

LEARNING STYLES AS A PREDICTOR OF EMOTIONAL INTELLIGENCE AMONG SAMPLE OF JORDANIAN UNIVERSITY STUDENTS

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ABSTRACT

This study examines if learning styles (deep, surface, strategic) predict emotional intelligence (emotional knowledge, emotion regulation, empathy, social commitment). Participants of the study comprised of (534) students (males and females) selected randomly from different faculties of Hashemite University. Regression and correlation analyses were used to data. Results indicate that there is a significant positive correlation between the dimensions of emotional intelligence and learning styles. Results also indicate that learning styles significantly explain emotional intelligence and learning styles predict all sub-dimensions of emotional intelligence.

Key words: Emotional intelligence, Learning styles, Undergraduate student.

Introduction.

The first use of the word emotional intelligence appeared in a doctoral dissertation written by Wayne Leon Payne in 1985. The term emotional intelligence was used five years later by John Mayer and Peter Salovey. In 1990, Mayer and Salovey were trying to develop a way of scientifically measuring the differences in people's ability in the area of emotions. They found that people, who have emotional intelligence skills, understand and express their own emotions, can recognize emotions in others, regulate affect, and use moods and emotions to motivate adaptive behaviors. (Salovey & Mayer, 1990).

Goleman emotional intelligence model thus consisted of five basic emotional and social competencies: self-awareness, self-regulation, motivation, empathy, and social skills. Self-awareness involves knowing what we are feeling at the moment and using those preferences to guide our decision making. Self-awareness involves having a realistic assessment of our own abilities and a well-grounded sense of self-confidence. Self-regulation is how we handle our emotions so that they facilitate rather than interfere with the task at hand. Self-regulation consists of being conscientious and delaying gratification to pursue goals and recovering well from emotional distress (Goleman, 1998).

According to Bar-On (1997), emotional intelligence is an array of personal, emotional, and social competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures, and directly affect one's overall psychological well-being. In other words, one's knowledge, skills, and overall intelligence must be augmented by the ability to understand, perceive, and regulate emotions. Mayer and Caruso (1999) suggests that emotional intelligence is not set at birth but can be developed through education and training.

Emotions influence a host of cognitive processes, such as attention, perception, memory, decision making, and social judgments (Planalp & Fitness, 1999). Elder (1997) notes that emotions play a significant role in students. Ability to learn content, thus emotions can facilitate learning. How a student uses emotions may also affect his/her ability to learn.

For example, if a student has just lost a loved one, then it would probably be hard for the student to focus on learning due to the emotion of sorrow.

Emotions provide people with valuable information about themselves and how they relate to others. Emotions are meaningful to education, they drive attention, which drives learning and memory (Sylwester, 1994). Boud, Keogh, and Walker (1985) state that negative feelings can form negative attitudes towards learning. Clarify if it's emotions in a general sense or negative emotions can distort perceptions, lead to false interpretations of events, and can undermine the will to persist. Positive feelings and emotions can greatly enhance the learning process; they can keep the learner on the task and can provide a stimulus for new learning. Emotional intelligence is much more complex and integrative than acknowledging affective components within a learning environment (Jaeger, 2001). Emotions trigger cognitive activities and direct actions (Salovey & Mayer, 1990). Researchers (Barris et al., 1985; Geiger & Pinto, 1991; Mentkowski & Strait, 1983; Pinto et al., 1994) noted than an individual's experiences and environmental factors may lead to changes in learning style preferences. These experiences and environmental factors may be directly or indirectly related to an individual's emotions and feelings, thereby creating a critical role for emotions in learning (Jaeger, 2001).

Learning styles and emotional intelligences have been studied frequently as separate research topics (Suliman, 2010; Badri et al, 2012 Gia daneka,2008; Schutte et al,2010; Alavinia & Ebrahimpour, 2012; Benson, 2005; BeShears, 2004; Boyd, 2004; Briody, 2005; Knoll, 2006; Leavitt, 2004; Miles, 2004; Paul-Oudouard, 2006; Phillips, 2005; Rivera & Beatriz, 2004; Scott, 2004; Smith, 2006, Spector, 2005;Wells, 2004; Yahr, 2005; Yancey-Bragg, 2006; Webb,2005, Fong & Yeo,2007). Findings indicated that emotional intelligence influenced the learning styles. Each of these styles is influenced by different dimensions of emotional intelligence.

