

Intrinsic and Extrinsic Interlay Factors in Saudi Graduate Students Perception of Performance and Success

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Introduction

The natural symbiotic relationship between intrinsic and extrinsic factors and how they contribute to student success is undeniable. A plethora of work including self-determination (Anderman and Anderman, 2010), attribution (Graham, 1996) and social cognitive (Bandura, 1986) theories speak about academic achievement by students having a reciprocity relationship between the extrinsic factors that underline or accentuate intrinsic motivating factor that in turn re-enforce extrinsic factors such as familiar and societal pressures upon the student. But a recent study and review of perceptions and attitudes of traditionally underrepresented students engaged in higher education in the Eastern Province of Saudi Arabia suggests that expectancy-value theory (Eccles, 1983) and goal setting theory (Locke, 1990) perhaps have the best explanation and viewpoint on how the extrinsic motivational factors driving traditionally underrepresented female graduate students in the Eastern Province of Saudi Arabia have strengthened intrinsic motivators so that the perceptions and attitudes that the traditionally underrepresented students can be quantified and explored. Such findings seem to suggest that community leaders and stakeholders in educational, governmental and business realms have an added responsibility to maintain a broader understanding of the purpose behind the acquisition of higher degrees of education and thus supporting motivating positive factors to encourage continued

participation and achievement. In turn, measured success such as high grade point averages and high employment statistics of graduates will mitigate and ultimately undermine any demotivating factors that have traditionally stood in the way of progress and success of students in the market place. This review of the study examines to what extent motivating factors, including but not limited to, self-efficacy, attribution and self-regulated goal setting have contributed to the pursuit of higher education in Saudi Arabia by traditionally underrepresented students. The recorded data was collected using mixed method design combining quantitative and qualitative analysis. Closed-ended surveys and interviews conducted in social and traditional sensitive manners were conducted by a controlled group of research assistants at one learning institution on an advanced group of postgraduate students at another institution to gauge and identify the motivational factors that influence tendencies towards postgraduate studies. The initial pilot of the research consisted of thirty master's degree students and five doctoral students. The research results and their review have shown the strong symbiotic relationship between extrinsic and intrinsic motivating factors. Primary correlating factors as a measure of success is the grade point average of these study subjects and the suggestion that the high grade point average will translate into a high employment rate after graduation. Increased employment after graduation will feed into the underlying belief that these underrepresented students can and

should succeed and that will encourage future individuals in this group to attempt higher education.

Background

A brief review of historical events in the history of education in Saudi Arabia is useful to understand the significance of underrepresented students engaging in higher education. Prior to 1957 the only formal education allowed in Saudi Arabia was reserved for one gender. The then King of Saudi Arabia, Saud bin Abdulaziz asked for support from the controlling scholars at the time and result was the opening of the first female school in 1960 which created the availability of education for all students regardless of gender (Almari, 2011). However, even with this advancement true changes to the educational system in Saudi Arabia had to wait until 2005 when the Ministry of Higher Education announced the King Abdullah Scholarship Program. This program was amended in 2010 to allow for students to attend both public and private institutions of learning (Ministry of Higher Education 2014). It is at this point that many new programs began to be developed and offered to encourage all potential students to seek distinguished roles and positions in society (Ministry of Higher Education, 2010). Access to these programs, the ability to keep the costs of education low and the encourage of society at the governmental level to encourage both genders to achieve lead to the percentage of female or underrepresented students into the ranks of post graduate educational programs to be on par with western countries (Gonzales, Allum & Sowell, 2013). From this point on, both genders of students strive to pursue higher education goals for better employment opportunities, personal achievement and attainment of success in the greater society. The previously mentioned extrinsic societal and governmental changes have manifested themselves and cleared the way for financial success and intrinsic growth for students of both genders as well as their family. This development thus feeds back into the societal paradigm shift believing that a strong and educated member of society, regardless of

gender is the benchmark for a stronger economy and society in the future (Hamdan, 2005).

Key Survey Questions and Findings

A recent survey conducted with the goal of understanding the perceptions and attitudes of female graduate students in Saudi Arabia was conducted in the summer of 2014. A complete listing of the questions and graphed results are available in the appendix of this document but for the purpose of this report, but a quick listing of those questions and discussion of their results gives us an interesting outlay of the students thoughts about the current state of extrinsic factors that may be (or perceived as) hindering continued education. The questions considered intrinsic and extrinsic motivators, perceived relationship between graduates' GPA and intrinsic and extrinsic motivators and these motivator's effects on perceptions of success and capabilities. The key hypothesis in this study was that there was a positive relationship between extrinsic and intrinsic motivators that impact perception of students' capabilities and success. Therefore, when the thirty master's students and five doctoral students were asked: "In your opinion, do the extrinsic factors hinder more than intrinsic factors in female Saudi students from continuing their higher studies", 51% of those responding answered that they did believe that extrinsic factors were still the main obstacle in achieving higher education. Another 40% were neutral on the question while just under 9% felt that the intrinsic factors were more problematic than the extrinsic factors. Now this finding is interesting because arguably the two largest extrinsic factors to education have been removed as obstacles. The first being the law and ability of women to attend higher education as the Ministry of Education's changes from 1960 has allowed for no less than thirty-eight educational institutions, ten private colleges and eight universities to exist (Al-Munajjed, 2009). The second of course is cost that has been alleviated by the King Abdullah's Scholarship program as referenced above. The survey results further show that the respondents do recognize that the shift in the Ministry of Education's allowance for higher education and the availability of funds to help pay for that

