self-concepts decreased. Hay, Ashman, van Kraayenoord, & Stewart (1999) tested predictions for the internal comparison and demonstrated that students with high reading and low mathematics skills did not increase their reading self-concepts. Also, they found that mathematics self-concept of children with high mathematics skill was reduced when their reading performance was low. Hence, predictions for the internal comparison were not clearly supported by Hay et al. (1999). In earlier studies, Butkowsky (1982) and Newman and Stevenson (1990) found that poor readers but successful in mathematics reported low self-evaluations in mathematics compared with good readers. Poor readers, who were also successful in mathematics attributed mathematics and
reading outcomes to external causes, indicating that negative self-evaluations in one domain may transfer to another and not compensating for them. Marsh (1988) reported the results of 8 studies (13 analyses) that tested predictions of the I/E model. Marsh found that the patterns of relations of mathematics achievement with verbal and mathematics self-concepts, and verbal achievement with verbal and mathematics self-concepts were supportive of the predictions of the I/E frame of reference model in all 13 analyses.

The internal/external frame of reference model is an outgrowth of the cognitive evaluation theory (Fistengen, 1954) and self-worth theory. The cognitive evaluation theory emphasized the use of social comparison as an evaluation of one's performance to a frame-of-reference group, where a downward comparison group helps increasing and an upward comparison group helps reducing the person's self-concept.

According to the self-worth theory (Covington, 1992), an individual learns that one is valued because of his/her accomplishments. Accomplishments are usually judged by comparing one's accomplishments with those of others and in the context of the perceptions of one's abilities in one domain and in other domains as well. Nicholls (1984) indicated that children's perceptions of their academic abilities decline as they proceed through school. In early school days, children generally believe that effort is very important attribute. Later on, students' self-perceptions of ability and competence tend to decrease as social comparisons are made and as feedbacks from others are internalized. The children's sense of worth begins to depend on whether they do better or worse than other students. Also, children begin to realize that effort doesn't compensate entirely for ability. In any case, children try to preserve and/or enhance their self-worth. Those who succeed would enhance their self-worth, but those who fail and especially who expend effort and still fail would feel a threat to their self-esteem.

Self-worth theory (Covington, 1983, 1992) and self-attribution theory (Rotter, 1966; Weiner, 1979) provided explanation to the tactics individuals use to maintain self-worth in the face of a large amount of negative and threatening social and external feedbacks. Rueda and Dembo (1995) indicated that teachers are not
consistent in their feedbacks to their students. Teachers tend to reward more and punish fewer students who expend effort than students who don't try. Therefore, students who don't try are reinforced, and at the same time, they have a handy rationalization that success could have been achieved if proper effort is expended. This safe strategy of many students was summarized by Covington (1983) "Try, or at least appear to try, but not too energetically and with excuses always at hand" (p.149). In Summary, one may select a comparison group that is below his/her level of skill or avoid working hard to preserve and enhance his/her self-concept.

Marsh (1984) argued that the way children attribute outcomes to internal or external causes are related to achievement and self-concept: "academic achievement, self-concept, and self-attributions are interwoven in a network of reciprocal relations such that a change in anyone will produce other changes in order to reestablish an equilibrium (p.1307). He indicated that a positive relation between self-concept and ability attribution has been broadly documented. However, the relation between self-concept and effort attribution is controversial. The academic locus of control that is employed in the current study involves effort and competence combined but not ability. Although effort has been classified as a component of internality and its expenditure may reduce negative affect, high effort also implies that low ability is the outcome (Covington & Omlich, 1984). Covington and Omlich proposed that "when the causal role of ability in success diminishes, effort becomes more important" (p.160).

In contrast with self-worth theory, Marsh (1984) argued that self-attributions are determined by achievement and self-concept (see also Calsyn & Kenny, 1977). Nevertheless, Marsh didn't reject that self-attributions determine academic achievement and self-concept and contended that both causal orderings are consistent with his dynamic equilibrium model. Unexpectedly, however, Marsh (1984) found that self-concept was uncorrelated with external attribution whether for success or failure. But, self-concept and internal attributions (positive ability and effort) were positively related. In line with self-worth theory's model of causal ordering, Bandalos, Yates, and Thorndike-Christ (1995) found that mathematics self-concept for college men and women was negatively related to
external attributions for success but not for failure. This relationship, however, was not the same for men and women. Also, Bandallos et al. found that self-concept and achievement were substantially related and this relationship was invariant across gender.

As for the literature in Arabic, Abu-Hilal (2001) indicated that very few systematic studies have been conducted to test the relationships among affective and cognitive variables in Arab countries. Specifically, no study has been carried out to test predictions of models and theories such as the I/E model, or self-worth theory. Although we recognize that those theories and models are subject to cultural differences (Salili, 1995) such studies in non-western cultures would broaden and deepen our understanding of those models and theories. Similar to western findings, subject matter like mathematics and science are stereotyped as male domains and language arts and social studies are stereotyped as female domains (Skålvik & Rankin, 1994). However, whereas western researches have sometimes reported contradictory results regarding gender differences in achievement and other related affective variables, research in the United Arab Emirates has produced consistent differences favoring girls (e.g., Aal-Hussain, 1993; Abu-Hilal, 1992; Abu-Hilal, 2001; Abu-Hilal & Aal-Hussain, 1997; Abu-Hilal & Abdel-Hamid, 1989; Abu-Hilal & Bahri, 2000; Hassan & Khalifa, 1999).

Several studies in the UAE have shown that girls outperformed boys in almost every subject matter (e.g., Abu-Hilal, 2001; Abu-Hilal & Abdel-Hamid, 1989 Hassan & Khalifa, 1999) and most affective variables such as attitudes, motivation self-concept and effort (e.g., Abu-Hilal 1992, Abu-hilal, 2001; Abu-Hilal & Aal-Hussain, 1997). Abu-Hilal and Abdel-Hamid (1989) compared the scores of boys and girls on the secondary general examinations conducted in 1987 in Al-Ain school district and found the averages of girls were significantly greater than the averages of boys in all subjects except English. Hassan and Khalifa (1999) compared the boys' and the girls' scores in science on the secondary general examinations over a ten-year period and found that girls consistently outscored boys in those ten years.

Abu-Hilal (1992, 2001) also found that girls were better achievers less anxious of mathematics and had more positive
attitudes to mathematics than boys. Aal-Hussain (1993) found that high school Emirati girls had significantly higher verbal and, mathematics achievements and self-concepts than boys did. However, he found that the correlations among these variables were similar for boys and girls. Also, Aal-Hussain reported that sex had a significant effect on mathematics achievement after controlling other variables (e.g., self-concept, IQ, SES), but sex did not have a significant effect on verbal achievement. Abu-Hilal and Aal-Hussain (1997) found that girls were more able to distinguish their self-worth in various areas than boys; girls didn't only score higher than boys did in most of self-concept facets, but were also more realistic and consistent in their self-evaluations. At the college level, Abu-Hilal and Al-Dahri (1993) found that girls had significantly higher GPA and were more motivated than boys. Al-Omer (1995) found that Kuwaiti college girls were more intrinsically motivated than boys.

**The present investigation**

Based on previous research in the west and the results of Abu-Hilal and Aal-Hussain (1997) in the Arab culture, the present study was designed to examine the following hypotheses:

(1) Verbal achievement is predicted to be positively related to verbal self-concept, and mathematics achievement to be positively related to mathematics self-concept. The cross links between verbal achievement and mathematics self-concept and between mathematics achievement and verbal self-concept are expected to be negative.

(2) The relationships between self-concept constructs and internal locus of control are predicted to be positive and those between self-concept and external locus of control are expected to be negative.

(3) It is expected that self-concept constructs would mediate the relations between achievement and internal locus of control positively, while the indirect relations between achievement and external locus of control is expected to be negative.
METHOD

Sample
The sample consisted of 259 boys from grades 6 (n=109) and 9 (n=150), and 135 girls from grades 6 (n=72) and 9 (n=63) from Al-Ain school district. Al-Ain school district has 28 elementary public schools (15 for boys and 13 for girls) and 9 junior high schools (4 for boys and 5 for girls). Four elementary schools (2 boys and 2 girls) and four junior high schools (2 boys and 2 girls) were randomly selected. Because the study was conducted two weeks before the final exams, two of the girls' schools refused to participate in the study. The listwise deletion method of non-complete data dropped 13 cases from the boy's sample and 22 cases from the girl's sample. The final samples were 246 boys and 113 girls.

Instruments
An inventory comprising several scales including two subscales of the SDQ-I (verbal and mathematics) and academic locus of control was administered to intact classes during one class session. The items were read aloud to students in grade 6 only. Verbal and mathematics subscales of the SDQ-I and academic locus of control have been validated in the United Arab Emirates (see Abu-Hilal & Aal-Hussain, 1997, Abu-Hilal & Bahri, 2000, Al-Emadi, 2001).

Self-Description Questionnaire (SDQ-I). Each of the verbal and math self-concept subscales consisted of eight items rated on a 5-point Likert scale: false (1), mostly false (2) sometimes false/sometimes true (3), mostly true (4) and true (5). Hence, the higher the score the more positive the self-concept. Items related to such things as perceived ability ("I am good at mathematics") ("and level of comfort with the subject matter ("I like mathematics"). ("") Coefficient alphas were computed for the present sample and found to be .89 and .88 for verbal and mathematics self-concept scales, respectively. Four indexes were created (2 verbal and 2 mathematics) by summing four items for an index.
**Academic locus of control.** The academic locus of control scale was adapted from Palenzuela (1984). Palenzuela (1984, 1988) and Millar and Irving (1995) presented adequate levels of reliability and validity estimates for the scale with American and British samples. The Arabic version used in the current study comprised nine items purporting to measure four constructs: personal competence and effort as a cause for success ("If I want to get a good academic record I have to be competent and I must work hard"), general effort ("In general, I believe that if one is competent and work hard, one will get good results in one's studies"), luck ("Luck is something decisive in the kinds of marks I'll get in my studies"), and helplessness ("I am convinced that whatever I do, my teachers will always give me the marks they want to"). The first two constructs of the scale represented the internal locus of control, while the latter two represented external locus of control. Based on the factor analysis for the item scores, four indexes were created. Each index was a sum of two items, except for personal effort that had three items. Alpha coefficients were computed for internal (.59) and external locus of control (.58). Alphas with college students in the United Arab Emirates (Al Emadi, 2001) were much greater than those reported in this study may be due to the hypothetical nature of some items.

**Academic achievement.** Grades in Arabic (VACH) and mathematics (MACH) are aggregate of scores representing various academic activities such as assignments, quizzes, and examinations in the two subjects and were obtained from the official school records. The possible range of scores is between zero and 100.

