The effectiveness of Management Education Model on academic resilience of university students

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Abstract

This study aims to examine the effectiveness ofManagement Education Model's 10 commandments on academic resilience of students. The study is applied in terms of purpose and quasi-experimental in terms of data collection method with pre-test and post-test and control group. In this study, 30 subjects were randomly placed into two groups of 15 each. The sampling method in this study was single-stage cluster sampling. Measuring instrument was Samuels' (2004) academic resilience inventory. Its reliability was evaluated using Cronbach's alpha coefficient and its validity was evaluated using content and construct validity, the findings of which suggested the reliability and validity of the instrument. In order to analyze the data, descriptive statistics (mean and standard deviation, etc.) and inferential statistics (multivariate analysis of covariance) using SPSS software were used. The findings showed that educational management model has a significant impact on academic resilience and its components (including communication, future orientation, problem-based / positive thinking. Finally, it was suggested that educational management steps should be taught to professors so that the students can better understand the educational content, and become deeply familiar with the course.

Key words: Educational management model; Resilience; The 10 commandments

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Introduction

While, specialized efforts have had an important role in academic achievement in recent years, non-academic factors could not be ignored. Self-efficacy, and self-improvement are important non-academic factors in resilience and its relationship with academic success. Langer (2004) in general, defines resilience as "the process, capacity, or the result of successful adaptation despite challenges or threatening circumstances".

According to Alva (1991), in the field of education, high levels of motivation, achievement, and performance, away from stressful events and situations students are face with in college, are believed to be what academic resilience refers to. Therefore, Academic resilience is defined as the ability to succeed at university despite shortages and it includes subjects such as confidence, well-being, motivation, orientation, strong communication, and stress management. Nevertheless, researches on resilience have been mostly focused on life events such as deprivations, having poor parents, or divorce.

Academic resilience could be associated with all school and college students, since all students may experience degrees of poor performance, difficulty, challenges, or pressure in some cases. Henderson and Millstone (2009) define resilience as "the capacity of an individual to respond to and even thrive in stressful and positive or negative conditions, and self-efficacy refers to the abilities of an individual to perform a specific task".

In general, three reasons have mentioned that resilience is important in education. Firstly, the teacher is a role model for demonstrating resilient behaviour therefore, the expectations of professors from students are formed. Secondly, students that are faced with hardships and difficulties in class, require a correct and logical approach, therefor, need resilient behavioural style. Thirdly, resilience means problem solving ability, quick retrieving of possible solutions, and bold action in confronting with different issues in such a way that is efficient, with a sense of commitment, self-management, and having motivation to comprehensively succeed among students (Hargerizer, & Fenik, 2010).

The confrontation of most students with the challenges of transition from high school to college, and traumatic individual experiences, lacking academic readiness, or belonging to communities at risk, influence how the students respond to these challenges, and the levels of motivation, perseverance, and academic efforts, while the resilience can play an important role as a mediator variable. Therefore, factors that lead to more adaptability of individuals to life needs and threats are examined. In the meantime, the needs and threats cause stress among students, and these high levels of stress can result in learning disabilities, psychological problems such as depression, and serious health problems. Students who experience high levels of stress have less incentive for clinical activities and have lower self-confidence. Among students with high levels of stress, the feeling of health and self-confidence is lower, and habits beneficial to health are higher. High levels of stress affect students' health (Eschon et al., 2008).

Students' coping abilities can lead to their academic success. As Elliott & Murayama,(2010) indicate "one of the coping strategies that help an individual face stressful situations and survive disease-causing disorders is resilience, which in turn in known as a factor for successful adaptation to changes and the ability to withstand problems".

According to Des (2010) resilience allows adaptive skills to be used by individuals, turning stressful situations into opportunities for learning and growth, and to control the stress by focusing on the problem, not only be a way for coping with stress but is also means for improvement, flexibility, and returning to the first state. A resilient individuals with tolerance, feeling of improvement, and flexibility, faces their own life stresses, challenges, and events, and also have active presence in their own life. Resilience adjusts stress and inability levels in stressful situations, and in fact, it is the dynamic process of positive adaptation to bitter and unpleasant life experiences. Studies show that individuals with resilience have better mental health, sense of self-actualization, and more self-confidence. "With the multiple stressors of academic period, if students do not have the necessary readiness and ability to cope with them, they will suffer from burnout and frustration whereas, attentive and supporting academic environment can develop the ability of individuals to cope and be resilient, and vice versa, negative experiences in the academic environment can make them vulnerable to stresses and future difficulties (Hargerizer, & Fenik, 2010).

