Educational engagement, An indication of the need for improving college education

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Abstract: Quality of student courses, according to individual and group characteristics, is an important and influencing issue that is rarely addressed. The purpose of this research is to find ways to improve the quality of college education and factors influencing student learning involvement. The research was conducted as a mixed type (Multi-stage) with an explanation design (or a sequential explanatory design). The samples of students, faculty and administrators at Tehran Universities were given the application form, interviews and a questionnaire and data was taken from them. Findings indicate that the college students' teaching behaviors were different, but the results showed no significant differences among college students by using the questionnaire. Despite the positive assessment at the level of students' involvement in their learning, the interview with the faculty members and administrators indicate the deficiencies in all aspects of students' educational engagement. Based on this study, we can talk about the student's conception of the work and the level of their engagement. Contextual factors on students' skills shortage seems to be effective.

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Introduction

Nowadays, to have the college education is one of the symbols of public welfare and quality of life. The university authorities seek to help the students by higher supports in order to pass the college course successfully (Tinto, 1993). Based on the adaptive view, the contextual events and phenomena (sociological, organizational, psychological, cultural and economic) affect the promotion of formal education process. From this perspective, some of the theories and patterns have particularly address the efficacy of education within the framework of student's academic achievement or success. The amount of its efficiency and efficacy is crucial because the college education is considered as the nearest community investment for the labor market. Incomplete college education reduces the efficiency of university as well as the personal losses and makes the access of education goals difficult. Incomplete course by the students is one of the signs of inefficient college education which is mentioned in most of the periodic reports related to its statistical findings. However, the quality of educational experiment in students, who have completed the course, is so important and unfortunately it is less considered in the evaluations of college education (Sharifi, 2010; Farasatkhah, 2010). Academic achievement and its dimensions are among the complicated structures of evaluation. On the other hand, the way of achieving this achievement has been investigated through measuring the academic involvement, student's satisfaction of education experience and convenience in the learning environment (Astin, 1993). Student's sense of convenience, tendency towards re-attending the university and satisfaction of educational experience can be considered as the prognosis of access to students' achievement and success (Mezulis, Abramson, Hyde & Hankin, 2004; Strauss & Volkwein, 2004). The sense of convenience and pleasant education experience has also investigated in relation to the social integrity and correlation with one or more student groups (Tinto, 1993). Student's educational achievement is the outcome of individual efforts in the one hand and raised from the educational experience with enthusiastic and involved students' cooperation in the process which is useful for the community and people on the other hand. An important part of educational achievement assessment has been dedicated to the knowledge evaluation and ending the courses.

Democratic values, creativity and problem solving skills are today among the social and knowledge-seeking scholarship labor market needs. The creation of these features requires the optimal education in a process; therefore, the student should do his work while engaging and integrating with the process from the beginning to the end. Perhaps that is why the student's educational engagement is considered as a sign of his achievement and success in new theory (Kuh, 2001 and 2003, Pascarella & Terenzini, 2005). According to Kuh's theory, the beginning and continuation of education, satisfaction with building and rebuilding the knowledge, skill,

competency, sustainability, achieving to the educational goals and the individual's performance out of the college are defined as the most prominent signs of educational engagement. Background of educational achievement are considered among the individual's preparation in 12-year public education courses by the end of school, family background, the way and reason of selection by the university and the field of study, the way of enrollment, financial aid, and the support policies and they are considered in connection with the student's educational engagement at the university. Student's knowledge, encountering and utilizing these factors are not equal and those, who cannot be fully engaged with the process of college education, prefer to be away from the college education temporarily or permanently. The educational experience in the faculty includes two key aspects of students' behavior and conditions of university. In an optimal condition, the university should be as the infrastructure of professor-student meaningful and constructive interactions and the students' collaboration and learning through providing a supportive academic environment and high and clear expectations in order to engage the students. The student's educational engagement is the outcome of influence by these two factors and is a multi-dimensional structure (Astin, 1991; Chickering & Gamson, 1987). Educational engagement associated with the student's satisfaction, sustainability, access to education service, learning and development have been investigated in all aspects (Astin, 1991 and 1993). On the other hand, Skinner, Kindermann, Connell and Wellborn (2009) have mentioned the dissimilarities of two structures of motivation and engagement while considering this structure as the motivational approach. Based on this view, the engagement beyond the motivation contains the application of organizational motivation, effort, and knowledge in the education process as a defined energy provider, driver and leader (Newmann, 1992; Frontier, 2007). According to the interactional effect between emotional and cognitive investment and learning behavior in the school situation and context, the educational engagement has been defined as an integrated structure (Fredricks, Blumenfeld, & Paris, 2004). Like other complex and multi-dimensional psychological structures, the educational engagement has different definitions, methods, and measurement tools (Elliot, & Dweck, 2005). The transformation process of definition and structural patterns of educational engagement can be re-determined as follows: A educational sense of belonging, and participation and attendance in the classrooms (Willms, 2003); an action with the psychological process of attention, interest, investment, and effort to learn (Marks, 2000); the structure linking the formal training to the individual learning (Appleton, Christenson, Kim, & Reschly, 2006); and the two-aspect and multi-dimensional individual- contextual structure (Kuh, 2003 and 2004).

