
Learner Factors in a High-Poverty Urban Middle School

Gabriela Olivares-Cuhat, University of Northern Iowa

ABSTRACT:

The purpose of this pilot study is to gain more insight into learner factors prominent in high-poverty urban schools and to suggest pedagogical approaches appropriate to this environment. To this end, three surveys were administered to students attending a high-poverty, urban middle school in order to measure their learning style preferences, language learning strategy use and emotional intelligence. The results indicated a strong preference for kinesthetic and sensing-perceiving learning styles, a generally high use of affective language strategies, and a low level of emotional intelligence in the interpersonal, stress management and adaptability scales. In addition, divergent tendencies in learning preferences and learning strategy use were found across different ethnic groups.

INTRODUCTION

Over the past ten years, 4th and 8th graders attending high-poverty schools in the United States have obtained lower reading, math, visual arts and music test scores on average than their counterparts in low-poverty schools. This situation is especially worrisome in cities, which account for a large proportion of high-poverty schools. While these issues have been well documented (Aud, Hussar, Planty, Snyder, Bianco, Fox, Frohlich, Kemp & Drake, 2010), a better understanding of learner factors commonly found in this type of environment could lead to the implementation of more effective instructional practices. Learner factors can be defined as individual characteristics influencing the learning process, a notion that can be especially helpful when attempting to explain why some students are more successful than others (Horwitz, 2008). In this light, the use of psychological and cognitive surveys aimed at evaluating a range of learning factors could offer a more comprehensive insight of a student's learning profile than standardized test scores. Also, by investigating how learner factors are linked to the high level of ethnic diversity typically found in urban high poverty schools (Aud et al., 2010), it may be possible to identify critical trends that could help narrow this educational gap.

To explore these issues, a pilot study was conducted in a high-poverty and diverse urban middle school classified as an academic emergency site according to state indicators based on state assessments, attendance and graduation rates. Several learner factors were first assessed using learning styles, English language learning strategies and emotional intelligence surveys. Second, these metrics were examined to uncover possible links between learner variables and ethnic background of the students.

BACKGROUND

High Poverty Schools in the United States

According to the U.S. Department of Education, average NAEP reading, mathematics, music and visual arts scores obtained by 4th- and 8th-graders in high-poverty schools over the last ten years were consistently lower than the scores achieved by students in low-poverty schools (Aud et al., 2010). Concurrently, high-poverty schools are more frequently found in cities: "In 2007–08, about 40 percent of city elementary schools were high-poverty schools,..., at the secondary level: 20 percent of all city secondary schools were high-poverty" (Aud et al., 2010, p.82). As a result, one might speculate that cities could suffer from a higher achievement gap, and in fact, Uzzell, Simon, Horwitz, Hyslop, Lewis and Casserly (2010) suggest this is, in fact, true. They report that urban schools in the United States are below state averages both in math and reading scores. Taken together, these studies outline a state of interdependency between high-poverty, urbanicity and low academic achievement. This relationship was further examined by Lippman, Burns and McArthur (1996), who investigated the question of a possible combined effect of high-poverty and urbanicity on academic performance. The authors found that "the less favorable outcomes observed for [students in high poverty urban schools] could be predicted from the combined effects of an urban setting and a high poverty setting" (p. 21). In other words, the effects of high-poverty on the educational gap affecting children in a urban environment was consistent with the one observed in suburban and rural school systems.

There are many reasons why this relationship between education and low socioeconomic status (SES) might exist. Looking specifically at a low SES Hispanic community, Gándara and Contreras (2009) found that basic developmental needs were not being met, due for instance to inadequate nutrition, poor access to basic medical care, and disadvantages in terms of early

education programs. In addition, these problems were often amplified by deficient school systems linked to inadequate school facilities (Earthman, 2002), low quality teachers and a high turnover of principals (Prince, 2002). What is more, poverty has an indirect influence on educational outcomes through weakened family structures, higher mobility, less access to books and computers, and a higher crime rate found in low-income neighborhoods (Evans, 2004).