education equates into an empowerment that suggests intrinsic belief in success for both higher education and career enhancement (Table 16). Then, the question needs to be asked, what other extrinsic factors exist that inhibit advanced education? Additionally, it is fair to further ask if these additional extrinsic factors can be overcome if real or alternatively be dismissed if illusory. To underline again, a positive and symbiotic relationship between extrinsic and intrinsic motivators pushes perceptions and attitudes on the reasoning level to be reinforced. This motivation translates into individual dynamic involvement in the given task, in this case higher education, and contributes to measured results. (Halepota, 2005). In the current study, the perceptions and attitudes of Saudi female students inclination for achievement as translated by GPA during studies and ability to achieve employment upon graduation. Therefore, it can be isolated that extrinsic factors other than legal obstacles and monetary concern erode at the intrinsic belief of the students. Considering this, a review of intrinsic goal setting and value expectancy deserves analysis.

Students enrolled in higher education, regardless of gender have been motivated by accompanying factors to at least attempt to succeed. A measurement of this is both the accumulation of grade points during the educational process and ultimately the graduation. Eccles, (1983) and Locke (1990) both separately reflect upon these dynamics by showing that students perceive their goals ahead of time and place values upon those goals before, during and after the process. Also considering Bandura's (as cited in Tollefson, 2000) argument that students will interpret and factor the causes that will lead them to success in the process as well as balance out the level of effort to be projected in achieving those goals, it can be clearly seen by the projections in the study that the student create their own personal goals and use them as personal standards to evaluate their performance. This dichotomy argument of self-efficacy suggests a high self-efficacy where individuals persist in doing and performing specific task as long as the obstacles are perceived as being overcome and the goals

achievable compared with the low self-efficacy position where given students give up easily because they feel that the extrinsic obstacles are greater than the intrinsic motivators. With the removal of the financial and (at least in theory) societal extrinsic factors in the way of achievement for Saudi female postgraduate students the questions then become: What other extrinsic factors exist for these students? Can these factors be overcome in order to produce competitive graduates for the regional and global market place? And is the acquiring of a degree a by these previously underrepresented students a remarkable achievement bearing little or no true value?

Tollefson (2000) argues that engages learners may have a high outcome expectancy and high self-efficacy and therefore are resilient in their academic tasks because the drive to succeed and the belief that the learners have the capabilities and skills to achieve are equally present. Comparatively, DeGroot and Pintrich (1990) in their study analyzed responses from junior high students using the "Motivated Strategies Learning Questionnaire" and concluded that the correlation between students' high self-efficacy and their academic achievement are highly relatable. In the study conducted on the Saudi female students similar results provide a showing that these students had a high drive to achieve a high grade point average, as this was a marker of success, and also expressed a showing that the opportunity to pursue education in this fashion was of such a significant importance that the students needed to embrace the opportunity regardless of the factors that stood in the way of individual achievement. Wigfield and Eccles (2002) touch upon the Weiner's attribution theory and show that focus of control, stability and controllability are relatable and measurable factors in explaining success or lack of success in any realm. In the study upon which this report is based, it can be seen that the students see that they now have some control due to the change of law and financial opportunity, there is stability in the continued support of the society to uphold these educational changes and the student's now have controlling abilities such as choice of programs and avenues of study including both internal study within the kingdom

and the ability to use the scholarship abroad (Table 8). It is at this point that in the conversation that self-determination theory (Deci, Vallerand, Pelletier, & Ryan, 1991) deserves merit. The theory claimed above that students possess inner incentives to achieve and this self-determination achievement as measured by initial enrollment, GPA and ultimately graduation, have grown due to the modified removal of formally insurmountable extrinsic factors. As more students than succeed in academic performance and become competitive in the market place, societal norms and beliefs will be impacted to allow for future enrolment in programs and the symbiotic cycle then continues to grow. Again, this assuming that upon graduation, these students are able to obtain employment. Clearly, any data here is speculative. History has emphasized this ongoing relationship between extrinsic factors and intrinsic motivators allow for success. Another reality is the familiar support issue. Current state of affairs suggests that female graduates will still have to count on family support and ultimately paternal permission to even participate in the workplace. This academic review of societal considerations concerning student success is reviewed extensively elsewhere (Lepper, Sethi, Daldin, & Drake, 1999).

Concluding Remarks

In considering these extrinsic variables that impact both the ability to pursue higher education and the ability to succeed afterwards, the issue of whether the pursuit of higher education is simply ethereal or illusory for these students. Review of the case study data does not seem to suggest this to be the case however with many of the student being driven to achieve high GPA's (Table 1) and the expression of the intrinsic belief that their personal development was both educational and self-achievement were not contrary to acting in accordance to social norms or family expectations (Tables 2 and 4 respectively).