Fredricks et al (2004) have reinvestigated the educational engagement at school from the individual aspect in three subsidiary structures of behavioral engagement, emotional engagement and cognitive engagement with together. The main measurable signs of behavioral engagement, student's effort to learn, collaboration with others in education and other school activities are among the extracurricular activities. Emotional engagement can be recognized with the positive or negative feelings about the teachers, students, educational content and field, and the school. The cognitive engagement is called the student's investment based on the educational content with building and rebuilding the knowledge, values, and skills. The cognitive engagement can be considered as other two-dimensional infrastructure and basis of engagement (O`Donnell et al, 2009). The engagement level may be different in any dimensions among different people and for different things. The important point is that these features can be learned and manipulated by using the curriculum in the college environment (Fredricks et al, 2004). Student's engagement in the learning process occurs in the college context and the university and its circumstances should be examined (Kezar & Kinzie, 2006). The supportive methods of university can advance the educational process for creating, organizing and integrating the individual's knowledge, value, practices and attitudes. The way of educational engagement leads to the student's effort and sustainability in facing with the challenges and is a trial for the group life in the future in associated with the educational self-regulation and individual and group development. Two structures of commitment and investment are very significant in recognizing the structure of educational engagement. Considering the educational engagement in investigating the educational engagement is particularly important for several reasons: First, the engagement is considered as the use of individual's force and potential in dealing with the context of group and environment and as the infrastructure of learning; second, it will be able to predict the student's performance and achievement in other fields in the future; third, it is learnable and transformative and can be manipulated based on the curriculum; fourth, its assessment is useful for the getting/giving the feedback and educational evaluation and provides the awareness about the efficiency of educational program and method (O`Donnell et al, 2009); especially it is a structure associated with the individual interaction with the context and it can be

affected by the changes in the environment (Connell, 1990, Finn and Rock, 1997).

According to the individual and group features, the quality of student course is an important and effective issue in the educational efficiency and it is less considered. Paying attention to the college students' features and the college education can help the students with success and educational achievement as well as providing a suitable environment and enhance the efficiency of universities. According to the theory of student educational engagement (Kuh, 2004), this study has been conducted with the aim to find ways to improve the quality of college education by addressing the students' learning engagement and factors which affect it. Therefore, the questions of this research are as follows: To what extent is the level of educational engagement according to the individual and contextual factors among the Iranian students?

Methodology:

This research is considered as a survey (non-experimental) and integrated (multi-stage) study. In this study, the Explanatory Design (or Explanatory Sequential Design) was used. The second stage of assessment was done with the model of explanation following after the first stage of data-collection based on several findings including the statistical differences among the groups, maximum/minimum scores in both sides of range (too high, too low) and unexpected results. Data collection was done through the methods of observation and inquiry in the educational environment of college in the first and second semester of academic year 2011-12. After selecting a sample of the research population from nearly two hundred thousand students, studying the universities of Tehran (Research and training institute of higher education) and at universities affiliated with the Ministry of Science, Research and Technology, and determining the educational sessions of position representative, each educational session was observed. The universities were classified into two comprehensive and industrial groups; two universities (Tehran and Alzahra Universities) were randomly selected from the comprehensive universities, a university (University of Science and Technology) was selected from the group, Industrial Universities. The sessions, in which the students were training in the sixth, seventh and eighth semesters, were randomly selected from each group in proportion to the number of groups in each faculty at the universities. A total of 720 students were selected. The time type was done for observing the sample selection and the individuals' behavior were observed in the mid-educational session interval. Then the students responded to the questionnaire at the end of each session. The methods of observation and questioning were done at the first stage for the group of students and they were interviewed at the second stage, but two groups of teachers and managers were only interviewed at the second stage.