Another consideration is the fact that minority children are generally overrepresented in high-poverty urban schools. According to Planty, Hussar, Snyder, Provasnik, Kena, Dinkes, et al. (2008, p. 49), “among students attending city schools, for example, 44 percent of Blacks, 46 percent of Hispanics, and 27 percent of American Indians/Alaska Natives attended high-poverty schools, compared with 9 percent of Whites and 17 percent of Asians/Pacific Islanders”. This fact may also have a negative impact on education, as it can cause cultural adaptation issues, marginalization and discrimination. For instance, Alexander and Entwisle (1988) found that grades for behavior assigned to black children in elementary school were not consistent with their standardized test results. Along the same lines, Gilmore (1985) showed that urban black elementary school children were denied learning opportunities by teachers who based their decisions on perceptions of a child’s behavior rather than academic performance.

Finally, while 46 % of Hispanic children attend elementary high-poverty schools in cities (Aud et al., 2010), they are also more likely to speak another language at home and to communicate in English with difficulty (KewalRamani, Gilbertson, Fox & Provasnik, 2007). Low levels of English proficiency are viewed by some researchers as a main factor for the achievement gap affecting Hispanic youth (Genesee, Lindholm-Leary, Saunders & Christian, 2006). In a nationwide study conducted by Moss and Puma (1995), it was also reported that “[Limited English Proficiency (LEP)] students in primary grades do not perform as well academically as their grade peers across several indicators of academic achievement” (p. 130). According to another study conducted in a large urban community by Hakuta, Gatto, Butler and Witt (2000), LEP students in the highest poverty category lagged substantially behind their peers with respect to the length of time required to reach oral and academic English proficiency.

Learner Factors

Along with these various socioeconomic and cultural factors, success in high-poverty urban schools is also determined by variables at the individual level, in the form of various learning skills and likings. These predispositions are referred to as “learner factors” and three of these factors were considered in this study.

Learning Styles Preferences. The idea of matching teaching and learning styles has been researched since the mid-1970’s and subsequently promoted by many educational organizations. A main feature of this concept is highlighting learners’ preferences instead of abilities, thus clearly setting it apart from measures of aptitude. According to Sternberg (1995): “A style is a way of thinking. It is not an ability, but rather how we use the abilities we have” (p. 266). Another claim that makes it relevant to educators is the notion that learning styles are malleable, i.e., that “we acquire styles by modeling those around us, such as parents, teachers, other authority figures and peers” and that “people are not locked into any one of style ... rather they change as life’s circumstances and their own predilections” (Sternberg, 1995, pp. 268-69).

A large number of learning styles models and inventories have been proposed over the years—for example, 71 were identified by Coffield, Moseley, Hall and Ecclestone (2004)—and only a few main ideas are presented here. Dunn & Dunn (1978) were among the first to suggest that instructional methods needed to be harmonized with learning styles. To this end, they designed various inventories aimed at ranking a wide range of variables generally categorized as an individual’s environmental, emotional, sociological, physiological, and cognitive processing preferences. Another influential approach stemmed from the experiential learning theory (ELT) proposed by Kolb (1984), which combines styles geared towards experience (concrete versus abstract) and cognition (active versus reflective) and relies on a learning style inventory (LSI) as assessment tool. Yet another learning styles taxonomy was borrowed from the well-known Myers-Briggs personality test (Briggs & Briggs Myers, 1982), which classifies subjects into 16 different psychological types that are derived from four opposite pairs, namely attitude (extraversion / introversion), information-gathering (sensing / intuition), decision-making (thinking / feeling), and lifestyle (judgement / perception). As a last example, Fleming (2001) created the VARK questionnaire that identifies learners’ preferences in terms of their sensory modalities, i.e., visual, auditory, reading/writing and kinesthetic.

Across all of these many models of learning styles, the goal is the same. From a cognitive viewpoint, learning styles can be seen as a means to aid the learning process and thus contribute to academic success. In that sense, one can view them as a distinct type of learner factor in that they can lead to different learning outcomes and possibly help explain academic achievement.