Scare related researches could be find in relation to the MEM and resilience due to its novelty.Schneider et al. (2002) investigating the relationship between hope and the first year students' academic achievement in a six-year longitudinal study, they reported that students who have higher levels of hope, have higher level of resilience, and are more focused on their goals and have a greater incentive than their peers have. Hashemi & Jokar, investigating the relationship between spiritual excellence and resilience in students indicated the significant relationship between spiritual excellence and resilience.

This present study explains the result of the use of Behrangi's management education model (known as 10 commandments) in the field of teaching and learning related to educational management. Providing conditions for students to learn

effectively, the model brings thema sense of achievement, self-efficacy, and self-confidence, avoiding them from all stresses, stressors and, challenging factors in academic environment. Each step of the model that was implemented in class was evaluated in a two-stage evaluation (professor-made and measurement).Feedback was properly used and explained in each of the next step. They moved to the next step only if the event of effective learning was observed. The research question was: Does the implementation of the management education model have an impact on the resilience of PNU students?

Research methodology

The applied research in terms of purpose and quasi-experimental (with pre-test and post-test) with control group in terms of data collection were used(Naderi, A. & Seif-Naraghi, M., 2014). Using single-stage cluster random selection, 36 students from the statistical population (students of technical language class of PNU Jam County, Bushehr Province) were randomly selected and assigned into two 18 member groups. The research instruments for measuring instrument was academic resilience inventory (ARI) of Samuels (2004), with research evidence of suitability confirmation from two studies. Soltaninejad et al (2014) adopted the original version in Iran and reduced the 40 items to29. Their research confirmed three factors that are communication skills, future orientation, and problem-oriented/positive thinking. Using Cronbach's Alpha coefficient. He, also, demonstrated good construct validity of the inventory. Conducting a study to evaluate the psychometric properties or factors of the inventory in Iran, Soltaninejad et al., obtained Cronbach's alpha coefficient for the school students' sample at between 63% and 77%, and for the college students' sample at between 62% and 76%.

In addition, to achieve the three-factor structure, the analysis of principal components with Varimax rotation was performed. Eleven questions were removed due to the factor loading of less than 3%, or due to being significant or equal on more than one factor. And, finally, analysis was performed on the remaining 29 questions.

Component	Number of questions
Communicational	11
Future orientation	11
Problem-oriented / positive thinking	7

In the scale of the inventory, no.145 indicates the highest score of resilience and 29 indicates the lowest score that one can obtain. In addition, academic resilience status of individuals on each of the subscales was obtained by calculating the scores of questions of each of the subscales. Scores on each subscale showed the academic resilience of an individual on that subscale.

Research executive protocol- To sum up, the research showed the positive effects on increasing learners' self-efficacy, self-knowledge, contemplation, critical thinking, logical thinking, scientific judgments, a habit of exploration and problem solving, new high levels of learning, conceptually understanding course material because of using management education model. Figure one indicates the steps and the goals of this model.

Step	Goals
1	Learners participate in practicing tasks, providing pre-organizer, framing andlinkingthe contents, making the contents meaningful, improving their overall attitude.
2	Learners work together in groups that their numbers are determined regarding the pages that each topic covers, its difficulties and level of accurate achievement and thoughtfulness.
3	Each learner collaborates within and between groups in order to findlinkage framework of contents, shares conceptual profiles, receives feedback to get used to the content, and creates unity despite diversity in learning.
4	Each group member in Intergroup participation focuses on the conceptual profiles of the categories of other groups, teaches the group contents to other groups, learns the essential points of each group to transfer to own group.
5	Learners participate in mastering concepts, drawing the chart for the link between contents, transferring knowledge from each group to the reference group, receiving a score A or B for efforts in resolving problems.
6	Learners participate in curriculum development based on the course topics, finding new contents, and personal experiences.

7	Each group of learners designs plan for teaching their topics, determines learning models,style, learning environment, and emphasize the use of the new concept, hybrid orientation of educational activities, and distinguishing the new profiles
8	Each group makes a rehearsal for demonstrating teaching topics and subtopics, models of learning specified in their lesson plan and scenarios.
9	Students and professor participate in observing implementation of the new curricula, receive corrective feedback on the use of a variety of creative teaching patterns
10	Summative evaluation in the form of teacher-made test and measurement are conducted, examining the educational influences, and academic achievement.