The tools were researcher-made and contained a questionnaire, called the questionnaire of students' educational features, an observation form of student behavior, and three forms of interview. The questionnaire had two parts of demographic and educational engagement in order to measure the educational engagement (constructed from the questionnaire NSSE and the questionnaire of school engagement in 5 parts/questions, each one containing multiple items and totally 67 items with four-point Likert scale) with the face validity and the structure with the structure validity coefficient obtained from using the Motivational strategies for learning questionnaire (MSLQ), 0.54 and significant ($P\leq0.001$), and the reliability equal to 0.76 by the retest test (Pearson correlation coefficient equal to 0.91in the cognitive dimensions, 0.82 in emotional dimensions, 0.96 in behavioral, and 0.81 in components of reliability in the academic challenge, 0.92 in active and collaborative learning, 0.83 in supportive college environment, 0.80 in enriched educational experiences and 0.92 for professor engagement). The internal homogeneity of tool was obtained equal to 0.76 by Cronbach's alpha coefficients in the first cognitive dimension, 0.82 in the emotional dimension, and 0.81 in the behavioral dimension and it can be stated the tool has had the acceptable reliability and internal homogeneity. Using the software SPSS, the exploratory factor analysis was done and then the confirmatory factor analysis was performed by using LISREL software. Based on KMO and Bartlett's tests, the sample adequacy was acceptable for doing the factor analysis of questionnaire (0.86 with 350 samples). According to Bartlett index for evaluating the matrix adequacy 9707.17, which was significant ($P\leq0.01$), the matrix had required adequacy and data were capable of being factors. Investigating the table of correlation shows that the value of KMO is higher than 0.8 for each of the components of questionnaire.

In terms of the observation form, called "students' educational engagement", the assessment of validity was done by two methods of face validity and calculating the identity coefficient. According to the method of identity coefficient calculation (Thorndike, 1982, Translated by Hooman, 1996), the other two educational psychologists were asked to provide an observation form of student educational engagement in the classroom according to the theoretical framework. The identity coefficient was obtained equal to 0.8 by experimental application of

two tools by two different observers and this is considered as an appropriate reliability indicator. The reliability is assessed by using the calculated agreement ratio.

In terms of three interview forms for interview with the students, professors and university administrators, the validity of tool was measured through the face validity and by the consultant professor, and its reliability was obtained by two questioners for an individual and a questioner for an individual in a time interval. The reliability of student questioning tool by this method in the status of agreement ration in two questioners for an individual was equal to times was equal to 0.80 and for the status of a questioner for an individual in two different times was equal to 0.90. The reliability of questioning the professor was 0.90 and 0.75, respectively, and the reliability of questioning the Chancellor was 0.80 and 0.85, respectively.

Findings:

The sessions of 19 educational departments were selected from Alzahra University, 15 departments from University of Tehran, and also 5 departments from the faculties at University of Science and Technology. Data about the students' behavior in the classroom shows that the indications of telling and asking are different at both universities and have higher frequency in the students' behavior at University of Tehran. This finding showed that the students at University of Tehran are more engaged with the lesson discussion with the professor and other students. Compared to Alzahra University and University of Tehran, the highest behavior indication has been reported among the students at University of Science and Technology as the behavior of having the bag and pen in hand and the eye contact with the professor. Results, obtained from the questionnaire, have been presented in the following tables.

Both effects of college ($p<0.0005$, $F_{(3, 225)}=14.083$) and living place ($p<0.05$, $F_{(1, 225)}=3.944$) on the score of engagement were significant. Furthermore, there is a significant relationship between the college-living place with the educational engagement ($p<0.0005$, $F_{(3, 225)}=11.131$).

Data derived from the interviews with the students, professors, and university administrators indicate that despite the fact that the students assessed that their own educational engagement was good, they considered that the professors and administrators had poor motivation and educational engagement.