**Proposed Model and Analyses**

The purpose of the current study was to test of the relationships among the constructs of verbal and mathematics achievement, verbal and mathematics self-concept, internal locus of control, and external locus of control with structural equation modeling. The model tested was composed of three parts: two exogenous variables (VACH and MACH) that were allowed to correlate freely. These two variables were assumed to be directly linked with verbal and mathematics self-concepts. This part of the model represented the internal/external (I/E) frame of reference model and was based
on its predications. The second part linked verbal and mathematics self-concepts with internal and external locus of control. The constructs of internal and external locus of control were assumed to be indirectly predicted by verbal and mathematics achievements through verbal and mathematics self-concepts. The full model is shown in Figure 1.

The correlation matrices of the observed variables for boys and girls were computed, then transformed into covariance matrices, and used as input to the EQS program (Bentler, 1995) to analyze the structural model. Verbal and mathematics achievements were specified to be fixed as manifest variables that were thought to influence the latent endogenous variables. The latent endogenous variables were assumed to be uncorrelated. However, disturbances of the two self-concept constructs for girls were allowed to correlate ad hoc. The chi squared likelihood ratio, LISREL goodness of fit index (GFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA) were used as criteria to assess the fit of models for boys and girls, separately.

RESULTS
In order to explore the relationships among the observed variables, Pearson product-moment correlation matrix was computed, the result of which can be seen in Table 1. Also, means and standard deviations were computed and are presented in Table 1. Inspection of the correlation coefficients and means revealed few significantly different statistics across gender. Because of these differences, the structural analyses were conducted for boys and girls separately (see Bentler, 1995).

Correlations among latent constructs
Prior to testing the structural model, a measurement model was tested for each sex. Of particular interest are the correlations among the latent constructs. Table 2 shows these correlations. For boys, verbal and mathematics self-concepts were significantly correlated \( (r = 0.35, p < .01) \). Verbal self-concept was not significantly correlated with either internal \( (r = 0.18) \) or external \( (r = 0.14) \) locus of control. Neither mathematics self-concept was significantly correlated with internal \( (r = 0.24) \) or external \( (r = -0.06) \)
locus of control. Internal and external locus of control were not significantly correlated ($r = -0.24$, $p > .05$). For girls, verbal and mathematics self-concepts were un-correlated ($r = 0.18$, $p > .05$). Verbal self-concept was significantly correlated with internal ($r = 0.34$, $p < .01$) but not with external ($r = -0.01$, $p > .10$) locus of control. Mathematics self-concept was positively correlated with internal ($r = 0.78$, $p < .01$) and negatively correlated with external ($r = -0.36$, $p < .01$) locus of control. Internal and external locus of control were negatively correlated ($r = -0.59$, $p < .01$).

**Table (1)**

Correlation Coefficients, Means, and Standard Deviations of the Study Variables for Boys (Above Diagonal) and Girls (Below Diagonal)

| Variables | M. | SD  | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
|-----------|----|-----|------|------|------|------|------|------|------|------|------|------|------|
| M.        | 75.8 | 74.0 | 6.36 | 4.68 | 13.0 | 9.5  | 15.3 | 14.2 | 14.0 | 13.8 |
| S.D       | 12.8 | 17.3 | 2.7  | 2.5  | 2.2  | 1.3  | 3.4  | 4.5  | 4.3  | 4.2  |
| 1. VACH   | 71.8 | 12.9 | ---  | .81  | -.32 | -.08 | -.04 | .04  | .24  | .06  | .30  | .25  |
| 2. MACH   | 70.2 | 19.6 | .84  | ---  | -.32 | -.01 | -.01 | .03  | .16  | -.06 | .52  | .44  |
| 3. LUCK   | 5.9  | 2.8  | .36  | -.36 | ---  | .23  | -.07 | .03  | .11  | .21  | .03  | .01  |
| 4. HELPLES| 5.7  | 2.4  | -.21 | -.22 | .48  | ---  | .05  | -.13 | -.00 | .04  | .03  | .03  |
| 5. EFFORT1| 13.3 | 2.1  | .34  | .34  | -.23 | ---  | .24  | .07  | .04  | .08  | .17  |
| 6. EFFORT2| 9.3  | 1.3  | .20  | .17  | -.24 | -.25 | .24  | ---  | .11  | .09  | .14  | .07  |
| 7. VSC1   | 16.2 | 3.4  | .23  | .04  | .00  | -.16 | .27  | -.01 | ---  | .76  | .34  | .30  |
| 8. VSC2   | 15.8 | 3.9  | .05  | -.14 | .01  | -.14 | .14  | -.05 | .69  | ---  | .16  | .13  |
| 9. MSC1   | 14.3 | 4.2  | .54  | .69  | -.30 | -.26 | .40  | .22  | .21  | .06  | ---  | .84  |
| 10. MSC2  | 14.4 | 4.1  | .52  | .63  | -.33 | -.10 | .48  | .31  | .16  | -.04 | .80  | ---  |

**Note.** VACH: Verbal achievement; MACH: Math achievement; VSC: Verbal self-concept; MSC: math self-concept. For boys coefficients > .14 p. < .05 and > .19 p. < .01; for girls coefficients > .19 p. < .05 and > .25 p. < .01
Table (2)

Correlation Coefficients among Latent Factors for Boys (Above Diagonal) and Girls (Below Diagonal)

<table>
<thead>
<tr>
<th>Factor</th>
<th>VSC</th>
<th>MASC</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSC</td>
<td>-</td>
<td>.35*</td>
<td>.18</td>
<td>.14</td>
</tr>
<tr>
<td>MASC</td>
<td>.18</td>
<td>-</td>
<td>.24</td>
<td>.06</td>
</tr>
<tr>
<td>Internal</td>
<td>.34*</td>
<td>.78*</td>
<td>-</td>
<td>-.24</td>
</tr>
<tr>
<td>External</td>
<td>-.01</td>
<td>.36*</td>
<td>-.59*</td>
<td>-</td>
</tr>
</tbody>
</table>


Structural equations analysis

Boys' Results

Figure 1a shows the results of the structural model for boys. The analysis of the boys' data yielded a $\chi^2 (28, \ N = 246) = 131.21$, p. = .000 (GFI = .91; CFI = .90; RMSEA = .12). Verbal and mathematics achievements were highly correlated (r = .81). The paths from VACH to verbal self-concept ($\beta =$0.30, p. < .01) and from MACH to the respective self-concept ($\beta =$ 0.80, p. < .001) were consistent with our predictions and previous research. The two path coefficients addressed the external comparison predictions of the I/E frame of reference model. It should be noted that the path coefficient from VACH to verbal self-concept is markedly smaller than the path coefficient relating MACH to its respective self-concept. This result tends to support previous results with non-western students (e.g., Abu-Hilal & Bahri, 2000). Abu-Hilal and Bahri contended that the nature and content of mathematics are different from Arabic language. Whereas mathematics primarily deals with numbers, language covers several areas such as grammar, literature, reading, comprehension, dictation, and composition. Abu-Hilal and Bahri (2000) argued that it was easier for students to identify self-worth in mathematics than in Arabic.

Also, the structural analysis produced results consistent with predictions for internal comparison. The path coefficients from VACH to mathematics self-concept ($\beta =$ -0.35, p. < .01) and from
MACH to verbal self-concept (β = -0.30, p < .01) were, as was predicted, significantly negative.

In regard to the relations between the constructs of self-concept and the constructs of locus of control, none of the path coefficients was significant and in the predicted direction. The direct path from verbal self-concept to the external locus of control was significant (β = 0.21, p < .01) but in the opposite expected direction. That is, students who held positive verbal self-concept tended to attribute their successes and failure to external causes such as luck and helplessness. No indirect relations between VACH and MACH and locus of control constructs were significant.

**Girls' Results**

The same model was tested for girls with disturbances of the two self-concept latent constructs were set free to correlate as an ad hoc (Figure 1b). The analysis of the girls' data yielded a $\chi^2 (27, N = 113) = 55.86$, p = .001; GFI = .91; CFI = .94; RMSEA = .10, a much improved fit over the boy's model. The two exogenous variables, VACH and MACH, were highly correlated ($r = 0.84$). The path from VACH to verbal self-concept ($β = 0.73$, p < .001) and from MACH to mathematics self-concept, ($β = 0.83$, p < .001) were consistent with the predictions of the I/E frame of reference model and supported the external comparison process.

In regard to the internal comparison, our predictions were also supported. Both of the cross-links were negative as was predicted. However, only the path from MACH to verbal self-concept was negatively significant ($β = -0.61$, p < .001); whereas, the path from VACH to mathematics self-concept was negative but non-significant. The path coefficients from mathematics self-concept to internal ($β = 0.66$, p < .00) and to external locus of control ($β = -0.43$, p < .001) were significant and in the predicted direction. That is, the more positive self-concept the girl held the more internally oriented and less externally oriented she was. However the results were not the same for the relationship between verbal self-concept and the locus of control constructs. Neither path coefficient was significant (verbal self-concept to internal locus was 0.22, p > .05, and to external was .05, p > .10). That is, no relation existed between verbal self-concept and the way girls attributed their success or failure.
Consistent with our predictions, MACH had significant indirect effects on internal ($r^2 = 0.42$, p. < .01) and external ($r^2 = -0.39$, p. < .01) locus of control. However, no indirect effects for VACH on internal or external locus of control were significant.

Note: * variances for the two factors are correlated $r = .36$, p. < .01
* $R^2$ = squared multiple correlation

FIGURE 1: INTERNAL/EXTERNAL FRAME OF REFERENCE MODEL FOR BOYS

FIGURE 2: INTERNAL/EXTERNAL FRAME OF REFERENCE MODEL FOR GIRLS
Summary and Discussion

The present study sought to investigate the relationships among achievements and self-concepts of language arts and mathematics, and locus of control. Mathematics and verbal achievements were hypothesized to positively predict mathematics and verbal self-concepts, respectively. It was also hypothesized that verbal achievement would negatively predict mathematics self-concept, and mathematics achievement would negatively predict verbal self-concept. Verbal and mathematics self-concepts were hypothesized to predict positively internal locus of control and negatively external locus of control. Verbal and mathematics achievements were hypothesized to be associated positively indirectly with internal locus of control, but negatively indirectly with external locus of control. It was also hypothesized that the pattern of relations among these constructs would be different for boys and girls.

Consistent with hypotheses and predictions for the external comparisons of the I/E frame of reference model, the results of this study revealed that each of verbal and mathematics achievements was positively related to its respective self-concept. As students compared their skills in each of the two subjects with other students, those with high skills tended to develop more positive verbal and mathematics self-concepts. Conversely, students who had lower verbal and mathematics performance demonstrated less positive self-concept for each of the two subjects. These results are consistent with previous findings by Hay et al. (1997), Marsh (1986, 1990) and Skaalvik and Rankin (1995). Also, these findings replicate previous findings with non-western samples (Abu-Hilal & Bahri, 2000). Abu-Hilal and Bahri concluded that "the effect of verbal and math achievements on their respective self-concepts were straightforward, and were consistent with predictions" (p. 318).