Figure 1- the educational goals that are fulfilled in each step of MEM

Statistical method of descriptive statistics (mean and standard deviation) and inferential statistics (multivariate analysis of covariance (MANCOVA) were used to analyse the data.

Findings

Table 1 demonstrates the result of analysing the process of the research found through examining descriptive statistics and demographic variables.

Table 1. The results of descriptive statistics of academic resilience and its components psychological variables related to divided groups?

Row	Academic resilience and its components	Control group		Experimental group	
		Pre test(Mean ± SD)	Post test(Mean ± SD)	Pre test(Mean ± SD)	Post test(Mean ± SD)
1	Communicational	36.20±4.82	33.26±5.79	33.60±4.96	72.26±23.94
2	Future orientation	32.00±4.07	31.26±5.04	31.66±3.97	72.73±27.06
3	Problem-oriented / positive thinking	23.07±3.24	20.33±3.57	25.06±6.02	68.93±5.61
7	Academic resilience in general	94.80±10.45	87.53±9.65	87.40±13.41	90.53±8.10

Table 1 shows the post-test increase of the means of experimental group compared to the pre-test of academic resilience in general, and its components divided by pre-test and post-test in experimental and control groups.

Table 2. Covariance analysis results that compares groups according to psychological well-being and its components.

Variable		Df	MS	F	P
Communicational	Pretest	1	183.54	0.59	0.44
	Group	1	9880.96	32.08	0.001
Future orientation	Pretest	1	1194.16	3.29	0.081
	Group	1	12792.78	35.32	0.001
Problem-oriented / positive thinking	Pretest	1	0.68	0.001	0.97
	Group	1	16506.08	25.41	0.001
Academic resilience in general	Pretest	1	251.20	3.43	0.07
	Group	1	159.73	2.18	0.15

As shown in Table 2, by removing the effect of pre-test variable, and given the calculated F coefficient, it is observed that there is a significant difference between the overall adjusted mean scores of academic resilience of participants in terms of membership of "experimental and control" groups P>0.05, $F_{(30,1)}$-2.18. In addition, according to Table 2, it is observed that there is a significant difference between mean communicational components (P>0.05, $F_{(30, 1)}$-32.8), future orientation (P>0.05, $F_{(30, 1)}$-35.32), and problem-oriented (P>0.05, $F_{(30, 1)}$-25.41), in two experimental and control groups (P>0.05). In other words, the effectiveness of educational management model on communicational, future orientation, and problem-oriented components is proven in the post-test of the experimental group. In other words, the effectiveness of educational management model on academic resilience of students has generally caused a significant impact on the experimental group.

Conclusion and discussion

The main objective of this study was to evaluate the effectiveness of management education model on the components of academic resilience of students. Therefore, the scenario of adopted steps of management education model in academic resilience was experimentally implemented. The impacts of learning were analysed through the three communicational, future orientation, and problem-oriented components. Results showed the significant positive effect of the model on the students' academic resilience. Therefore it is concluded that the management education model is effective in increasing the academic resilience of students. The findings of this study are in line with the findings of Ahmad-Panah (2001). These researcher, in his studies, also showed that education is effective on individuals' resilience.

The results of this study are in line with the study of Langer (2004) on enhancing resilience components. It is important to note that individuals who receive management training improve in the components of communication, positive-thinking, and futuristic orientation. Management education model using techniques such as assertiveness, self-management, planning, and organizing in teaching and learning creates a positive environment and develops interpersonal interactions, positive thinking, and foresight. Given the importance of educational management model training in promoting academic resilience of students, it is recommended that all managerial and educational centres include teaching this model in their work plan. The policy makers of the nation's health, also, needs to place this model teaching at the top of their policies and planning. Holding regular educational classes in use of the model provide better and targeted services to prevent physical and psychological complications, as well as high costs on the health sector of the country. There are some limitations on generalizing the results to other students because the sample includes PNU students of Jam County. The use of media for advertising the benefits of using the model may have great impact on research variables and making differences. Research suggestions include the inclusion of the management dimension on the agenda of universities that work in the field of education, as well as providing a model based on the desired components and examining the relationship of these variables with other variables related to students.

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