Language Learning Strategies. Language learning strategies have been defined by Griffiths as “activities consciously chosen by learners for the purpose of regulating their own learning” (2008, p. 87). These techniques involve a decision process on the part of the learner, which require both an awareness of learning tools (e.g., mnemonic devices, relaxation methods or guessing meaning from context) and a knowledge of their adequate use (Cohen, 1998). According to Chamot (2005), learning strategies are important to the educational field in that they promote a better understanding of language processes

and can be both taught and learned. In the field of language learning, they may be classified either according to their types, i.e., memory, cognitive, compensation, metacognitive, affective and social (Oxford, 1990), or in function of specific tasks such as listening, reading, vocabulary learning and writing (Cohen, 1998). It has been suggested that successful language learners are able to use these strategies in a more coordinated manner and more frequently than others do (Oxford, 2001). In addition, several studies have indicated a connection between language learning strategy use, achievement and performance, and learner independence (Olivares-Cuhat, 2002; Vidal, 2002). Investigators have also pointed out that factors such as proficiency (Magogwe & Oliver, 2007), age (Takeuchi, Griffiths, & Coyle, 2007), personality, gender, brain sphere domination, and the nature of the task are among those that affect language strategy use and choice among all learners (Oxford, 2001).

Many instruments exist to assess language learning strategies, including self-report surveys, interviews, students' diaries, and think-aloud protocols (Oxford, 2001). One of the most widely used tools is the Strategy Inventory for Language Learning (SILL) developed by Oxford (1990). Another instrument called the Young Learners' Language Learning Strategy Use (Cohen & Oxford, 2002) survey was derived from the SILL.

Emotional Intelligence. The concept of emotional intelligence (EI) has raised a considerable amount of interest in the fields of psychology and education over the past 15 years (Barchard & Hakstian, 2004, p. 438). Emotional intelligence can be traced to the theory of multiple intelligences developed by Gardner (1983), which proposes that intelligence is divided into various cognitive abilities. One of these abilities, "personal intelligences", consists of intra- and interpersonal dimensions linked to awareness of one's feelings and the mood of other people. This notion that intelligence could be separated into various modalities led to the development of EI (Mayer, Roberts & Barsade, 2008). EI is a combination of "non-cognitive capability, competency, or skill", including "emotional, personal, and interpersonal abilities that influence one's overall ability to cope with environmental demands and pressures" (Bar-On, 1997). One main exponent of this approach is the Bar-On model of emotional-social intelligence (ESI), which has led to the development of a self-report measure, the Bar-On Emotional Quotient Inventory (EQ-i). Other important interpretations of EI are based on specific abilities (Mayer et al., 2008) and traits (Petrides, Pita & Kokkinaki, 2007).

An interesting aspect of EI within the framework of this study is the claim that it can be modified through training: "[Results from studies suggest that] factors described by the Bar-On [EI] model are both teachable and learnable, and that these factors can be enhanced by relatively simple didactic methods over a relatively short period of time" (Bar-On, 2000, p. 19). In fact, the possibility of improving EI by way of instructional activities has spurred the establishment of various social emotional learning programs (Elksnin & Elksnin, 2003). For instance, guidelines for teachers and educators to improve basic social and emotional skills were proposed by Lewkowicz (2007) through the development of choice-making, identification of feelings, anger management, and control of anxiety.

Nowadays, a large body of research has established the relevance of EI to the field of education. The existence of a link between measures of EI and academic performance has been identified in many studies (Barchard & Hakstian, 2004; Hogan, Parker, Wiener, Watters, Wood & Oke 2010). The role of EI on students' behavior was studied by Mavrovelli, Petrides, Sangareau and Furnham (2009) who reported that higher levels of EI were correlated with a better ability to forge relationships and more award nominations for cooperative and leadership skills. Also, a study conducted in Malaysia found that a measure of EI was significantly correlated to problem behaviors including stress, depression, somatic complaints, aggression and delinquency among urban high school students (Liau, Liau, Teoh & Liau 2003). These links between EI and various parameters related to academic success justifies its classification as a learner factor. In this sense, EI quotients can be viewed as a means to explain differences in academic success.