Table 1. Comparison of students' educational engagement based on the living place

		Dormitory Students (150 students)	**Non-Dormitory Students (550 students)**	**Total (700 students)**
Cognitive	Mean **Standard deviation**	46.4 7.6	35.4 7.6	37.8 8.8
Emotional	Mean **Standard deviation**	32.3 4.4	26.6 4.95	27.8 5.4
Behavioral	Mean **Standard deviation**	32.1 5.1	25.7 6.9	27.1 7.1
Engagement	**Mean** **Standard deviation**	**113.3** **15.7**	**89.8** **17.5**	**94.9** **19.7**

Table 2: Comparison of students' educational engagement in four colleges

		Technical-Engineering (61 students)	**Science (65 students)**	**Humanities (77 students)**	**Art (30 students)**	**Total (233 students)**
Cognitive	Mean **Standard deviation**	34.7 7.1	34.3 8.5	42.4 9.4	39.8 4.7	37.8 8.9
Emotional	Mean **Standard deviation**	25.5 4.4	26.1 5.7	30.4 4.99	29.5 4.1	27.8 5.4
Behavioral	Mean **Standard deviation**	26.2 5.5	23.5 7.1	30.7 7.1	27.5 5.4	27.1 7.1
Engagement	**Mean** **Standard deviation**	**88.7** **14.8**	**86.02** **19.2**	**105.8** **20.4**	**98.5** **12.2**	**94.9** **19.7**

Table 3: Comparison of students' educational engagement based on the college and living place

College	Living place	Mean	Standard deviation	Total
Technical-Engineering	Dormitory	99.0	0.0	7
	Non-Dormitory	87.3	15.2	54
	Total	88.7	14.8	61
Basic Sciences	Dormitory	73.0	1.4	2
	Non-Dormitory	86.4	19.3	63
	Total	86.02	19.2	65
Humanities	Dormitory	124.9	2.8	30
	Non-Dormitory	93.6	16.9	47
	Total	105.8	20.4	77
Art	Dormitory	97.9	6.8	11
	Non-Dormitory	98.9	14.6	19
	Total	98.5	12.2	30
Total	Dormitory	113.3	15.7	150
	Non-Dormitory	89.8	17.5	550
	Total	94.9	19.7	700

Discussion and conclusion:

The findings derived from observing the training sessions indicated that the students at University of Tehran were more engaged with the professor and other students in lesson discussion than the students at Alzahra University. This difference may be rooted in the single gender Alzahra University and mixed university of Tehran and this is consistent with Zohrehvand et al's (2010) findings based on the interaction of gender and educational engagement. Compared to Alzahra University and University of Tehran, the highest behavior indication has been reported among the students at University of Science and Technology as the behavior of having the bag and pen in hand and the eye contact with the professor. This finding can be interpreted in relation to the curriculum and contents of classroom and is consistent with the findings by Fredricks et al (2004). The results of Tables 1 and 2 indicate that despite a significant difference between the amount of educational engagement in dormitory and non-dormitory students, they, themselves, assessed that the students' educational engagement in various fields are more or less similar and constructive. However, the results of interviews with professors indicate the student's poor educational activities and reduced students' educational engagement in academic learning process. It seems that the educational activity is not done based on the knowledge, belief, and real and accurate plan and the students enhance the difficulties of education process by unrealistic estimates of educational status. On the other hand, the students, professors and administrators at the university have been like-minded in this fact that the social academic facilities and space are insufficient for developing and providing the necessary infrastructures for educational engagement. Despite the confirming signs of these shortcomings, this assessment can also be rooted in individuals' psychological projection.

The findings of this research need to retest in different academic status and other educational courses including the higher education. Therefore, it is suggested that the long-term studies should be conducted and planned according to the structure of educational engagement.

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References

1. Thorndike, R.L. (1982). Applied Psychometrics, Translated by Heidar-Ali Hooman (1996), Tehran: University of Tehran.
2. Farasatkhah, Maghsoud (2010), University and Higher Education: Global Perspectives and Iranian issues, Tehran: Ney Publications.
3. Appleton, J. J., Christenson, S.L., Kim, D., & Reschly, A.L. (2006). Measuring cognitive and psychological engagement: Validation of Student Engagement Instrument, Journal of School Psychology, 44(2006), 427-445.
4. Astin, A. W. (1984). Student Involvement: A developmental theory for higher education. Journal of College Student Personnel, 25(4), 297-308.
5. Astin, A.W. (1991). Assessment for Excellence: The philosophy and Practice of Assessment and Evalluation in Higher Education. New York: American Council on Education/Macmillan Publishing Company.
6. Astin, A. W. (1993). What matters in College? Four critical years revisited(1st ed.). San Francisco: Jossey-Bass.