Statement of the problem

The teaching and learning processes are influenced by different cognitive variables, important amongst them include students learning styles and emotional intelligence. Where he found all of Honigsfeld and Dunn (2006) Understanding one's learning styles can help the learner improve achievement in class, but understanding how learning styles and emotional intelligence correlate together can open new doors to an adult's learning skills. Therefore, the purpose of this study was to examine the relationship between emotional intelligence and learning styles among the students of the Hashemite University.

Objective and Research Questions:

The objective of this study, among other, is to determine the relationship between emotional intelligence and learning styles among in Jordanian university students.

The specific study questions that guided this study were:

RQ1: Is there any significant relationship between Jordanian university students emotional intelligence and their learning styles?.

RQ2: Is there any significant relationship between the dimensions of emotional intelligence (emotional knowledge, emotion regulation, empathy, social commitment) and learning styles (deep, surface, strategic)?.

Importance of the study

In addition, this study is very important for many reasons:

1. This will help teachers and learners better understand these findings and use these findings to enhance classroom learning.
2. This examination of these two concepts can lead to a better understanding of the impact of learning styles and emotional intelligence in learners.
3. It can also help adult learners enhance their classroom skills.
4. It opens the door for researcher to conduct related studies in the field of emotional intelligence and its relationship to other variables in different university.

Definition of terms

For the purposes of this study, the following terms were defined:

Learning styles: preferences that students have for thinking, relating to others, and for various classroom environments and experiences. (Grasha, 1990, p.106).

Emotional intelligence: is a set of abilities that accounts for how people's

Emotional reports vary in their accuracy and how the more accurate understanding of emotion leads to better problem solving in an individual's emotional life. (Mayer, Salovey, & Caruso, 2000, p. 396).

Methodology

Participants:

The population of this study consisted of (20250) undergraduate students, who were enrolled in the various faculties at Hashemite University (HU) for the academic year 2011/2012, across all levels of study. A sample population of 534 undergraduate, between the ages of 18-22 years old, were selected based on random sampling technique.

Instruments

Data was collected via 2 main instruments, namely emotional intelligence questionnaire, and learning styles questionnaire. A detailed description of the instruments is provided below:

Emotional intelligence questionnaire

The instrument used in this study was developed by the Al-Alwan (2011) after on extensive review related emotional intelligence mersuerment (Mayer and Salovey, 1990; Mayer, Caruso and Salovey, 1997, Narimani and Basharpour, 2009). The instrument consisted of (41) items that relate to emotional intelligence four dimensions: emotional knowledge (9) items, emotion regulation (10) items, empathy (13) items, social commitment (9) items. Participants rated each item on a 5 point Likert scale ranging from totally disagree (1) to totally agree (5).

A cronbach alpha of (0.76) was reported for the emotional intelligence. In terms of the emotional intelligence dimensions, a reliability estimate of (0.79) was reported for the emotional knowledge, and a (0.82) was reported for the emotion regulation, and a (0.70) was reported for the empathy, and a (0.74) was reported for the social commitment.

Also, the reliability coefficient was calculated using test-retest and was found be (0.83, 0.85, 0.80, 0.86) for emotional knowledge, emotion regulation, empathy and social commitment.

Learning styles questionnaire

The 52-item Approaches and Study Skills Inventory for Students was used to measure the three approaches to learning adopted by students (Entwistle & McCune, 2004). Participants indicate their relative agreement with statements by using a 5-point Likert-type scale, ranging from 1 (*disagree*) to 5 (*agree*). The Deep approach scale contains four-item subscales (seeking meaning, relating ideas, use of evidence, and interest in ideas). The Surface approach scale includes four-item subscales (lack of purpose, unrelated memorising, syllabus boundness, and fear of failure). Total scale scores for both the Deep and Surface learning approaches could theoretically range between 16 and 80. The Strategic approach scale consists of five, four-item subscales (organised study, time management, alertness to assessment demands, and monitoring effectiveness). Total scale scores could theoretically range from 20 to 100. Entwistle and McCune reported acceptable reliabilities for the Deep ($\alpha = .84$), Strategic ($\alpha = .80$), and Surface ($\alpha = .87$) scales.

Procedures:

The instruments were administered to the participants in their regular classrooms by the researcher. The researcher explained to the participants the purpose and the importance of their participation in this study. In addition, the researcher assured the participants of the confidentiality of their response and that their response would be used only for research purposes.