Instructional Strategies for the High-Poverty Urban Classroom

Over the last thirty years, various researchers have pointed out the benefits of implementing learning styles/strategies and EI methods in urban high-poverty schools (Gandára et al, 2009). In doing so, they have brought forward numerous pedagogical and administrative recommendations, including the use of differentiated instruction, the teaching of appropriate social behaviors, the assurance of a safe school climate, the provision of adequate nutrition and health services, and the involvement of families and community (Chittooran & Chittooran, 2010). Within this effort, educators have already suggested that the concepts of learning styles/strategies and EI could be helpful in addressing learning challenges encountered in high-poverty urban settings. As a first example, based on the finding that many at-risk students favor tactual and kinesthetic learning styles, Honigsfeld and Dunn (2009) have advised their teachers to include activities requiring the use of hands, bodies and to stand on their feet, as these children "are more likely to internalize comprehensive information while using small- and large-motor movements", (p. 221). Kuykendall (2004) found that the learning styles of at-risk Black and Hispanic minorities were more likely to be people-oriented (in that they seek a personal interaction with teacher) and field-dependent (whereas they learn better in a student-centered and personal environment) and recommended to match teaching styles accordingly. Regarding learning strategy use, Johnson (1998) emphasized the importance of providing learning strategy instruction to at-risk students, as they are less likely to develop these critical tools on their own. Finally, the need to develop intrapersonal EI skills of minority students with a view to improving their academic performance was stressed by Burnette (1999), who suggested to create opportunities enabling them to "boost their self-esteem, develop positive self-attributes, and

enhance their strengths and talents” (p. 3).

RATIONALE OF THE STUDY

This research ascribes to the tenets of differential psychology and thus assumes that learning characteristics vary significantly across a student population. Such variability typically encompasses “general skills, aptitudes and preferences for processing information, constructing meaning from it, and applying it to new situations” (Jonassen & Grabowski, 1993, p. 3). Within this cognitive perspective, it can be helpful to emphasize the role of learner factors, a concept borrowed from the field of second language acquisition, to describe how a range of cognitive, affective and metacognitive variables are linked to successful learning (Horwitz, 2008). An advantage of this approach is that researchers are then in a better position “to explain why some learners succeed more than others” (Ellis, 2008, p 643). Accordingly, this paper interprets some general psychological constructs (namely learning styles/strategies and emotional intelligence) specifically as learner factors, a step consistent with the fact that these variables have shown significant correlations with academic achievement. From a pedagogical perspective, the focus on learning styles/strategies and EI offers several benefits. First, these variables are operationalized through multi-dimensional scales, thus providing teachers and researchers with detailed characterizations of students’ profiles. Second, the categories measured by the subscales of learning styles/strategies and EI tests are relatively intuitive so that it is easier for the educator to interpret and act upon these results. Third, learning styles/strategies and EI are dimensions that can be taught and/or modified in a classroom setting, so that insights gained from their role in the learning process can be used directly to design and implement better instructional strategies.

These ideas lead to the main goal of this study, which is to gain insight into factors that typically relate to learning in a high-poverty urban environment, with a view to improving the teaching and learning situation facing these students. To this end, the current study first quantifies learning styles, language learning strategies and emotional intelligence among high-poverty urban middle school students and second, identifies links between these learner factors and ethnicity. Accordingly, the following research questions were posed in a pilot study conducted at a high-poverty urban middle school classified as an academic emergency site:

1. What are the learning-style preferences, English-language learning strategy types and levels of EI reported by the test subjects?
2. Are there significant differences in learning style preferences, English language learning strategy use, and EI levels between students of distinctive ethnic backgrounds?

METHOD

Participants and Site

The study was conducted in a middle school located in a low income area of a major Midwestern city with an enrollment of 774 students, including 71.1% of Hispanics, 49.5% of English language learners (ELL), and 27.4% who had a learning disability. The school was defined as high-poverty institution, as it was ranked in the top quartile with respect to enrollment of economically disadvantaged students, who were defined as members of a household meeting the income eligibility guidelines for free or reduced-price meals. The percentages of students at and above the proficient level in reading, mathematics and science were significantly below state requirements.

The participants consisted of 66 mainstream classroom students who were 13 years old on average, with 22 boys and 40 girls, 52% of which were enrolled in the seventh grade, and 48% were in the eighth grade. In the sample, 73% were Hispanic, 12% African-American, 12% White and 3% Arab. Regarding their linguistic background, 30% of the students perceived themselves as English monolinguals and 70% as Spanish-English bilinguals. Participation was secured through an informed parental consent and an assent of the student. Subjects and teachers received gift certificates upon completion of the study.

Design and Procedure

Several weeks prior to the tests, the potential subjects were given a biographical information questionnaire to take home and return to their main teachers. On the day of the test, the students were grouped by grade level. At the beginning of the session, they received a packet containing the testing materials, i.e., a learning styles survey, a language strategy use survey, and an emotional intelligence test. No time limits were set, but each test had to be completed by everyone before the group could move on to the next one.