Comparing path coefficients across gender, it can be noted (see Figure 1) that whereas the path coefficients from MACH to mathematics self-concept were similar for boys (0.80) and girls (0.83), path coefficients from VACH to verbal self-concept were markedly smaller for boys (0.30) than for girls (0.73). These results contradict the findings of Ethington and Wolfle (1986) who found
that the relations between mathematics achievement and attitudes were not the same across gender. However, in the present study the paths from mathematics achievement to self-concept for boys and girls were markedly similar. The finding of the mathematics segment of the model seem to provide support to Marsh's (1989) gender invariant model, but the finding for the verbal segment contradicts the gender invariant model and provides support to the differential socialization hypothesis.

The relations among self-concept constructs and locus of control constructs are more complex than can be accounted for by our predictions. For boys, none of the path coefficients between the self-concept constructs and locus of control constructs were significant and in the predicted direction. However, for girls, two path coefficients were significant and in the predicted direction. Girls high on mathematics self-concept attributed their failure and success to internal causes, mainly effort. Also, girls low on mathematics self-concept attributed their failure and success to external causes such as luck and biases of teachers. According to the arguments in the first section of this paper, internal locus of control should have been more strongly related to girls' verbal self-concept than to their mathematics self-concept. At least, this is the argument made by many western researchers (e.g., Fennema & Sherman, Ethington & Wolfe, 1986, Skaalvik & Rankin, 1994). The case is completely different in the United Arab Emirates. In the current study boys slightly outscored girls in Arabic and mathematics, an uncharacteristic finding of real achievement for boys and girls in the UAE. Several studies in the UAE have shown that girls outperformed boys in almost every subject matter (e.g., Aal-Hussain, 1993; Abu-Hilal, 2001; Abu-Hilal & Abdel-Hamid, 1989 Hassan & Khalifa, 1999) and most affective variables such as attitudes, motivation self-concept and effort (e.g., Aal-Hussain, 1993; Abu-Hilal 1992, Abu-hilal, 2001; Abu-Hilal & Aal-Hussain, 1997). Abu-Hilal and Abdel-Hamid (1989) compared the scores of boys and girls on the secondary general examinations conducted in 1987 in Al-Ain school district and found the averages of girls were significantly greater than the averages of boys in all subjects except English. Hassan and Khalifa (1999) compared the boys' and the girls' scores in science on the secondary general examinations over a ten-year period and found that girls
consistently outscores boys in those ten years. Abu-Hilal (1992, 2001) also found that girls were better achievers less anxious of mathematics and had more positive attitudes to mathematics than boys. Abu-Hilal and Aal-Hussain (1997) found that girls were more able to distinguish their self-worth in various areas than boys; girls didn't only score higher than boys did in most of self-concept facets, but were also more realistic and consistent in their self-evaluations.

The weak relations of achievements and self-concepts with internal and external locus of control are probably due to some limitations inherent in the design of the present study. Specifically, the six variables were measured at different levels of specificity. Whereas achievement and self-concept were content specific (i.e., verbal and math), locus of control constructs were rather generally measured, i.e., they are not related to specific contents. Also, the reliabilities of the two locus of control constructs were rather weak. The instrument was originally developed for older subjects, college students, and it was adapted to younger students. In comparison, Marsh (1984) used a well developed and reliable instrument of self-attribution where the items were designed to measure self-attribution in reading and mathematics, and their relations with reading and mathematics achievement and self-concepts were examined. Future research with non-western samples may need to consider using more valid and reliable measures of locus of control that are directed to measure locus of control in specific school subjects. As the constructs are measured at the same level of specificity, predictions then can be tested.

In conclusion, the results of this study seem to support the differential socialization hypothesis. Although no invariance tests across gender were conducted, the magnitude and pattern of coefficients indicated that the relations among the constructs were not the same for boys and girls. Future research with non-western samples may consider investigating this issue further and may add age as another possible confounding factor with gender.

References

and academic self-concept of twelfth grade students in the United Arab Emirates. (Unpublished doctoral dissertation, the University of Hull, UK).


Validation of the Counselor Self-Efficacy Scale in the United Arab Emirates

Fatima R. Al-Darmaki, Ph.D.
United Arab Emirates University
Abstract

The main purpose of this study was to examine the reliability and validity of the Counselor Self-Efficacy Scale (CSES) based on a sample from the United Arab Emirates (UAE) University college population. One hundred thirteen male and female psychology students participated in the study. Some demographic variables (i.e., number of credit hours completed by the subjects and Grade Point Average), Problem-Solving Inventory (PSI), and Self-Efficacy Scale were used to test the construct-related validity of the CSES. Factor analysis of the CSES revealed two factors: Counselor's Effectiveness and Adequacy of Counselor's Helping Skills and Knowledge. Participants who reported stronger perceptions of counseling self-efficacy also reported higher problem-solving appraisal and stronger perceptions of general and social self-efficacy. Furthermore, the number of credit hours completed by the subjects was positively associated with CSES scores. Findings are discussed and recommendations for future research are provided.
ملخص

يهدف هذا البحث إلى دراسة ثبات وصدق مقياس الكفاءة الذاتية الإرشادية على عينة من مجتمع طلبة جامعة الإمارات العربية المتحدة قوامها 113 طالباً وطالبة من برنامج علم النفس، واستخدم كل من مقياس حل المشكلات ومقياس الكفاءة الذاتية وبعض المتغيرات الديموغرافية (عدد الساعات المعتمدة المنجزة، المعدل التراكمي) في هذه الدراسة للتحقق من صدق مقياس الكفاءة الذاتية الإرشادية. أسفرت نتائج التحليل العاملي لمقياس الكفاءة الذاتية الإرشادية عن عاملين هما: فعالية المشرف ومدى كفاءة معلومات ومهارات المرشد. كما أشارت النتائج إلى وجود علاقة إيجابية بين درجات أفراح العينة على مقياس الكفاءة الذاتية الإرشادية وكل من مقياس حل المشكلات والكفاءة الذاتية، إي أن الكفاءة الذاتية الإرشادية المرتفعة ارتبطت بتقديرات مرتفعة في حل المشكلات والكفاءة الذاتية. كما اتضح من النتائج وجود علاقة إيجابية بين عدد الساعات المعتمدة المنجزة ومقياس الكفاءة الذاتية الإرشادية.
Research on counselor development has focused on the application of self-efficacy theory (Bandura, 1977, 1982, 1989, 1997) to investigate the process of gaining competency and confidence pertaining to counseling. In particular, perceived self-efficacy has received considerable attention in the counselor development literature. Perceived self-efficacy is defined as people's judgment of their capabilities to organize and execute courses of action in a given situation to produce desired outcomes (Bandura, 1997, p. 3). The theory asserts that perceived self-efficacy influences actions chosen by the individuals, the amount of effort they will exert in a given situation, and the level of persistence they will exhibit when faced with obstacles and threatening situations. Furthermore, self-efficacy expectations influence peoples' thought patterns and their emotional reactions in dealing with those situations. Moreover, percepts of personal efficacy determine the outcome one anticipates.

Efficacy beliefs vary in level, strength, and generality according to the given situations. The range of perceived capability for a given person is measured against levels of task demands that represent varying degrees of challenge. In addition, people may judge themselves efficacious across a wide range of activities or only in certain domains of functioning. Also, the stronger the sense of personal efficacy the greater the perseverance and the higher the likelihood that the action chosen will be carried out successfully despite any obstacles faced by the individual (Bandura, pp. 42-43).

Bandura argues that percepts of self-efficacy beliefs increase or decrease based on four sources of information: (a) performance accomplishments, that is, performing tasks successfully enhances self-efficacy beliefs whereas repeated failures weaken the sense of personal efficacy; (b) vicarious experience, that is, observing others perform a certain behavior successfully leads to the conviction in the observer that he or she will be able to perform the observed behavior; (c) verbal persuasion, that is, being verbally persuaded by others to perform
a specific behavior, and (d) physiological and emotional arousal, that is, experiencing less negative affect such as stress, anxiety, or depression in a situation leads the individual to expect success and, in turn, strengthen their sense of self-efficacy. Of those four sources, performance accomplishments is the strongest source of efficacy information because they are based on authentic experiences. Selecting and integrating information from these four sources into self-efficacy beliefs will depend largely on the cognitive processing of efficacy information and the reflective thought.

According to social cognitive theory, perceptions of self-efficacy can vary across activities and situations. Therefore, measurement of self-efficacy should be focused on a specific domain of psychological functioning. Analysis of the impact of self-efficacy on actions depends on microanalytic measures rather than on global indices of personality traits or motives of effectance (Bandura, 1997).

Previous studies have examined self-efficacy in relation to several variables such as academic performance and perceived career options (Lent, Brown, & Larkin, 1986), college students' identity (Lopez, Watkins, Manus, & Hunton-Shoup, 1992), and academic achievement and academic self-concept (Lent, Brown, & Gore, 1997).

Considerable work in the area of counseling has extended Bandura's hypotheses regarding the role of self-efficacy in affective functioning to counseling situations (e.g., Friedlander, Keller, Pecabaker, & Olk, 1986; Friedlander & Snyder, 1983; Larson, Suzuki, Gillespie, Potenza, Bechtel, & Toulouse, 1992; Larson & Daniels, 1998; Melchert, Hays, Wilijnen, & Kolocek, 1996). Larson and Daniels (1998) found 32 studies that investigated counseling self-efficacy in relation to a number of psychological variables such as anxiety, outcome expectancy, counselor performance, stable counselor characteristics (e.g., personality, aptitude, age), self-evaluation, supervisors' perceptions of counselor performance, and the perceived working environment (see Larson & Daniels, 1998). Additionally, counselor self-efficacy was examined in relation to client process and outcome variables in career counseling (see Heppner, Multon, Gysbers, Ellis, & Zook, 1998) and in relation to the supervisory process (see Friedlander & Snyder, 1983).
Melchert, Hays, Wilijnen, & Koloczek (1996) have developed the Counselor Self-Efficacy Scale (CSES) as a measure of counseling self-efficacy to test the validity of self-efficacy theory as it relates to counseling and counselor development. This measure was found to be a sound measure for counseling self-efficacy and to discriminate among groups at different levels of clinical training and experiences. For example, undergraduate juniors and seniors in interviewing courses were found to score significantly lower on CSES than the beginning graduate students (Melchert et al., 1996).

In the UAE society, provision of counseling services is a relatively new profession compared to western culture. The need for counseling became prominent in the UAE society subsequent to the rapid social and economic changes that have been taking place during the past 30 years. These changes have had a deep impact on the values, beliefs, and role expectations of the Emirati people and have challenged their psychological well-being, especially those with limited cognitive and emotional tolerance to changes (Al-Darmaki, 2003, 2004). Such individuals may experience psychological problems in the form of somatic symptoms in order to avoid the stigma attached to mental illness (Al-Darmaki, 2003; Sayed, 2002). The willingness to seek counseling, tolerance of stigma, and confidence in mental health practitioners are more evident among the younger and more educated individuals in the UAE university (Al-Darmaki, 2003).