Then, the question booklets were distributed and instructions were given to the participants on how to answer them. The participants' responses were scored by the researcher and were entered into the computer for statistical analysis. The data were analyzed using the SPSS package

Results and Discussion:

To facilitate understanding the results of this study, questions of this study are divided into two question.

Results related to study question (1): Is there any significant relationship between Jordanian university students emotional intelligence and their learning styles?.

To answer this question, the correlation coefficients between measure emotional intelligence and measure learning styles are presented in table 1.

Table 1: correlation between measure emotional intelligence and measure learning styles (n= 534).

Measure	Emotional intelligence
Learning styles	0.42*

*p <0.05.

Table 1 shows, that there significant correlation at level of (p=0.05) between the emotional intelligence and learning styles.

Thus we can say that emotional intelligence has a positive influence with three learning styles among Hashemite university students.

Results related to study question (2): Is there any significant relationship between the dimensions of emotional intelligence (emotional knowledge, emotion regulation, empathy, social commitment) and learning styles (deep, surface, strategic)?.

To answer this question, the correlation coefficients between measure emotional intelligence and measure learning styles are presented in table 2.

Table 2: correlation between the dimensions of emotional intelligence and learning styles (n= 534).

Variable	Diemen's	Emotional knowledge	Emotion regulation	Empathy	Social commitment	Total
Learning styles	Deep	0.28*	0.34*	0.40*	0.22*	0.31*
	Surface	0.02	0.04	0.20*	0.17*	0.11*
	Strategic	0.25*	0.29*	0.21*	0.22*	0.24*

p<0.01

Table 2 shows that the deep learning styles are positively related to the emotional knowledge, emotion regulation, empathy and social commitment ($p < 0.01$). The surface learning styles are positively related to the empathy and social commitment ($p < 0.01$). The strategic learning styles are positively related to the emotional knowledge, emotion regulation, empathy and social commitment. This result mean the emotional intelligence is influenced by learning styles university students. The size of this correlation indicates that generally high levels of emotional intelligence are related to high levels of students learning styles, and if one of the variables increases, the other will increase, as well. This finding is consistent with previous research by Alavinia and Ebrahimpour (2012); Giadenakad's, 2008; Fong and Yeo(2007) which found a positive meaningful relationship between emotional intelligence and learning styles. Schutte et al (2010) found that the experiential and rational processing significantly predicted higher levels of emotional intelligence.

Multiple Regression Analysis:

Table 3 shows the results of the multiple regression analysis using learning styles as predicted by emotional intelligence.

Table 3: Results of regression analysis predicting learning styles on emotional knowledge.

Learning styles	R	R ²	F	β	t
Deep	0.319	0.102	6.582	0.233	2.962
Surface				-0.050	-0.674
strategic				0.154	1.926

Results given in table 3 show that the deep, surface and strategic learning styles is a significant predictor of emotional knowledge ($R^2 = 0.10$, $F = 6.582$, $p < 0.05$). This results was supported by the close moderate correlation between the third variables ($r = 0.319$). An approximated 10% of the variance of the students emotional knowledge emotional intelligence was accounted by learning styles.

Table 4 Results of regression analysis predicting learning styles on emotion regulation.

Learning styles	R	R ²	F	β	t
Deep	0.345	0.119	7.842	0.241	3.089
Surface				-0.006	-0.080
strategic				0.171	2.159

Results given in table 4 show that the deep, surface and strategic learning styles is a significant predictor of emotion regulation ($R^2 = 0.119$, $F = 7.842$, $p < 0.05$). This results was supported by the close moderate correlation between the third variables ($r = 0.345$). An approximated 11% of the variance of the students emotion regulation emotional intelligence was accounted by learning styles.

Table 5 Results of regression analysis predicting learning styles on empathy.

Learning styles	R	R ²	F	β	t
Deep	0.404	0.164	11.345	0.360	4.744
Surface				0.143	2.005
Strategic				-0.009	-0.123

Results given in table 5 show that the deep, surface and strategic learning styles is a significant predictor of empathy emotional intelligence ($R^2= 0.164$, $F= 11.345$, $p<0.05$). This results was supported by the close moderate correlation between the third variables ($r=0.404$). approximated 16% of the variance of the students empathy emotional intelligence was accounted by learning styles.