Instruments

Kaleidoscope Profile®. This instrument is a self-report measure of learning styles (Haggart, 2003), which has been administered by various schools as a mean “to develop insight into staff and students thinking, learning and working styles” (School comprehensive educational plan, 2010). It assesses twelve learning style dimensions: sensory (visual, auditory, tactual, kinesthetic); organizational / perceptual: global versus sequential and abstract versus concrete; and temperament (intuitive-feeling, intuitive-thinking, sensing-judging and sensing-perceiving). The selection of this instrument was motivated by its applicability and suitability to the age of the participants.

Young Learners' Language Strategy Use Survey. This instrument is a self-report measure of language learning strategy use applied in academic research (Cohen & Oxford, 1992; Moloney, 2007). Within the framework of this study, 21 questions related to reading and vocabulary strategies were retained. These items referred to memory, affective, cognitive and metacognitive strategies. The selection of this tool was motivated by its suitability to the age and level of the participants (Cohen & Oxford, 2002).

Emotional Quotient Bar-On Youth Version (YV). This instrument is a self-report measure of EI designed for students between the ages of 7 and 18 years old often used in empirical studies (Bar-On & Parker, 2000; Parker, Duffy, Wood, Bond, & Hogan, 2005). Its short form consists of 30 items and six scales: Total EI, Intrapersonal, Interpersonal, Adaptability, Stress Management and Positive Impression. This test has been normed over 9,000 North American children and teenagers and showed solid internal reliability scores ranging from 0.77 to 0.86 and test-retest reliability coefficients ranging from 0.77 to 0.88 for the age group under study. The selection of this instrument was motivated by its reliability and its suitability to the age of the participants.

Biographical Questionnaire. The students submitted information about their age, gender, their ethnic and language backgrounds, family situation, and educational levels and language background of their parents.

Data Analysis. One-way between-subjects ANOVA and all-pairwise comparisons were evaluated with the SPSS statistical software. Given the exploratory nature of the study, Fisher's LSD multiple comparison test was preferred to Tukey's HSD, as the former is less likely to lead to Type II errors (i.e., it is less conservative).

RESULTS

In this section, empirical findings are presented and analyzed to answer the research questions. In summary, the students tested in the study could be described as kinesthetic, sensing-perceiving, significantly below average in terms of EI, but fluent in the use of affective learning strategies, and showing a diversity of learning preferences and abilities in function of their ethnic backgrounds.

Research Question #1

What are the learning-style preferences, English-language learning strategy types and levels of EI reported by the test subjects?

Results of the learning style are shown in Table 1. They indicate a strong preference for the kinesthetic (sensory mode) and sensing-perceiving styles (temperament mode) and a low preference for the visual and intuitive-thinking styles, while no dominant trend emerged with respect to the organizational/perceptual mode.

The prevalence of learning strategy used by the students was derived from the Young Learners' survey ratings. Accordingly, the level of strategy use was found to be high for the affective type, and medium for the cognitive, metacognitive and memory types (see Table 2).

The reported EI levels are shown in Table 3. These results range from very low (interpersonal, stress management and adaptability scales) to average (intrapersonal and positive impression scale).

Research Question #2

Are there significant differences in learning style preferences, English language learning strategy use, and EI levels between students of distinctive ethnic backgrounds?

The normality of the distributions were demonstrated for all sample variables with the Kolmogorov-Smirnov test. First, one-

way ANOVAs and LSD post hoc comparisons between learning styles preferences revealed significant differences between ethnic groups. Regarding organizational/perceptual styles, White students showed a higher predilection for the concrete global style, with $F(4, 61) = 3.43, p = 0.014$; Hispanic and African-American children demonstrated a stronger inclination for the abstract global style, with $F(4,61) = 2.93, p = 0.028$; and African-American reported a higher predisposition for the abstract sequential style, with $F(4,61) = 5.44, p = 0.001$. As to the temperament category, the intuitive feeling style was favored by Hispanic students, with $F(4,61) = 2.95, p = 0.027$; Hispanic and African-American children preferred the intuitive-thinking style, with $F(4,61) = 4.75, p = 0.002$. In addition, a significant difference was found between ethnic groups with respect to answers provided to one statement of the learning strategy questionnaire, as Hispanic students indicated a higher tendency to use a learning strategy that promoted reading habits, with $F(4,61) = 3.27, p = 0.017$.