Preparing undergraduate psychology students for the role of counselor has become one of the chief goals of the Psychology Program at the UAE University. Additionally, a program that offers a degree in Human Services and Counseling has been initiated at the undergraduate level at UAE University in order to prepare counselors to serve the community. Among the reasons for such emphasis on training counselors in UAE at the undergraduate level are: a) the observed increase need for provision of professional psychological help in society; b) the shortage in practicing psychologists in various settings; and c) the unavailability of
graduate level counseling programs in the country (Al-Darmaki, in press).

Informal observations indicated an increased concern among educators in the UAE regarding the process of counselor training and the factors that contribute to counselor development. However, the process of becoming a counselor and counselor characteristics have not been examined. One important aspect of counselor development in UAE is to examine counseling self-efficacy. The lack of a sound measure of counseling self-efficacy made it impossible to examine counselor development. This investigation is part of a study in which another counseling self-efficacy measure, the Self-Efficacy Estimate Inventory, (Larson et al., 1992) was translated. Data regarding this scale are reported elsewhere (Al-Darmaki, in press).

Counseling is considered a problem-solving situation in which counselors rely partly on their problem-solving skills in dealing with a given counseling situation. In this context, counselors' confidence in their problem-solving skills would contribute positively to counseling self-efficacy. The positive relationship between problem-solving appraisal and counseling self-efficacy was supported in previous studies (e.g., Larson et al., 1992). Self-efficacy was chosen because it was found to correlate with counseling self-efficacy in a study conducted by Melchert et al. (1996). This is predictable since counseling self-efficacy is viewed as one domain of general self-efficacy.

Previous studies (see Larson & Daniels, 1998) reported minimal relationship between counselor’s demographic variables (e.g., age, achievement, aptitude) and counseling self-efficacy. In the UAE, the relationship between counselor’s demographic variables and the Counselor Self-Efficacy scores has not been examined.

The purpose of the current study was three-fold. First, to examine the reliability and validity of the CSES based on a sample from the Psychology Program at the United Arab Emirates University. Second, to explore the factor structure of the CSES
in a UAE college sample. Third, to investigate the CSES in relation to some demographic variables (i.e., the number of credit hours completed by the subjects, and academic performance measured by Grade Point Average), problem-solving, and self-efficacy. Based on the literature, it was hypothesized that CSES scores would be related to Problem-Solving Inventory (PSI) scores and Self-Efficacy Scale scores. Furthermore, it was expected that the number of credit hours completed by the subjects and the Grade Point Average (GPA) would be related to counseling self-efficacy. Findings from this study would shed light on the utility of the CSES in the UAE society and give directions for investigating counselor development in the UAE. Further, findings would broaden our understanding of the construct of counseling self-efficacy cross-culturally.

Method
Participants:
One hundred thirteen (female n= 105; male n= 8) undergraduate students enrolled in psychology program at the UAE University volunteered to participate in this investigation. The number of male participants was low because they were the only male students who met the inclusion criteria at the time this study was conducted. Male participants were included to increase the sample size. Participants were selected from three different classes; psychological testing and measurement, counseling psychology, and practicum. These classes are designed to prepare graduates to provide psychological services in various settings such as schools and hospitals. It is important to note that data were collected from practicum students during the three-week pre-practicum period prior to the actual field training to control for the impact of training on the variables under investigation. The pre-practicum period is used for orientation and reviewing the skills needed for practicum such as tests administration, conducting counseling interviews, developing case conceptualization, and
practicing code of ethics in psychology. During practicum students are trained to actually perform counseling and clinical tasks under supervision both at school and hospital settings.

The participants range in age from 20 to 27 years (M=21.95; SD=1.24) and the mean of their GPA was 2.45 on a 4-point scale. The Mean for credit hours completed by the subjects was 104.72, which indicates that the majority of participants were in the fourth year of their program and had about 18 credit hours remaining to complete the requirements of their degree program.

**Instruments:**

The Counselor Self-Efficacy Scale (CSES): The CSES (Melchert, Hays, Wiljinen, & Koloczek, 1996) consists of 20 items rated using a 5-point Likert-type scale to assess knowledge and skills normally needed for practicing individual and group counseling. One half of the items are worded negatively, thus requiring that responses to positively worded items to be inversely recoded so that high scores indicate high self-efficacy. Internal consistency using Cronbach alpha procedure was reported to be .91 and test re-test reliability after a 1-week period was found to be .85. Convergent construct validity was evidenced by the correlation between CSES and the Self-Efficacy Inventory which was found to be .83. CSES was found to be related to level of counseling training and amount of clinical experience (Melchert et al., 1996).

The CSES was translated into Arabic by the author for the purpose of this study and the accuracy of the translation was checked by a colleague specialized in psychology.

The Problem Solving Inventory (PSI): The PSI (Heppner, 1988) was developed to measure the perceptions and evaluation of a person's problem-solving behaviors and attitudes rather than a person's problem-solving capabilities. The PSI is a 32-item measure consisting of three subscales: Problem-Solving Confidence, Approach-Avoidance Style, and Personal Control. PSI is scored using a 6-point Likert scale ranging from strongly agree (1) to strongly disagree (6). The PSI total score is derived from the sum of the three subscale scores. Several items were worded negatively and must be reversed. Low scores on the PSI reflect a positive self-appraisal of problem-solving abilities.
Reliability estimates indicate that the PSI is internally consistent ($r= .90; N=150$) and stable over a 2-week interval ($r= .89; N=31$). PSI is found to be correlated with locus of control and personality type. No correlation between PSI and social desirability or intelligence was reported (see Heppner, 1988).

PSI was translated into Arabic by AlFiky and AlShennawy (1996) to be used with samples from Saudi Arabia and was found to be reliable and valid. AlFiky and AlShennawy reported a reliability estimate of coefficient alpha of .82 for the total score. They found five factors for PSI: Evaluating the Problem, Confidence in Problem Solving, Failure in Problem Solving, Evaluating of Results, and Emotional Reaction. These factors were correlated with the total items scores. In addition, PSI was translated into Arabic for use with a Jordanian sample (Jarwan, 1986). Jarwan reported test-retest reliability estimates of .61 (2 weeks) and .64 (4 weeks) for the whole scale, internal consistency of .77, and item correlation coefficient of .64.

In this study, the original PSI was used after being translated into Arabic with a permission from the publisher. This decision was made because the two Arabic translations were inconsistent with regard to how the items on the scale were rated. Jarwan used a 5-point Likert type format, whereas AlFiky and AlShennawy (1996) used a 4-point Likert type format.

Alpha Coefficients in this study was found to be .89 for PSI total score, .85 for Problem-Solving Confidence subscale, .81 for Approach-Avoidance Style subscale, and .69 for Personal Control subscale; all indicating satisfactory reliability.

Self-Efficacy Scale: The Self-Efficacy Scale (Sherer, Maddux, Mercadante, Prentice-Dunn, Jacobs, & Rogers, 1982) is composed of 23 items and two subscales; the General Self-efficacy subscale (17 items) and the Social Self-efficacy subscale (6 items). Items on the scale are rated on a 6-point Likert-type scale. Reversed items were converted for scoring. Higher scores indicate high self-efficacy expectations. Cronbach alpha reliability coefficients were .86 for the General Self-efficacy and .71 for the Social Self-efficacy. Construct validity was evidenced by the correlation between the Self-efficacy scale and related personality characteristics measures (Sherer & Adams, 1983). Evidence for criterion validity was obtained through the relationship between the
Validation of the Counselor Self-Efficacy Scale / Dr. Fatima R. Al-Darmaki

Self-efficacy scale and employment, number of jobs quit, number of times terminated from a job, and educational level.

The scale was translated into Arabic for the purpose of this study and was checked for accuracy by a psychology colleague. The internal reliability for the Self-efficacy scale was found to be .89 for General Self-efficacy and .63 for Social Self-efficacy, suggesting its appropriateness for use in this investigation.

Procedures

CSES, PSI, and the Self-efficacy scale were administered in one setting. Subjects were instructed to fill out the instruments along with a demographic information sheet. The total administration time was approximately 30 minutes.

Data Analysis

Data were analyzed in three steps. First, the data of CSES were factor analyzed to investigate the factor structure of the scale using the total sample. Second, the internal reliability estimates of the instruments were computed. Third, correlation coefficients were obtained to examine the relationships between the CSES and the demographic variables, PSI, and the self-efficacy Scale.

Results

Factor Analysis

A principle components analysis extraction with Varimax rotation was conducted with the 20 items of the CSES to determine the factor structure of the scale with the UAE college sample (N=113). Two factors with eigenvalues greater than one were extracted. The total variance accounted for by the two factors was 37.8%. The eigenvalues for the two factors were 3.88 and 3.67 which accounted for 19.41% and 18.35% of the variance, respectively. All 20 items of the CSES met the criteria of .35 for inclusion in a factor. Eleven items loaded on factor I (i.e., 1, 2, 5, 7, 8, 13, 14, 16, 18, 19, 20). This factor may be interpreted as Counselor’s Effectiveness. Factor II consisted of nine items (i.e., 3, 4, 6, 9, 10, 11, 12, 15, 17) which assessed Adequacy of Counselor’s Helping Skills and Knowledge. These results could not be compared with Melchert et al.’s findings because the researchers did not report the factor structure of the scale.
The two factors found in this study were moderately to highly internally consistent. Cronbach's alpha reliability coefficients were .81 for factor I and .76 for factor II. The reliability estimate for the overall CSES scale was .86, slightly lower than the reported alpha by Melchert et al. (1996).

The means and standard deviations of the variables under investigation are reported in table 1.

**Correlation coefficients**

Correlation coefficients were obtained for the variables under investigation. The results of the correlations are reported in table 2.

Correlations between CSES and the number of credit hours completed by the subjects and the GPA were carried out to provide evidence for the construct-related validity of the CSES. The number of credit hours completed by the subjects was found to be positively related to the CSES ($r = .31$) and Counselor's Effectiveness factor ($r = .37$) at significant level $p < .01$, indicating a relationship between the counselor self-efficacy and the number of credit hours completed by the subjects. No correlation was found between CSES and the GPA. This result is consistent with the findings reported by Larson et al. (1992).