7. Chickering, W. & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. From http:// www.cuw.edu/ Tools/ faculty_staff/ committees/ chikering and gamson. Html
8. Connell, J.P. (1990). Context, self, and action: A motivational analysis of self-system processes across the life span. In D. Cicchetti, & M. Beeghly(Eds.), The self in transition: Infancy to childhood. The John D. and Catherine T. MacArthur foundation series on mental health and development(pp.61-97). Chicago, IL: The University of Chicago Press.
9. Elliot, A. J., & Dweck, C. S. (Eds). (2005). Handbook of competence and motivation. New york: Guilford Press.
10. Finn, J. D., & Rock, D.A. (1997). Academic success among students at risk for school failure. Journal of Applied Psuchology, 82, 221-234.
11. Fredricks, J.A., Blumenfeld, P.C.,& Paris A.H. (2004). School engagement: potential of the concept, state of the evidence. Review of Education Research, 74(1),59-110.
12. Frontier, A.C. (2007). What is the relationship between student engagement and student achievement? A quantitative analysis of middle school students perceptions of their emotional , behavioral, and cognitive engagement as related to their performance on local and state measures of achievement. UMI Number:3293073. Copyright 2007 by ProQuest LLC.
13. Kezar, A. & kinzie, J. (2006). Examining the ways institutions can create student engagement: The role of mission. Journal of college student development, 47(2), 149-172.
14. Kuh, G.D. (2001). Assessing what really matters to students learning: Inside the National Survey of Student Engagement. Change, 33(3), 10-17.
15. Kuh,G. D.(2003). What we are learning about student engagement from NSSE: Benchmarks for effective educational practices. Change,35(2),24-32.
16. Kuh, G.D. (2004). The National Survey of Student Engagement: Conceptual framework and overview of psychometric properties. Bloomington, IN: Indiana University Center for Postsecondary Research and Planning. Retrieved March 19, 2008 from http://nsse.iub.edu/2004_annual_report/pdf/2004_Coceptual_Framework.pdf
17. Marks, H.M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years. American Educational Research Journal, 37(1), 153-184.
18. Newmann, F. M. (1992). Student engagement and achievement in American secondary schools. New york: Teachers College Press.
19. O`Donnell; Reeve; Smith (2009). Educational Psychology: Reflection for Action. 2th ed. John Wiley & Sons, Inc.
20. Pascarella, E.T., & Terenzini, P.T. (2005). How college affects students: A third decade of research. San Francisco: Jossey-Bass.
21. Skinner, Ellen; Kindermann A, Thomas; Connell, James P;Wellborn, James G (2009). Engagement and Disaffection as Organizational Constructs in the Dynamics of Motivational Development**.** In Handbook of Motivation at school, Edited by Kathryn R.Wentzel and Allan Wigfield. First published 2009 by Routledge.
22. Strauss, L. C., & Volkwein, J.F. (2004). Predictors of Student commitment at two-year and four-year institution. Journal of Higher Education, 75(2), 203-227.
23. Tinto, V. (1993). Leaving College: Rethinking the causes and cures of student attrition. Chicago: University of Chicago Press.
24. Willms, J. D. (2003). Student Engagement at School: A sense of belonging and participation. OECD: Programmed for International Student Assessment. Retrieved August 11, 2005 from: http://www.pisa.oecd.org/document/4/0,2340,en_32252351_32236159_33668932_1_1_1_1,00.html
25. Mezulis, A. H., Abramson, L. Y., Hyde, J. S., & Hankin, B. L. (2004). Is There a Universal Positivity Bias in Attributions? A Meta-Analytic Review of Individual, Developmental, and Cultural Differences in the Self-Serving Attributional Bias. Psychological Bulletin, 130(5), Sep 2004, 711-747. doi: 10.1037/0033-2909.130.5.711.

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