Finally, one-way ANOVAs and LSD post hoc comparisons demonstrated a significant difference in the use of a memory learning strategies between language groups. Specifically, English monolinguals reported a stronger willingness to use memory aids in the classroom, with $F(4,61) = 5.06, p = 0.028$.

Table 1
Kaleidoscope Profile Learning Styles Preferences

<i>Learning Mode</i>	<i>Learning Style</i>	<i>Proportions [%]</i>
Sensing	Kinesthetic	61.8
Sensing	Tactile	30.9
Sensing	Visual	7.3
Organizational	Concrete-Sequential	26.8
Organizational	Concrete-Global	26.8
Organizational	Abstract-Sequential	30.5
Organizational	Abstract-Global	15.9
Temperament	Sensing-Perceiving	63.2
Temperament	Sensing-Judging	26.5
Temperament	Intuitive-Thinking	2.9
Temperament	Intuitive-Feeling	7.4

Table 2
Strategy Use Scores

<i>Strategy Type</i>	<i>Affective</i>	<i>Cognitive</i>	<i>Metacognitive</i>	<i>Memory</i>
<i>Score</i>	High	Medium	Medium	Medium

Table 3

Bar-On EQ-YV Emotional Intelligence Quotients

<i>Scale</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Ranking</i>
A (Intrapersonal)	93.5	13.8	Average
B (Interpersonal)	72.2	13.8	Very low
C (Stress Management)	77.4	18.7	Very low
D (Adaptability)	77.6	18.1	Very low
F (Positive Impression)	94.6	17.0	Average

DISCUSSION

In this paper, several surveys were administered in a high-poverty urban middle school, with the general purpose of gaining more insight into the learner variables more prevalent in this type of environment and possibly identify ethnic-specific trends.

With regard to learning styles, a high proportion of kinesthetic learners and a low representation of visual learners were found in the sample as compared to the general population of middle-schoolers (Carbo, Dunn & Dunn, 1986). This could indicate that the participants did not follow an expected developmental curve, according to which the number of visual and auditory learners gradually increases with age (Carbo et al., 1986). This slow pace of progress may then be a sign that the developmental needs of children of low SES are not being addressed adequately. For instance, it is less likely for a low-income child to attend a preschool program, to be exposed to quality reading material, or get parental involvement in reading activities. In turn, as many of these children are only performing at a basic reading achievement level, they may not be able to foster their visual abilities. In other words, children in high-poverty urban schools may be caught in a cycle that prevents them from developing the very learning styles that would enable them to become more effective learners.

The high proportion of sensing-perceivers students may also lead to more adverse situations “because [sensing-perceivers] are described as behaving in ways that will satisfy their high valuation of action, stimulation, and impulsiveness in the moment, unlike other temperaments, they have the greatest difficulty adjusting to and accepting the structure of the traditional classroom setting” (Woodruff & Clarke, 1996). As it happens, these preferences appear to be in conflict with traditional modes of teaching at the grade levels considered in this study, which are mostly visual and auditory, and require a degree of deference of the students toward the teacher. In turn, these mismatches may contribute to low academic achievement.

In regard to the ANOVA results, a variety of trends in learning styles preferences among different ethnic groups were revealed. For example, White students tended to favor concrete global styles, Hispanics leaned more towards intuitive feeling styles, and African Americans were more likely to prefer abstract sequential styles. It can be concluded that the plurality of inclinations found in a diverse classroom points to the benefits of including a large variety of instructional strategies in high-poverty urban school systems. This concern has been echoed in previous research warning against the incongruity between teaching and learning styles often found in minority schools (Ravitch, 2000). As pointed out by Kuykendall (2004, p. 71): “Students who find their culture and learning styles reflected in both the substance and organization of the instructional program are more likely to be motivated, less likely to be disruptive and more likely to benefit from their learning experience”.

In regards to the language-learning strategies, students reported a frequent use of the affective type, and medium use of the cognitive, metacognitive and memory types. However, in view of their low academic performance, it is questionable that students actually benefited from these skills. In fact, one may speculate that a mismatch between strategy use and nature of

the tasks typically assigned in the classroom could have diminished their return (Oxford, 2001). For instance, the students may have found little interest in some of the reading material and could have then missed opportunities to use affective language strategies appropriately. Second, the higher use of memory strategies demonstrated by English monolinguals showed that the use of such learning aids could be generalized to the whole classroom through learning strategy instruction.