**Table 1**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSES</td>
<td>70.72</td>
<td>9.76</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>40.99</td>
<td>5.88</td>
</tr>
<tr>
<td>Adequacy</td>
<td>29.73</td>
<td>5.24</td>
</tr>
<tr>
<td>General SES</td>
<td>74.03</td>
<td>14.23</td>
</tr>
<tr>
<td>Social SES</td>
<td>24.69</td>
<td>5.16</td>
</tr>
<tr>
<td>PSI (Total)</td>
<td>94.06</td>
<td>18.95</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>28.66</td>
<td>8.13</td>
</tr>
<tr>
<td>Confidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach-Avoidance</td>
<td>45.55</td>
<td>9.71</td>
</tr>
<tr>
<td>Style</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Control</td>
<td>19.85</td>
<td>4.54</td>
</tr>
</tbody>
</table>
Note: Effectiveness = Counselor’s Effectiveness; Adequacy = Adequacy of Counselor’s Helping Skills and Knowledge. These are the factors of the Counselor Self-Efficacy Scale (CSES); General SES = General Self-efficacy Scale; Social SES = Social Self-efficacy Scale; Problem-Solving Confidence, Approach-Avoidance Style, and Personal Control are the subscales of PSI = Problem-Solving Inventory.

The intercorrelations for the CSES factors were moderately significant at \( p < .01 \). Counselor’s Effectiveness factor was correlated with Adequacy of Counselor’s Helping Skills and Knowledge (\( r = .54 \)).

**Table 2**

Correlation Coefficients among the Variables Under Investigation

<table>
<thead>
<tr>
<th>Variables</th>
<th>CSES</th>
<th>Counselor’s Effectiveness</th>
<th>Adequacy of Counselor’s Helping Skills and Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours</td>
<td>.31**</td>
<td>.37**</td>
<td>.17</td>
</tr>
<tr>
<td>GPA</td>
<td>-.02</td>
<td>-.02</td>
<td>-.02</td>
</tr>
<tr>
<td>Counselor’s Effectiveness</td>
<td>.89**</td>
<td>-</td>
<td>.54**</td>
</tr>
<tr>
<td>Adequacy of Counselor’s Helping Skills and Knowledge</td>
<td>.86**</td>
<td>.54**</td>
<td>-</td>
</tr>
<tr>
<td>General SES</td>
<td>.61**</td>
<td>.55**</td>
<td>.52**</td>
</tr>
<tr>
<td>Social SES</td>
<td>.49**</td>
<td>.42**</td>
<td>.44**</td>
</tr>
<tr>
<td>PSI</td>
<td>-.56**</td>
<td>-.52**</td>
<td>-.45**</td>
</tr>
<tr>
<td>Approach-Avoidance Style</td>
<td>-.41**</td>
<td>-.40**</td>
<td>-.31**</td>
</tr>
<tr>
<td>Personal Control</td>
<td>-.38**</td>
<td>-.36**</td>
<td>-.31**</td>
</tr>
<tr>
<td>Problem-Solving Confidence</td>
<td>-.60**</td>
<td>-.54**</td>
<td>-.52**</td>
</tr>
</tbody>
</table>
Note: CSES= The Counselor Self-Efficacy Scale; Counselor's Effectiveness and Adequacy of Counselor's Helping Skills and Knowledge are the factors of CSES; General SES= General Self-efficacy Scale; Social SES= Social Self-efficacy Scale; Problem-Solving Confidence, Approach-Avoidance Style, and Personal Control are the subscales of PSI= Problem-Solving Inventory.

The moderate correlation suggests that the two factors, while interrelated, are independent enough to be considered as separate scales. CSES total scores were correlated with Counselor's Effectiveness factor (r=.89) and Adequacy of Counselor's Helping Skills and Knowledge factor (r=.86).

All correlations among CSES and the two factors scores, PSI overall scores and subscales scores, as well as General Self-efficacy Scale scores and Social Self-efficacy Scale scores were found to be moderately significant at p < .01, providing evidence for the convergent validity of the CSES.

General Self-efficacy Scale scores were positively associated with CSES scores (r=.61), Counselor's Effectiveness factor (r=.55), and Adequacy of Counselor's Helping Skills and Knowledge factor (r=.52). This result suggests that those who reported higher counseling self-efficacy also reported higher general self-efficacy. Social Self-efficacy Scale scores were positively related to CSES (r=.49), Counselor's Effectiveness factor (r=.42), and Adequacy of Counselor's Helping Skills and Knowledge factor (r=.44). These correlations suggest that those who reported stronger perceptions of counseling self-efficacy also reported stronger perceptions of social self-efficacy.

Furthermore, the CSES was found to be negatively correlated with PSI (r= -.56) and its subscales Problem-Solving Confidence (r= -.60), Approach-Avoidance Style (r= -.41), and Personal Control (r= -.38); suggesting that greater counseling self-efficacy was related to higher problem-solving appraisal. The CSES Counselor's Effectiveness factor was correlated with PSI (r= -.52), Problem-Solving Confidence (r= -.53), Approach-Avoidance Style (r= -.40), and Personal Control (r= -.36). The CSES Adequacy of Counselor's Helping Skills and Knowledge factor was associated with PSI (r= -.45), Problem-
Solving Confidence \((r = -0.52)\), Approach-Avoidance Style \((r = -0.31)\), and Personal Control \((r = -0.31)\). These results provide support for the hypothesized relationship between counseling self-efficacy and both self-efficacy and problem-solving.

Discussion

Understanding counselors' development requires investigating the counselor self-efficacy using a reliable and valid measure of counseling self-efficacy. Because there are no valid instruments available in the UAE to measure counselors' self-efficacy, it was necessary to translate an existing scale and examine its reliability and validity based on a sample from UAE before determining its use to investigate counselors self-efficacy. The findings of this study suggest that the Counselor Self-Efficacy Scale (CSES) may be a reliable and valid measure for use with samples from UAE college students. Factor analysis of CSES revealed two factors: Counselor's Effectiveness and Adequacy of Counselor's Helping Skills and Knowledge. In addition, the findings of this study indicated that relationships exist between CSES and PSI as well as between CSES and both general self-efficacy and social-self-efficacy. Stronger perceptions of counseling self-efficacy were related to stronger self-perceived problem-solving effectiveness and higher perceptions of self-efficacy. These results are consistent with the findings of previous studies (Larson et al., 1992; Melchert et al., 1996). In data not reported here, counseling self-efficacy as measured by Counseling Self-estimate Inventory was found to be positively related to problem-solving appraisal (Al-Darmaki, in press).

Furthermore, the number of credit hours completed by the subject was found to be positively related to perceptions of counseling self-efficacy. This result is not surprising because students are expected to gain more knowledge and skills as they advance in their program which, in turn, lead to feeling more self-efficacious in performing counseling tasks.
The findings of this study not only provide some evidence for the reliability and construct-related validity of the CSES, they also make it possible for future investigations to examine counseling self-efficacy in relation to other variables cross-culturally.

This study has a number of limitations. First, this study used a sample from a college population and, therefore, its findings may not be generalizable to other populations. Second, more empirical support for the validity of the CSES should be provided in order to determine its valid use with UAE college population. Third, replicating the factor structure of PSI and Self-Efficacy Scale found in the American culture was not possible in the current study due to the small sample size. The factor structure of PSI and Self-Efficacy Scale needs to be investigated in future studies to compare findings from previous studies with findings using populations from UAE culture. Finally, future studies should examine the CSES in relation to self-efficacy theory and models of counselor development. In other words, the relationship between counseling self-efficacy and other related variables such as counselor training and counselor's experience level should be tested to enrich our understanding of counselors development and to compare counselors' development cross-culturally.
References


Using Process Writing Approach in the EFL Classroom

By

Yahia Ashour M. Al-Khoudary
Abstract

This study presents the outcome of an investigation to evaluate the students' writing performance in English as a Foreign Language (EFL). It focuses on the "Process Writing Approach" (PWA), a research conducted in a secondary school in Al-Ain city, the United Arab Emirates. The procedure of my investigation is based on three dimensions: (1) sixty students are selected randomly and divided into two groups, (2) pre and posttests are given to them, and (3) interviews with the students to find out the effectiveness of (PWA) application in the experimental class.

The findings show that (PWA) is the best remedy to improve the students writing skill and overcome all relevant difficulties. They also show that secondary school teachers can fully rely on this new and practical approach once students and teachers change their attitudes towards the writing process.
ملخص

تبرز ورقة البحث هذه خلاصة دراسة مستفيضة تهدف إلى تنمية مهارة الكتابة في اللغة الإنجليزية لطلبة المرحلة الثانوية في مدينة العين بدولة الإمارات العربية المتحدة. وتركز هذه الدراسة على طريقة جديدة مبتكرة من: "أسلوب الكتابة المتماسك" (Process Writing Approach) كأفضل نهج بناءً على وجهة نظر الباحث يمكن لعليمي اللغة الإنجليزية في المدارس الثانوية بدولة الإمارات العربية المتحدة تطبيقه والاعتماد عليه، وذل ذلك تسهولة تدقيقه وفعاليته.

وقد اعتمد الباحث في دراسته على ثلاثة محاور رئيسية: أولها: اختبار (60) طالب بشكل عشوائي من إحدى مدارس العين الثانوية، قسموا إلى مجموعتين، وثانيهما: إجراء اختبارين للطلبة المستهدفين. الاختبار الأول (قلي) في البداية والأخر (بعدي) في نهاية الفصل الدراسي، وذلك بعد أن قام الباحث بتطبيق برنامج لمدة فصل دراسي كامل، وثالثهما: إجراء مقابلة مع كل طالب على حدة بهدف تزويد الباحث بالمعلومات الصحيحة الدقيقة والتعرف على اتجاهات الطلاب وموهتهم تجاه الطريقة التي استخدمت في تعليمهم "مهارة الكتابة المتماسك". وبعد تحليل نتائج الاختبار القلي والإسبانية، وكذلك تحليل نتائج الاختبار اليدوي أظهرت نتائج الدراسة ما يلي: (1) آبل الكتابة المتماسك في أثناء الحصة الدراسية سيكون أفضل علاج لتحسين مهارة الطلبة في الكتابة لأنه يعمل على إزالة معظم أخطاء الطلبة إن لم يكن كلها. (2) يرى الباحث أن نتائج هذه الدراسة الواقعية والميدانية يمكن أن يستخدمها علما اللغة الإنجليزية في المدارس الثانوية بدولة الإمارات العربية المتحدة كأفضل مثال بحثي وخير حافز لهم للتخلي عن الطريقة التعليمية التقليدية في تدريس مهارة الكتابة في اللغة الإنجليزية.
Using Process Writing Approach in the EFL Classroom

This paper presents the outcome of an investigation to evaluate the students’ writing performance in English as a Foreign Language (EFL). It focuses on the “Process Writing Approach” (PWA), a research conducted in a secondary school in Al-Ain city, the United Arab Emirates. The procedure of my investigation is based on three dimensions: (1) sixty students are selected randomly and divided into two groups, (2) pre and posttests are given to them, and (3) interviews are conducted for the students in the experimental groups.

The findings show that (PWA) is the best remedy to improve the students writing skill and overcome all relevant difficulties. They also show that secondary school teachers can fully rely on this new and practical approach once students and teachers change their attitudes towards the writing process.