Table 6 Results of regression analysis predicting learning styles on Social commitment.

Learning styles	R	R ²	F	β	t
Deep	0.267	0.071	4.435	0.167	2.087
Surface				-0.097	1.249
Strategic				0.102	1.252

Results given in table 6 show that the deep, surface and strategic learning styles is a significant predictor of Social commitment ($R^2= 0.071$, $F= 4.435$, $p<0.05$). This results was supported by the close moderate correlation between the third variables ($r=0.267$). An approximated 0.07% of the variance of the student's Social commitment emotional intelligence was accounted by learning styles.

By the end, the researcher recommends conducting other studies on other variables in different universities. Also, the researchers recommend lectures in universities to encourage students to adapt learning styles, and teaching emotional intelligence through courses.

Reference.

1. Alavinia, P., & Ebrahimpour, S. (2012). On the correlation between emotional intelligence and learning styles: the case of Iranian academic Eel learners, *Theory and Practice in Language Studies*,2(6),1291-1299.
2. Al-Alwan, A.,(2011). Emotional Intelligence and its Relationship with Social Skills and Attachment Styles of University Students in Light of Specialization and Gender, *Jordan Journal of education science*,7(2),125-144.
3. Badri, S., Saeed, S., Narges, S,& Hasan, J.,(2012). Examining the relationship between emotional intelligence and learning styles, *Procedia – Social and Behavioral Sciences*, 31, 95-99.
4. Barris, R., Kielhofner, G., & Bauer, D. (1985). Educational experience and changes in learning and value preferences. *Occupational Therapy Journal of Research*, 5(4), 243-256.
5. Bar-On, R. (1997). *Bar-On emotional quotient inventory (EQ-i): Technical manual*. Toronto: Multi-Health Systems.
6. Benson, D. S. (2005). Comparison of learning styles and other characteristics of sitebased, hybrid and online students. *Dissertation Abstracts International*, 66 (03), 874A. (UMI No. 3166920).
7. BeShears, R. S. (2004). The ability of emotional intelligence to predict transformational leadership when personality, affect, and cognitive ability are controlled. *Dissertation Abstracts International*, 65 (10), 5444B. (UMI No. 3151327).
8. Boud, D., Keogh, R., & Walker, D. (1985). *Reflection: Turning experience into learning*. New York: Nichols Publishing.
9. Boyd, P. E. (2004). Effect of age, gender, ethnicity, level of education, years of experience, and school setting on the emotional intelligence of school administrators. *Dissertation Abstracts International*, 65 (08), 2842A. (UMI No.3143781).
10. Briody, M. E. (2005). Emotional intelligence: Personality, gender and cultural factors. *Dissertation Abstracts International*, 66 (01), 543B. (UMI No. 3159654).
11. Elder, L. (1997). Critical thinking: The key to emotional intelligence. *Journal of Developmental Education*, 21(1), 40-41.
12. Entwistle, N., & McCune, V. (2004). The conceptual bases of study strategy inventories. *Educational Psychology Review*, 16, 325-345.
13. Fong, O. & Yeo,R. (2007). Influence of emotional intelligence on learning styles: an exploratory study on management undergraduates in Malaysia and Saudi Arabia,in *Enhancing Higher Education, Theory and Scholarship*, Proceedings of the 30th HERDSA Annual conference, Adelaide,8-11 July 2007:pp167.
14. Geiger, M. A., & Pinto, J. K. (1991). Changes in learning style preferences during a three-year longitudinal study. *Psychological Reports*, 69(3), 755-762.
15. Gia daneka, J.(2008). Learning styles and emotional intelligence of the adult learner. Available at :Proquest LLC.