As to the EI survey results, the relatively low EI quotient obtained by the students could possibly be linked to their low SES, as illustrated by Harrod and Scheer (2005). This point underlines the role of the societal conditions on the students' EI and ultimately on their academic performance and personal success. Possibly, school psychologists could contribute to improving emotional literacy in the school through appropriate intervention programs and specific learning modules (J. Cohen, 2001). Regarding the low scores reported in the interpersonal, stress management and adaptability dimensions, these scales have previously been correlated with low academic success when transitioning from high school to university (Parker et al., 2005), which is consistent with the academic emergency status of the research site. Thus, the findings of the current study support the claim made by Parker et al. (2005) that "an important link exists between adaptability and stress management skills as well as interpersonal abilities and academic success" (p. 76).

To summarize the findings: (a) the learning styles preferred by the participants were not well matched to traditional teaching styles, demonstrating the need to promote a wider range of learning modes; these preferences also showed a diversity of tendencies in function of ethnic backgrounds, thus pointing to the benefit of implementing many instructional strategies in the diverse classroom; (b) the students' fluency in affective language learning strategies did not seem to be effective, indicating that the classroom tasks were not taking full advantage of this predisposition; also, variations in language learning strategy use between groups of different linguistic backgrounds signaled that students could benefit from additional strategy-based instruction; (c) the participants displayed low level of emotional intelligence in the interpersonal, stress management and adaptability categories, stressing the need of supporting their psychological well-being.

PEDAGOGICAL RECOMMENDATIONS

In light of this pilot study, the author would like to suggest a number of instructional strategies to mitigate adverse conditions encountered by middle-schoolers in high-poverty urban schools. First, activities relying on a large variety of learning styles could be implemented in order to accommodate the divergence in learning style preferences that one encounters in a diverse environment. This could include setting up different "learning centers" within the classroom in order to foster the use of various learning styles. Next, because children in these schools favor the kinesthetic learning style, teachers could promote activities stimulating a wide range of abilities and cognitive skills, such as debating with classmates, imagining an end to a story, self-monitoring one's progress, conducting a hands-on science project, analyzing a literary passage, and dramatizing a situation. Furthermore, with a high representation of sensing-perceiving learners, the teacher may also want to include more activities matching this learning style, such as discovery processes, manipulative and practical projects and assignments with a competitive component. Regarding language learning strategies, their efficient use could be taught both implicitly and explicitly, for instance with the help of the strategy-based instruction approach, which "aims to assist learners in becoming more responsible for their efforts in learning" (Cohen, 1998, p. 82). This method involves the implementation of a succession of steps typically including the modeling of a useful set of strategies, soliciting examples from the students, conducting discussions and reflecting on these new concepts in groups, broadening the range of strategies, and finally integrating the use of strategies in daily classroom activities.

As to the low emotional intelligence level reported by the students, it could be beneficial to add various classroom activities into different school subjects in order to bring out the abilities of students to recognize and manage their emotions, cope with adversity and better handle relationships. For instance, the teacher could introduce and discuss topics evoking a range of feelings (such as sadness, frustration, and happiness); challenge them to find solutions to problematic issues; allow them to express emotions through role-plays; create opportunities for classroom sharing experiences; and generally develop trust, camaraderie and empathy through group activities.

In conclusion, this study highlights some of the complexity of the educational challenges faced by middle-school students in high-poverty urban communities. To mitigate these difficulties, instructional techniques could compensate for unfavorable trends found in learning style preferences and emotional intelligence, better take advantage of existing strengths in language learning strategy use, while accommodating a divergence in learning style preferences linked to the cultural diversity of the student body. To be sure, the burden of improving these conditions should ultimately go beyond the classroom and be shared by parents/caretakers, administrators and policy makers (Chittooran et al., 2010).

Dr. Olivares-Cuhat

is an Assistant Professor of Spanish at the University of Northern Iowa, specialized in the field of second/foreign language acquisition and ESL. Her research interests include: language aptitude, learning styles, language learning strategies, language anxiety, emotional intelligence, and teaching methodology. Her work has been published in *Foreign Language Annals*, *The Modern Language Journal* and *Linguistik Online*.

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