INTRODUCTION

The purpose of this study is to investigate the effectiveness of the Process Writing Approach (PWA) as a means to improve the writing skills of secondary school students in the United Arab Emirates (UAE), and to suggest the implementation of this approach in the local secondary schools.

It has been found that most of the secondary school students are not proficient enough in English. They find it extremely difficult to communicate successfully in this language. The following reasons are suggested here:

1- The different nationalities of the teachers of English who are appointed to teach in UAE schools;
2- lack of proper continuous teaching training;
3- lack of students’ motivation to learn English;
4- the improper teaching method and the number of hours of written and spoken English;
5- over use of Arabic in class;
6- English Language as a medium is not encouraged as equally as other subjects in public schools.

Abu Housh (2004) argues that despite the high marks students usually obtained in national examinations, they struggle badly when they are given placement tests. A large sample has shown less than 1% of grade 12 achieved a score approved by international standards to be accepted at an English medium university and less than 7% achieved an intermediate level. That is due to the present system of testing and passing students to join higher education to replace the expatriate work force in the future.

As such the education system in the UAE aims at meeting the specific needs of the society, and also the plans of broader economic and social development. However, there is an urgent need to change the methods and materials of teaching and learning system at school. The Ministry of Education is fully supportive in helping to upgrade the skills and abilities of its current workforce and consequently it remains the researcher's job to come up with better ways and means to discover what these ways and means should be, and how they should be implemented.

BACKGROUND TO THE STUDY

The idea for this research arises from the researcher's experience in teaching EFL at secondary schools in Al-Ain. Although the English language proficiency of the students has been generally poor, it was observed that they encountered the greatest difficulty in their writing skill. The main problem is pertinent to the content and how ideas are to be generated, organized and developed. A preliminary investigation revealed that the cause lies in the skills, and knowledge of the teachers themselves, as well as their attitude towards the teaching of writing (Gardner & Abu Libdeh, 1995).
Many teachers seemed unaware of the latest research in writing and the various methodologies being developed for teaching English as a second or foreign language.

It is obvious that the teaching of writing skills in UAE is neglected because; it is, in fact, most difficult to teach ESL/EFL programmes (Gardner & Abu Libdeh, 1995). Moreover, an interview with EFL school inspectors in Al-Ain Educational Zone on the 16th May of 2004 shows that teaching writing skill is virtually not practised in classrooms mostly because it is very difficult for teachers to evaluate students writing assignments. Most teachers in the UAE dislike any change and find that the traditional methods are easier to use. Gardner and Abu Libdeh (1995) indicate that the method of teaching is mainly teacher-centered. In class, teachers usually speak more than students who totally depend on their teachers.

OBJECTIVES OF THE STUDY
The objectives of this study are as follows:
• to investigate the effectiveness of the new system of writing instruction the (PWA) in EFL classrooms in the UAE;
• to study the feasibility of introducing the new system in the EFL classroom;
• to promote future research in the field of writing in the UAE.

THE RESEARCH QUESTIONS
(a) Are there any differences between the writing performance of students who use the PWA and the others who totally depend on current approach used in the Khalifah Secondary School (K.S.S.) in AL-AIN?
(b) What are the factors that affect the implementation of the PWA in the (K.S.S) in Al-Ain city?
(c) To what extent is it possible to implement the PWA in AL-AIN schools?
THE RATIONALE of THIS STUDY

The rationale behind selecting this area of study is that EFL secondary school students are very poor in the writing skill (Al-Khoudary, 2002; Abu. Housh, 2004). For example, different methods have been used to improve their proficiency in this skill, but the problem still persists. In addition, the teaching of writing composition at secondary schools in the UAE is almost totally neglected (Gardner & Abu Libdeh, 1985; Raddaoui, 2001).

The process approach was introduced in ESL/EFL composition because of the dissatisfaction that was being felt towards controlled composition and other traditional approaches of teaching writing. It was obvious that these approaches lacked relevance to the combination of creative thinking with writing (Flower, 1989; Taylor, 1981; Zamel, 1982; Al-Khoudary 2001).

The importance of improving the writing skills of ESL/EFL students by using the PWA approach has been emphasized in many other studies. For example, studies conducted by Abdullah (1998); Hedge, (1998) Raimes (1995, 1991, 2002) indicates that the final effect of the PWA is an awareness of the dynamics of the writing process. Abdullah’s study points out that the writing process helps dispel the notion that writing is a linear process. The process approach of composing allows learners to see how they are progressing. It allows them to get feedback from the teacher, and it allows teachers as well to monitor and diagnose the students’ problems (Raimes, 1985; Zamel, 1987; White & Ardent, 1991). The approach helps students achieve the autonomous learning that the Ministry of Education and Youths in UAE is currently craving for.

The process writing approach

The process approach was introduced in ESL composition because of the dissatisfaction that was being felt towards controlled/guided composition, and the form-based approaches. Research into first language composition indicated that these approaches lacked relevance to thought and expression, and it was recommended that creative thinking should be combined with writing (Flower, 1989; Taylor, 1981; Zamel, 1982). The figure below shows the stages of PWA:
COMPOSING

PUBLISHING

PREWRITING

DRAFTING

REVISION

EDITING

Figure 1: Stages of the Process Writing Approach (Raimes 1985:229)

Raimes' (1985) classification above marks the stages of prewriting, composing/drafting, revising, editing and publishing. Flower & Hayes (1980, 1981) and Arndt & White (1991) categorize the stages as follows: generating ideas, focusing, structuring, drafting, evaluating, and reviewing. They state that these procedures apply to the creation of any piece of writing irrespective of text type or subject matter.

Prewriting

According to most researchers (Flower & Hayes, 1981; Lindemann, 1987; Raimes, 1985; Hedge, 1998) the prewriting stage is probably the most important stage of the writing process in which student writers formulate their ideas. Flower & Hayes (1981) are of the same opinion about the prewriting process. Their model explains that prewriting techniques teach students to write down their ideas quickly without caring about surface errors and form. This practice would help students acquire fluency rather than accuracy in writing as they think and write at the same time rather than think, and then write.

Thinking and brainstorming precede actual composing and may take place after the writing has begun. According to Flower & Hayes (1981: 375) the planning process is not a unitary stage, but a distinctive thinking process which writers use over and over again during composing. However, it must be remembered that prewriting does not take place in a vacuum. Raimes (1983) states that students always want to express their thoughts after having
stimulus in the form of reading, discussion and thinking.

Composing and Drafting
The second phase of activity is the writing task itself which consists of the first draft. According to Raimes (1983:88) the actual writing begins with making a first draft, which aims at communicating ideas in very broad and even inaccurate forms. At this stage there is room to change and alter. Where students are sufficiently relaxed with each other, pair-work in the form of sharing and criticizing can be helpful, particularly to eliminate major errors or ambiguity. Some writers advocate concentrating on one particular draft, writing it on the board or photocopying it and circulating it so that everyone in the group has a chance to react. Whatever method is adopted, the students need to feel the need to share and work co-operatively to generate the workshop feeling (Flower & Hayes, 1981: 174; Raimes, 2002).

Revising
Composing and drafting do not usually mark the end point of the writing process (Tribble, 1996: 113). Writers revise the text they have produced and make corrections to ensure both clarity of expression, factual and grammatical accuracy. Good writers tend to concentrate on getting the content right first, and leave details like correcting spelling, punctuation and grammar until later (Hedge, 1998:23).

Poor student writers can be helped through peer and group activities to learn how to produce a good composition. Recent research indicates that it is not necessary to correct surface errors like grammatical mistakes, misspelling, and punctuation because correcting such errors does not directly address the writer’s main problems which are more related to the way in which learners manipulate the written text (Zamel, 1982; Raddaoui, 2001).

Editing
This is the final stage of the writing process where students rewrite the final draft, correcting all errors including the mechanics, grammatical mistakes and spelling. The role of the teacher is very important because he gives help and goes round the groups and pairs to check the students’ problems in grammar and spelling.
Students try to produce the best drafts after receiving feedback from peers and teacher.

**RESEARCH PROCEDURE**

In order to test the research questions outlined in the previous section, the treatment procedure was carried out to find out to what extent such a process would affect the students' level of writing. Both quantitative and qualitative approaches are employed in this study, according to the requirements of the research issues.

**TREATMENT PROCEDURE**

The stages of PWA as mentioned by Raimes (1985) were adapted and adopted for use with the experimental group of students. The table below summarizes the activities in each stage of the writing process:

*Table 1: Summary of the treatment procedure*

<table>
<thead>
<tr>
<th>STAGES</th>
<th>ACTIVITIES</th>
<th>PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment of task</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Discussion of task</td>
<td>Questions and answers</td>
<td>Teacher and student (as a class)</td>
</tr>
</tbody>
</table>
| Prewriting/ brainstorming     | a) Seeing video-film, posters, pictures, OHP transparencies.  
b) Generating ideas, choosing & eliminating.  
c) Writing ideas that come immediately to their minds | - Students, in small groups of five.  
- Students sit in pairs. |
<p>| Drafting / composing first draft | Rewriting ideas into short compositions. Focus on content              | Students, in groups                               |
| Second draft                 | 2 or 3 paragraph concentrating on content                                 | Students, in groups;                              |</p>
<table>
<thead>
<tr>
<th>Revising / second draft</th>
<th>Refinement of ideas, incorporation / elimination of material.</th>
<th>Students in pairs. Intervention by teacher where necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editing/ final draft</td>
<td>Topic edited for grammatical errors, punctuation, spelling</td>
<td>Students, in groups; Intervention by teacher where necessary</td>
</tr>
</tbody>
</table>

The activities described above were carried out in every writing lesson. The allocated time 45 minute-period was distributed on the PWA stages. As usual, the First Secondary students in the UAE are asked to write only less than ten lines about a related topic provided with guide phrases to help students write.

First, in the prewriting process, the teacher asked students about the topic they liked to write about. Next, he discussed with them why they liked it. Then, he showed a short video-film, pictures, and posters. After that, the teacher asked students to brainstorm for ideas, using mapping or clustering.

Second, during the drafting process, students chose the ideas related to their topic and wrote the first draft without concentrating on the surface feature errors. Here, the teacher monitored from a distance to check if the students are progressing satisfactorily, and he intervenes if he is asked for help.

Third, during the revising process, students in pairs exchange papers and give feedback about the organization of the topic. The second draft is then produced. Before rewriting the final draft, a checklist is distributed to all the students to give their feedback about his classmate's progress in the second draft, concentrating on the organization of ideas (cohesion and coherence).

Finally, in the editing process, students sit in groups and negotiate about correcting the grammatical, spelling and punctuation errors. Here, the teacher intervenes to provide help to students about grammatical, spelling and punctuation errors.
SUBJECTS
A sample of 60 students was chosen. All subjects were males ranging from 15 to 16 years of age. They share the same socio-economic status, spoke the same language (Arabic) and professed the same religion. In this sense, they were a homogeneous group.

