

## A study to investigate the effectiveness of successful intelligence training program to increase academic hope

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### ABSTRACT

The purpose of this study is to investigate the effectiveness of successful intelligence training program on academic hopefulness of probation students of Esfahan University of Technology. The research is semi-experimental of pre-test, post-test type with control group. Research population includes all probation students of Esfahan University of Technology. The study chooses 30 female and male students and assigns them randomly into two groups of experimental and control. Experimental group participate in 13 successful intelligence-training sessions for 13 weeks. Research tools consists of, Hope in certain aspects. Statistical analysis is conducted using SPSS18 on inferential statistics level proportionate to data analysis level. Statistical test hypothesis are analyzed through univariate covariance and multivariate covariance analysis. The results show that successful intelligence program training was effective to enhance hopefulness of probation students ( $p < 0.05$ ). Given the results of present research, successful intelligence program training can be used as an intervention method in order to decrease harms because of dormitory and student life.

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## 1. Introduction

During the past few years, there have been various studies on the effectiveness of successful intelligence program training on academic hopefulness of various societies (Sternberg & Grigorenko, 1997; Sternberg, 1985; Healy, 2005; Fredrickson, 2009). Chimich and Nekolaichuk (2004), for instance, explored the links between depression, integrity, and hope in the elderly. They suggested that depression, integrity, and hope were highly interrelated in the elderly population and it could affect mastery of the developmental tasks of aging. Motlagh et al. (2008) investigated the factors influencing students' academic failure in Jondishapour University of Medical Sciences over the period 2004-2005. They reported that the effective variables on academic performance and students' educational failure, the educational authorities could make appropriate plans and strategies to identify at risk students and provide proper consultation and better facilities for them.

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Shure and Spivack (1981) examined an experimental model on the mediating function of interpersonal cognitive problem solving skills on behavioral adjustment in preschool and kindergarten children. They identified two significant behavioral mediators in young children; a beginning had been made to isolate specific thinking skills, which, if enhanced, could contribute to healthy social adjustment and interpersonal competence at an early age. Sternberg (2004) explained that intelligence cannot be recognized outside its cultural context and they considered the relevance of culture to intelligence, as well as its investigation, assessment, and development. They described the importance of understanding intelligence in its cultural context and concluded that intelligence must be understood in such context.

Schunk (1996) performed two studies on how goals and self-evaluation influence motivation and achievement outcomes. In both works, fourth-grade students received instruction and practice on fractions over sessions. Students worked under conditions involving either an objective of learning how to solve problems or an objective of merely solving them. In the first study, half of the students in each goal condition assessed their problem-solving capabilities. The learning objective with or without self-evaluation and the performance objective with self-evaluation led to higher self-efficacy, skill, motivation, and task orientation than did the performance objective without self-evaluation. In the second study, all students in each objective condition assessed their progress in skill acquisition. The learning objective led to higher motivation and achievement outcomes than did the performance objective.

Snyder et al. (2002) introduced a cognitive, motivational theory to the educational research community. In this study, hope theory integrated the conceptualization of goals, along with the strategies to reach those objectives, and the motivation to pursue those objectives. In a six-year longitudinal investigation, individual differences in hope, as computed by the Hope Scale (Snyder et al., 1991; 1994) scores of entering college freshmen, predicted better overall grade point averages even after controlling for variance associated with entrance examination scores. High- relative to the low-hope students also were more likely to have finished their programs and not to have been dismissed over this six-year time schedule.

## 2. The proposed study

The purpose of this study is to investigate the effectiveness of successful intelligence program training on academic hopefulness of probation students of Esfahan University of Technology. The research is semi-experimental of pre-test, post-test type with control group. Research population includes all probation students of Esfahan University of Technology. The study chooses 30 female and male students and assigns them randomly into two groups of experimental and control. Experimental group participate in 13 successful intelligence training-program sessions for 13 weeks. Research tools consists of, Hope in certain aspects (Simpson & Snyder, 1999). Statistical analysis is conducted using SPSS18 on inferential statistics level proportionate to data analysis level. Statistical test hypothesis are analyzed through univariate covariance and multivariate covariance analysis. Table 1 demonstrates the result of Kolmogorov–Smirnov test to examine whether the data are normally distributed. As we can observe from the results of Table 1, all data are normally distributed when the level of significance is five percent.