16. Goleman, D. (1998). *Working with emotional intelligences*. New York: Bantam Books.
17. Grasha, T. (1990). The naturalistic approach to learning style. *College Teaching*, 38(3),106-113.
18. Honigsfeld, A., & Dunn, R. (2006). Learning-style characteristics of adult learners. *Delta Kappa Gamma Buletin*, 72(2), 14-19.
19. Jaeger, A. J. (2001). Emotional intelligence, learning style, and academic performance of graduate students in professional schools of public administration (Doctoral Dissertation, New York University, 2001). *Dissertation Abstracts International*, 62 (02), 486A. (UMI No. 3004907).
20. Knoll, C. (2006). An analysis of the effects of a computer-enhance curriculum and learning on student achievement in college algebra at a Florida community college. *Dissertation Abstracts International*, 67 (02), 927B. (UMI No. 3206707).
21. Leavitt, L. H. (2004). A study of the relationship between learning styles of freshmen in a coordinated studies learning community and their academic achievement and retention. *Dissertation Abstracts International*, 65 (02), 430A. (UMI No. 3123087).
22. Mayer, J. D., & Caurso, D. R. (1999). *Ability model of emotional intelligence*. Paper presented at the Emotional Intelligence: optimizing Human Performance in the Workplace Conference, Chicago, IL.
23. Mayer, J. D., Caruso, D. R., & Salovey, P. (2000). Selecting a measure of emotional intelligence: The case for ability scales. In R. Bar-On, & J. D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace* (pp. 320- 342). San Francisco: Jossey Bass.
24. Mayer, J. D., Salovey, P., & Caruso, D. R. (1997). *The emotional IQ test* (CD Rom). Needham, MA: Virtual Knowledge.
25. Miles, D. G. (2004). An investigation of learning style preferences and academic self-efficacy in first-year college students. *Dissertation Abstracts International*, 65 (08), 2919A. (UMI No. 3144915).
26. Mentkowski, M., & Strait, M. J. (1983). *A longitudinal study of student change in cognitive development, learning styles, and generic abilities in an outcomecentered liberal arts curriculum*. (Report No. 6). Milwaukee, WI: Alverno Productions.
27. Paul-Oudouard, R. (2006). Emotional intelligence, social problem solving, and demographics as predictors of well-being in women with multiple roles. *Dissertation Abstracts International*, 66 (07), 3956B. (UMI No. 3181638).
28. Phillips, M. (2005). An analysis of emotional intelligence and faculty qualities necessary for success in a nontraditional classroom setting. *Dissertation Abstracts International*, 66 (07), 2465A. (UMI No. 3181011).
29. Pinto, J. K., Geigerm, M. A., & Boyle, E. J. (1994). A three-year longitudinal study of changes in student learning styles. *Journal of College Student Development*, 35(2), 113-119.

30. Rivera C., & Beatriz, V. (2004). Across contexts comparison of emotional intelligence competencies: A discovery of gender difference. *Dissertation Abstracts International*, 64 (12), 4541A. (UMI No. 3118152).
31. Planalp, S. & Fitness, J. (1999). Thinking/feeling about social and personal relationships. *Journal of Social and Personal Relationships*, 16(6), 731-750.
32. Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
33. Scott, B. S. (2004) The relationship between emotional intelligence and ethical decision making. *Dissertation Abstracts International*, 65 (08), 2899A. (UMI No. 3143785).
34. Schutte, N.S., Thorsteinsson, E.B., Hine, D.W., Foster, R., Cauchi, A. and Binns, C. (2010). Experiential and rational processing Styles, emotional intelligence and Wellbeing. *Australian Journal Psychology*, 62(1), 14-19.
35. Smith, J. T. (2006). Effective leadership in schools: Learning styles of principals as they relate to teacher job satisfaction and teacher retention. *Dissertation Abstracts International*, 67 (12), 4408A. (UMI No. 3244815).
36. Spector, P. E. (2005). Examining emotional intelligence and leadership. *Dissertation Abstracts International*, 66 (11), 6323B. (UMI No. 3197949).
37. Suliman, w.A. (2010). The relationship between learning styles, emotional social intelligence, and academic success of undergraduate nursing students, *J Nurs Res*, 18(2), 136-143.
38. Sylwester, R. (1994). How emotions affect learning. *Educational Leadership*, 52(2), 60-65.
39. Webb, P. E. (2005). Examining emotional intelligence and leadership. *Dissertation Abstracts International*, 66 (11), 6323B. (UMI No. 3197949).
40. Wells, K. H. (2004). Emotional intelligence as an ability and its relationship with openness to difference. *Dissertation Abstracts International*, 65 (01), 456B. (UMI No. 3119082).
41. Yahr, S. W. (2005). An investigation of the relationship between expertise and learning style. *Dissertation Abstracts International*, 66 (04), 1248A. (UMI No. 3172865).
42. Yancey-Bragg, T. (2006). Leadership theories, perceptions and assessments: The relationship of African American women in a Fortune 500 company. *Dissertation Abstracts International*, 66 (09), 3372A. (UMI No. 3189966).