The students were divided into 2 equal groups: one was the control group who were taught writing using the current approach (traditional approach) used in secondary schools in UAE, and the other was the experimental group who were taught writing using the PWA.

Research Instruments
Several instruments were used to obtain the information for this study to obtain accurate data. A detailed description of the research instruments is provided below.

- Pre-test and post-tests.
- Interviews

Pre and post-tests
There were two objectives for using these tests in the study: First, to check if the two groups are of the same level before the treatment; Second, to investigate the effect of the new approach on the students’ performance.

The Pre-test
The pre-test was administered to both the control and experimental groups. The topics chosen for the writing were similar to the ones that they would normally write in the classroom and for their examinations. They (the topics) were related to the students' culture, experience, and environment in order to motivate them write fluently. The evaluators were three experienced secondary school teachers. Each of them wrote his grade confidentially, and these (three) grades were later added and then divided by three to obtain the average grade.
The Post-test
In order to test the possible effects of the PWA on the level of students’ writing over one semester period of training, students were asked to sit in groups and write their drafts. After they had looked at their mistakes and received feedback from the teacher and partners, they produced the final drafts. Teachers of both the control and experimental group had allocated three hours a week for the teaching of writing.

At the end of the period of the treatment, students in both groups were given the post-test. The papers were collected and marked by the same raters depending on the marking criterion.

Interviews:
Interviewing the students about the writing process yielded two kinds of information about writing. The first was a profile of the subject as a student writer, which tells about his experience at composing, and his perceptions of the PWA (Zamel: 1982; Kelly: 1986; Chandrasegaran: 1991).

The researcher asked two experienced teachers as (volunteers) to conduct individual interviews with the students in the experimental group. During the interviews, students were asked about the problems they found in writing compositions in English. The interviews were tape-recorded for later analysis.

The experimental groups were asked about the new approach the teacher used and why they liked / disliked it, the most useful stage in the writing process, and which kind of writing stimulus/stimuli they preferred. In general they were asked about the PWA and whether they thought it was effective for them, compared to the methods of teaching previous teachers had used in teaching the writing skills (See the questions of the interview in appendix 1).

RESULTS AND DISCUSSION
The quantitative method was used to analyze the obtained data by means of the pre- and post-tests. The data was analyzed using the Statistical Package for Social Sciences (SPSS).
ANALYSIS OF PRE AND POST-TESTS

At the end of 16 weeks of treatment procedure of using the PWA to teach writing to the students in the experimental group, a writing test was administered to both groups. The final scores of this test and those of the pre-test were administered before the start of the treatment and then compared. Three raters of the experienced teachers were trained on the marking criteria adapted assessment scale for Written Composition (Refer to: Carroll & West, 1989). The following table presents the means and standard deviations of these tests, and the graphs below indicate the rate of improvement in the students' ability to write (based on the tests stated above)

Table 2: Means and Standard Deviation of the Pre- and Post-tests for the Control & Experimental groups

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean Pretest</th>
<th>Mean Posttest</th>
<th>Percentage Improvement</th>
<th>Std. D Pretest</th>
<th>Std. D Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>68.20 (68.60)</td>
<td>75.50 (90.50)</td>
<td>10.7% (31.92%)</td>
<td>4.16 (3.50)</td>
<td>4.88 (5.70)</td>
</tr>
<tr>
<td>Intermediate</td>
<td>58.30 (59.70)</td>
<td>62.70 (88.40)</td>
<td>7.55% (48.07%)</td>
<td>3.16 (3.16)</td>
<td>5.10 (5.48)</td>
</tr>
<tr>
<td>Weak</td>
<td>47.50 (47.10)</td>
<td>55.40 (76.40)</td>
<td>16.63% (62.70%)</td>
<td>4.50 (4.71)</td>
<td>7.10 (6.24)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>58.00 (58.23)</td>
<td>64.53 (85.10)</td>
<td>11.26% (46.14%)</td>
<td>9.42 (9.49)</td>
<td>10.12 (8.45)</td>
</tr>
</tbody>
</table>

Note: The numbers in brackets represent the means and standard deviations for the experimental group.

From table 2, it can be noted that both groups are homogenous: students in all three proficiency levels in both groups had approximately the same level of performance prior to treatment. The post-test results show that the experimental group performed very much better than the control group in this test. The overall means of the control group was 64.53, whereas the overall means of the experimental group was 85.10.
The overall percentage improvement for the control group was only 11.26 per cent, while that of the experimental group was 46.14 per cent, meaning that there was four times more improvement in the experimental group than in the control group.

In the control group, the percentage improvement for all the students was less than 17 per cent, with those in the intermediate category exhibiting only a 7.55 per cent improvement. On the other hand, the percentage improvement in the experimental group was at least 31.92 per cent, going up to almost 63 per cent for those in the ‘weak’ category. In fact, from an examination of the table and figures above, it can be seen that the students who gained most from using the PWA were those in the weak and intermediate groups, especially the former. The ‘good’ students have been pushed to excel even more in the experimental group (almost 32 per cent improvement compared to mere 10.7 per cent improvement). In short, it can be seen that the PWA has benefited all three categories of students.

The ANOVA analysis was also used to confirm the findings.

**Table 3: The ANOVA Results (2x3) with Proficiency Levels as the Independent Factor and Pre-test Scores as the Dependent Variable.**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>1</td>
<td>3.27</td>
<td>.21</td>
<td>.65</td>
</tr>
<tr>
<td>Level</td>
<td>2</td>
<td>2234.8</td>
<td>144.8</td>
<td>.000</td>
</tr>
<tr>
<td>Group x level</td>
<td>2</td>
<td>4.07</td>
<td>.26</td>
<td>.77</td>
</tr>
<tr>
<td>Error</td>
<td>54</td>
<td>15.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANOVA was used to test if any differences were present before the treatment. The results revealed that no significant difference was present between the control and experimental groups ($F = 1, 54 = .21, P>.005$) before the treatment. The results also showed that there was no interaction effect between the two before the treatment.

In order to test the efficacy of the treatment, the post-test grades were also analyzed with ANOVA, similar to the previous analysis but with post-grades as the dependent variable.
Table 4: ANOVA Results (2x3) with Group and Level as the Independent Factors and the Post-test Scores as the Dependent Variable.

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>1</td>
<td>6344.8</td>
<td>188.8</td>
<td>.000</td>
</tr>
<tr>
<td>Level</td>
<td>2</td>
<td>1470.1</td>
<td>43.8</td>
<td>.000</td>
</tr>
<tr>
<td>Groupx</td>
<td>2</td>
<td>143.8</td>
<td>4.3</td>
<td>.02</td>
</tr>
<tr>
<td>Level</td>
<td>54</td>
<td>33.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The comparison of the students’ post-test scores for the three ability levels across the levels of treatment (Experimental vs. Control) indicated that the Experimental group outscored the Control at all levels of the ability. The results revealed that there was significant difference between both groups (F = 1, 54) = 188.8, P >.0001. The level effect was significant as shown in Table 5 (F =2, 54) = 43.8, P< .0001. The results showed significant interaction between group levels.

As can be noted in Table 5, there was group and level (proficiency) main effects. For the group main effect, F (1, 54) = 188.8, P <.0001 and for level, the F was 43.8 (2,54), P <.0001.

Since the correlation between the pre-test and the post-test was large and significant (r = .58, P< .0001), another analysis was conducted to guard against the effect of the pre-test on the post-test. The ANCOVA (Analysis of covariance) was employed similarly to the previous design except that the pre-test was treated as a covariate. As can be seen in Table 5, the group by level (proficiency) interaction was significant approach used in the classroom.

Table 5 shows the results of the Analysis of Covariance with the Pretest as the Covariate.
Table 5: Analysis of Covariance with the Pre-test as Covariate

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>1</td>
<td>652.833</td>
<td>29.790</td>
<td>.000</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>6068.784</td>
<td>276.930</td>
<td>.000</td>
</tr>
<tr>
<td>Level</td>
<td>2</td>
<td>2.109</td>
<td>.096</td>
<td>.908</td>
</tr>
<tr>
<td>Group* Level</td>
<td>2</td>
<td>125.655</td>
<td>5.734</td>
<td>.006</td>
</tr>
<tr>
<td>Error</td>
<td>53</td>
<td>21.914</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The analysis revealed very interesting results, probably due to the effect of the covariate on the posttest scores.

As the means of the post-test were adjusted for the pre-test, the means of the experimental Vs. the control for the three level groups indicated that when the differences in the post-test were adjusted for the differences in the pretest (covariate), the gain each level was able to make was not the same as when the performance on the pre-test was not controlled and adjusted for the post-test.

Students’ Attitudes towards PWA

The control and experimental groups were compared and the mean difference was tested by a t-test so as to test their attitude with regard to their improvement in writing ability.

Table 6: Mean and Standard deviation of Experimental and Control group and the Test Statistics.

<table>
<thead>
<tr>
<th>Group</th>
<th>No.</th>
<th>Mean</th>
<th>Std. D</th>
<th>T. test</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>50.23</td>
<td>7.722</td>
<td>-12.1</td>
<td>.0001</td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>76.9</td>
<td>9.29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6 indicates that there is a significant difference between the attitudes of the control and experimental groups (t = -12.1, P < .0001). It is clear that the experimental group (mean = 76.9) outscored the control group (mean = 50.23) indicating that the method used in teaching them was more effective in improving students’ attitudes towards learning composition.
Table 7 (below) shows the results of analysis of covariance (ANCOVA) with attitudes as the dependent variable and group (experimental vs. control) and level (weak, intermediate and good) as independent factors and the pretest as covariate.

**Table 7: Results of ANCOVA with Pretest as Covariate and Attitudes towards Writing as an Independent Variable.**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>46.226</td>
<td>1</td>
<td>46.226</td>
<td>.666</td>
<td>.418</td>
</tr>
<tr>
<td>Group</td>
<td>10537.639</td>
<td>1</td>
<td>10537.639</td>
<td>151.832</td>
<td>.000</td>
</tr>
<tr>
<td>Level</td>
<td>359.755</td>
<td>2</td>
<td>179.877</td>
<td>2.592</td>
<td>.84</td>
</tr>
<tr>
<td>Group Level</td>
<td>131.027</td>
<td>2</td>
<td>65.513</td>
<td>.944</td>
<td>.396</td>
</tr>
<tr>
<td>Error</td>
<td>3678.374</td>
<td>53</td>
<td>69.403</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>257342.000</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected total</td>
<td>14898.733</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R squared = .753.

The ANCOVA results indicate that there was a significant main effect for group (F = 151.38, df = 1.53, P < .0001). However, other main effects or interaction effect were also significant. The three variables explained about 75% of the variance in attitudes. This shows that both groups had the same attitude before the treatment. There is no difference in the attitude among them towards writing. Table 8 describes the correlation between the pre-test, post-test and students’ attitudes.