**Table 1**

The summary of the results of Kolmogorov–Smirnov for pre-test and pos-test

		Pre-test						Post-test					
		R	E	L	F	J	Total	R	E	L	F	J	Total
Experiment	Z	0.515	0.422	0.473	0.613	0.645	0.56	0.686	0.656	0.541	0.891	0.357	0.579
	Sig.	0.935	0.994	0.979	0.846	0.799	0.912	0.735	0.783	0.931	0.406	1	0.89
Witness	Z	0.639	0.547	0.402	0.593	0.701	0.149	0.555	0.812	0.723	0.612	0.629	0.434
	Sig.	0.809	0.926	0.997	0.873	0.71	0.142	0.917	0.525	0.672	0.848	0.824	0.992

R: Relationship, E: Education, L: Leisure, F: Family, J: Job

In addition, Table 2 demonstrates the results of some basic statistics associated with pre-test and post-test. As we can observe from the results of Table 2, the mean of scores has been slightly changed from pre-test to post-test. Now, we perform Levin test to find out whether the variances of data are equal or not. Our survey indicates that F-value is equal to 4.1 with Sig. = 0.052, which means the pre-assumption of having equal variances holds. Therefore, we can perform ANOVA test and the results are summarized in Table 3.

**Table 2**

The summary of some basic statistics

Statistics	Pre-test in	Pre-test in	Post-test in	Post-test in
Mean	3.04	3.08	2.66	3.38
Standard	0.51	0.49	0.54	0.39

**Table 3**

The summary of ANOVA test

Group	Sum of squares	df	Mean of squares	F	Sig.	Effective	Power of statistics
Group membership	3.64	1	3.64	26.77	0.000	0.49	0.999
Pre-test score	2.65	1	3.65	19.48	0.000	0.42	0.989

R<sup>2</sup>=0.64, Adjusted R<sup>2</sup> = 0.61

The results of Table 3 clearly indicate that the results are statistically significant and we can conclude that the successful intelligence program has been effective. Now, we perform the test for various components of hope survey and the results are given in Table 4 as follows.

**Table 4**

The results

Source	Statistics	Value	F	df	df of error	Sig.	Effect	Power of statistics
Group membership	Pilla effect	0.634	6.226	5	18	0.002	0.634	0.975
	Wilkes	0.366	6.226	5	18	0.002	0.634	0.975
	Hoteling	1.729	6.226	5	18	0.002	0.634	0.975
	Highest root	1.729	6.226	5	18	0.002	0.634	0.975
Hope in social relationship	Pilla effect	0.74	10.242	5	18	0	0.74	0
	Wilkes	0.26	10.242	5	18	0	0.74	0
	Hoteling	2.845	10.242	5	18	0	0.74	0
	Highest root	2.845	10.242	5	18	0	0.74	0
Hope in education	Pilla effect	0.572	4.803	5	18	0.006	0.572	0.923
	Wilkes	0.428	4.803	5	18	0.006	0.572	0.923
	Hoteling	1.334	4.803	5	18	0.006	0.572	0.923
	Highest root	1.334	4.803	5	18	0.006	0.572	0.923
Hope in leisure	Pilla effect	0.795	13.976	5	18	0	0.795	1
	Wilkes	0.205	13.976	5	18	0	0.795	1
	Hoteling	3.882	13.976	5	18	0	0.795	1
	Highest root	3.882	13.976	5	18	0	0.795	1
Hopes in family relationship	Pilla effect	0.732	9.817	5	18	0	0.732	0.999
	Wilkes	0.268	9.817	5	18	0	0.732	0.999
	Hoteling	2.727	9.817	5	18	0	0.732	0.999
	Highest root	2.727	9.817	5	18	0	0.732	0.999
Hopes in carrier path	Pilla effect	0.64	6.4	5	18	0.001	0.64	0.978
	Wilkes	0.36	6.4	5	18	0.001	0.64	0.978
	Hoteling	1.778	6.4	5	18	0.001	0.64	0.978
	Highest root	1.778	6.4	5	18	0.001	0.64	0.978

According to the results of Table 4, we can conclude that all components of the survey are statistically meaningful when the level of significant is five percent. In other words, when the scores of pre-test are removed the effects of successful intelligence program in social relationship, hope in

education, hope in leisure, hope in family relationship and hope in carrier path are 0.634, 0.74, 0.572, 0.795, 0.732 and 0.64, respectively. These results confirm that the test has effectively influenced on our participants, positively.

### 3. Conclusion

In this paper, we have presented an empirical investigation to study the effect of successful intelligence program on increasing university students' hope. The proposed study has implemented a standard test to examine the effect of training program in terms of five perspectives including hope in social relationship, hope in education, hope in leisure, hope in family relationship and hope in carrier path and the results have been able to improve the hope among these students. The results of this survey are consistent with findings reported by Bilchik (1999) to increase hope in family relationship. The results are also consistent with Sternberg (2004) in terms of hope in education.

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