**Table 8: Correlation between Tests and Attitudes (n = 60)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest 1</td>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>.58**</td>
</tr>
<tr>
<td>Posttest 2</td>
<td>Pearson correlation</td>
<td>.58**</td>
<td>1.000</td>
</tr>
<tr>
<td>Attitude</td>
<td>Pearson Correlation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at P. < 0.01

The analysis showed no correlation between the grades of the pretest and students' attitudes towards the new teaching process. The correlation was .09, meaning that there was no correlation between their attitudes and the results of the pretest. In the post-test, however, there was a significant correlation with $r = .58^{**}$, $P. < .0001$.

**ANALYSIS OF THE INTERVIEWS**

The analysis of the data obtained from the interviews was regarding:

- The current approach used in teaching writing composition in the classroom.
- Difficulties encountered in the classroom; and
- Attitudes towards PWA. (see appendix 1)

**Attitude of the Students towards PWA**

The majority of students (93 percent) stated that they liked the English language but they said that the teaching approach their teachers used were very traditional and boring. They said that the teacher only asked them to write a paragraph about a topic the teachers chose. They would then collect the papers at the end of the lesson or ask them to do it as homework.

Some students initiated that their teachers did not teach them writing composition. What they did was to supply them with samples of written topics at the end of the semester to be memorized for the final examination. They added that some teachers did the written exercise in the work-books.

According to the students, difficulty in writing composition stemmed from the teaching approach adopted by the teachers. The analysis of the first question reveals that most of the interviewees (96 percent) disliked the previous teaching method.

The responses to the second question revealed that they were weak in writing; grammar and spelling were serious problems.
The students’ responses to the third question revealed that most teachers did not teach the writing skill.

The responses of students to (Section C) showed that the majority of the students who were exposed to the PWA noticed their progress in the writing skill. Above (90 per cent) indicated that they were against the traditional approach used by previous teachers. The responses to the fist question in (Section C) revealed also that the various stages in the PWA had polished their ideas and taught them how to think. They assumed that their errors became fewer. They suggested that teachers should adopt such an approach in teaching writing rather than neglecting this important skill and providing them with written samples for the test.

The majority of students also stated that the techniques used in the PWA were very interesting and beneficial, for instance, the use of pictures, video films and mapping ideas. They concluded that the PWA had greatly improved their level in writing composition. They stated that they felt they could write on any topic without difficulty. The following extracts were taken from students in the experimental class:

**Extract 1 (good students)**

"Although we consider ourselves in good level, the new approach our teacher used was very successful and helped us a lot in improving our writing. Now we can write more confidently and achieve higher grades better than worries of evaluation tests, which made us focus on memorizing the written samples the teachers furnished”.

**Extract 2 (intermediate students)**

"We hated English lesson because teachers presented writing lessons in a boring and tedious way. The method used by the current teacher was very interesting and helped us to write well-organized compositions. We hope the Ministry of Education recommends such an approach to help us learn writing”.

**Extract 3 (weak students)**

"PWA improved our ability to write acceptable compositions. The writing question in the final examination has become easy to pass"
without memorizing the written samples that we find difficulty to read or memorize. The new approach gave us wide opportunities to revise and correct our errors”.

The interviews revealed that, the majority of students (above 96 per cent) stated that the new method the teacher used was very interesting and effective in increasing fluency in writing during the writing of the first-draft, and accuracy in the final draft. The students in the experimental class thought that some teachers may refuse to use the new approach. Another problem mentioned by the students was the lack of training for students themselves and the availability of suitable classroom.

**DISCUSSION OF RESULTS**

Checking the pre- and post-test results of both groups, it was noted that the subjects in the experimental group had performed better than the subjects in the control group who were not trained according to the PWA. Another observation was that the improvement in the writing ability of the subjects in the experimental group was significantly greater than those achieved by the subjects in the control group. The means and standard deviations illustrated that students in the experimental group scored much better than their counterparts in the control group.

The three levels of students in both groups achieved better scores in the post-test than the pretest, but it was noted that the students in the experimental group got better results than their counterparts at all three ability levels after the treatment procedure (Table 1). The mean improvement due to the treatment procedure was more than 25 points. In contrast, the gain made by the three ability levels in the control group was 6.5 points. All in all, the experimental group, which was initially similar to the control group, proved that the experimental method used (the PWA), was superior to the traditional method of teaching writing composition. These results support some studies done in the same area such as (Flower & Hayes (1981), Raimes (1983, 1985, 1987), Zamel (1982), Siti (1994), Hedge (1998), Tribble (1996) and Al-Khoudary (2002).

The results favour the experimental group for a number of reasons. The students in the experimental group were trained well after...
they received writing exercises using the PWA. Furthermore, the students might have become aware that what was happening in their classroom was different from what was happening in other English classes, including the control class.

**PEDAGOGICAL IMPLEMENTATION**

**Performance of Students**
According to the results of the pre- and post-test, it was noted that the experimental group outscored their counterparts in the control group. The good students got a mean of 90.50, intermediate students got a mean of 88.40 and the weak students got 76.40 in the posttest. These results indicate that the students who were taught composition with the PWA achieved a better quality of writing than those who were taught writing according to the traditional approach.

The investigation of the writing samples of students revealed the same findings: students who were in the experimental group could write better compositions. On the contrary, students in the control group did not improve their writing as much as those in the experimental group. This result confirms that the PWA was successful and workable because over the period of one semester (or 16 weeks), it helped students improve their writing abilities.

**Attitude of students**
The students' reactions toward the PWA were positive. The results of interviews showed that after the treatment procedure, the attitude of students in the experimental group changed significantly. The correlation between students' performance in the posttest and their attitude indicated that there was a significant difference in the attitude of students in the experimental group with \( r = .58^{**}, P. < .0001 \) (Table 9).

**FINDINGS OF THE STUDY**
The findings of the study have several implications for the teaching of writing in EFL classes in the K.S.S, and, possibly, also for other schools in the UAE.
• The most important implication of this study is that it is possible to improve the writing abilities of UAE students in EFL.

• The result of the study indicates that writing should be viewed both as a process and a product. This finding supports studies done by Siti Hamin Stapa (1994); Tompkins (2000); Al-Khoudary (2002); Raimes, (2002); and Richards (2002) which claim that there will be no product without the process and no process without the product.

• Although it may be a little hasty to say so at the moment, the success of the PWA in the K.S.S could also be extended to other schools in the UAE.

• The application of such an approach needs a well-trained staff of teachers and asset of assessors who would be willing to over-look surface mistakes in favor of development students' writing ability.

RECOMMENDATIONS AND SUGGESTIONS

On the basis of the results and findings of this study, and their implications, a number of recommendations are suggested:

• The new English course should focus on teaching composition as well as on the other three skills for the secondary stage in the UAE.

• Seminars, conferences and workshops should be encouraged to exchange ideas between educators from all over the country and the world.

• Classrooms should not be overcrowded. Class size should be limited to 20 - 25 students.

• Enough time should be allotted in schools for teaching writing composition.

• When teaching writing, teachers should focus on upgrading students' ability to compose a text, and not merely on following the mechanical rules of writing.

• Memorizing for the purpose of passing examinations should be totally abolished.
• Teachers should not be knowledge providers. They should be facilitators, guides and supporters instead.
• A portfolio should be prepared for every student so as to evaluate his/her progress in the writing skill.
• Specific training should be undergone for EFL teachers at training centres that have regular and modernized programs supervised by qualified trainers and educators;
• Teachers should be provided with circulars about the new pedagogical methodology.
• Opportunity should be given to teachers and students to attend seminars and educational programmes.
• It is essential to encourage teachers to adopt and adapt PWA due to its positive effect on students’ level and eliminate the traditional approach that lead to pseudo-learning;
• It is necessary to find ways of close communication among English Curriculum developers in the Ministry of Education and Youth and the Educational and Scientific Research Centers in the Institutes and Universities.

DIRECTIONS FOR FUTURE RESEARCHES
As this is a case-study of improving the students' level in the writing skill, the results cannot be generalized to a greater population of students in different environments. Hence, more case-studies in this area can be conducted, with different sets of students and teachers (such as those with different beliefs about writing instruction) to see if they yield the same or different results as the following:

1- A study on a suggested course focusing on PWA and its effects on secondary students' learning improvements.
2- Devising a training project for English school inspectors and teachers concerning PWA.
3- Conducting a study about the relationship between the stages of (Piaget of developing mind and the PWA).

4- Investigating the interactions between the teacher and the students and its effects on their writing ability using PWA.

CONCLUSION

The purpose of this study is to discover a method of teaching writing that would enhance the ability of the UAE students in this skill. It was the researcher’s hypothesis that the PWA would prove to be effective for this purpose. Accordingly, the researcher set out to investigate the effectiveness of the PWA as a way to improve the writing abilities of UAE students in EFL. If, indeed it was effective, he wanted to explore its feasibility as an accepted method of teaching writing in EFL classrooms in the UAE. A case study approach was adopted, and the K.S.S in the Al Ain Educational Zone was the chosen site. 30 students were subjected to the experimental method (PWA), and their performance was compared to those of 30 other students who had followed the traditional approach of teaching writing.

The findings were positive, both in terms of the performance of the students and their attitudes towards writing in EFL, and the PWA. Using the techniques of PWA shifts the class from traditional pseudo-learning to effective real learning, from a teacher-centred to student-centred, from knowledge acquisition to learning how to learn, from whole class teaching to small group or individual learning, and then to self-learning, to include more emphasis on individual differences, more collaborating with others, and teacher-student interaction and student-student interaction. The researcher believe that this approach will not only minimize and overcome the disadvantages of the traditional relationship between teacher and student but will also allow teaching and learning activities to benefit both students and teachers.
References:


TESOL Quarterly 16, 195 – 207.

_______. 1987. Writing: The process of discovering meaning. In 
The author: Yahia Ashour Mohammed AL-khoudary is currently an instructor and a part-time lecturer at AUST. He has a Master of English from the USA and PhD from UM. His research interests include secondary education, teaching and autonomous learning. E mail: Yahia52@hotmail.com.

Interview Schedule for Students

(This schedule was administered after the respondents in the end of the semester)

SECTION A

Name:

SECTION B

The current approach used in teaching writing in the classroom.

1- In your opinion, how well do your teachers teach you composition?
2- Do you face any difficulties in learning composition?
3- How did your previous teachers help you in the writing skills?

SECTION C

Student's Attitudes towards PWA

1- In your opinion, how well does your teacher accomplish the new instructional method?
2- Do you face any difficulties in learning writing composition?
3- Would you please, give your opinion about the approach you like teachers to adopt?
4- How do you feel about the new method of teaching composition?
i- Attitudes towards PWA

ii- Attitudes towards the technique of the new approach: drafting, revising and editing.

iii- Attitudes towards stages of PWA

SECTION D

(Miscellaneous)
Look (Explorations in Theory) by Uriel Weinreich, Mouton 1972.
George Yule,