This research was conducted with the intent to understand intrinsic and extrinsic motivational factors influencing Saudi females' tendency

towards postgraduate studies. Motivation was an eternal key factor and also the key factor in influencing their desire to continue their postgraduate studies. An increase in motivation naturally indicates greater propensity towards postgraduate studies while decreasing in motivation results in fewer numbers attending postgraduate programs. Understanding and obtaining knowledge about what motivational factors exist and how they influence Saudi people and community around these students can support help to create a motivational atmosphere for future students' studies and can result in increasing the number of Saudi females attending postgraduate studies next years.

Statistics of this study show that Saudi females can be intrinsically motivated to pursue their higher education even in consideration of the more extrinsically viewed barriers, although career enhancement as an extrinsic factor receives the highest percentage by 88.6 % compared with other extrinsic factors. Similarly, the results show that they get different external support by 94.3% from families, friends, supervisors and some community organizations which assist them to seek that kind of higher studies. It should also be considered that Saudi females encounter difficulties and challenges while continuing their postgraduate studies. This can be evidence by the 91% of those polled which showed their great enthusiastic willing to overcome those de-motivator or inhibitor barriers. According to the results of this study, 97.1% of Saudi postgraduate females polled believe that coalition with community organizations was an important factor that creates a good motivational atmosphere for increasing the number of attendees of postgraduate programs. Also, results show that efforts and services offered by the Ministry of Higher Education is not fully realized by Saudi females as only 37.1% of those polled agree that the Ministry should provide more opportunities for postgraduate programs. It should be remembered that the Ministry of Higher Education provides many opportunities with specific conditions and requirements inside and outside Saudi Arabia including "King Abdullah Scholarship Program" and other governmental grants (Ministry of Higher Education, 2014). It

can therefore be suggested that this study act as an enhancement to Saudi educators and stakeholder communities, increasing both individuals and institutions' understanding of the main factors affecting the Saudi females'

perception and attitudes towards postgraduate studies which should then lead to more collaboration from all communal organizations.

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Appendix I

Survey of Perceptions and Attitudes of Saudi Arabian Female Students' Metacognition for Higher Education

In today's education realm, many Saudi females are motivated to pursue higher education in order to get better opportunities in job recruitment, increase quality of life and to be active members in their societies. Two kinds of motivations can be identified to influence their tendency towards pursuing higher studies, they are intrinsic and extrinsic motivators. A student can be intrinsically motivated to engage in an academic task when the student is concerned about learning something and involves in a task for its own sake. On the other hand, students who are extrinsically motivated involve in academic tasks in order to receive some rewards or to avoid an externally compulsory punishment (Anderman & Anderman, 2010). These intrinsic as well as the extrinsic motivators are relevant to Saudi females as they pursue higher education (Ministry of Higher Education, 2010). Therefore, the research studies contained within regarding the motivational theories that encourage Saudi females to continue their higher studies can be measured by the following questions and demonstrated in the subsequent materials.

Appendix II

Tables

Table (1-1): Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.821	0.821	10

Table (1-2): Group Statistics

Independent variable	Degree of post-graduate	N	Mean	Std. Deviation	Std. Error Mean
Personal Development Variables	Master	30	5.03	.183	.033
	PHD	5	3.00	1.871	.837

Table (1-3): Independent Samples Test

	Levene's Test for Equality of Variances		T-Test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Personal Development Variables	163.304	.000	6.250	33	.000	2.033	.325	1.371	2.695	
			2.428	4.013	.072	2.033	.837	-.289	4.355	

Table (1-4): Group Statistics

Independent variable	Degree of post-graduate	N	Mean	Std. Deviation	Std. Error Mean
You receive support mostly from	Master	30	2.27	1.911	.349
	PHD	5	2.20	.447	.200

Table (1-5): Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
You received support mostly from	12.875	.001	.077	33	.939	.067	.868	-1.700	1.834
			.166	28.709	.869	.067	.402	-.756	.889

Table (1- 6): GPA of Postgraduates (ANOVA)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.474	3	.158	.398	.756
Within Groups	12.329	31	.398		
Total	12.804	34			

Table (1-7): Degree of post-graduate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Master	30	85.7	85.7	85.7
	PHD	5	14.3	14.3	100.0
	Total	35	100.0	100.0	

Table (1-8): Postgraduates' GPA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.5-5	15	42.9	42.9	42.9
	4-4.49	9	25.7	25.7	68.6
	3.5-3.99	5	14.3	14.3	82.9
	3-3.49	6	17.1	17.1	100.0
	Total	35	100.0	100.0	

Table (1-9): Personal Development Variables (Question 3)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	To satisfy my desire in self-improvement	2	5.7	5.7	5.7
	To achieve my educational goal	2	5.7	5.7	11.4
	All of the above	30	85.7	85.7	97.1
	None of the above	1	2.9	2.9	100.0
	Total	35	100.0	100.0	

Table (1-10): Career Enhancement Variables (Question 4)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	To earn higher compensation	3	8.6	8.6	8.6
	To provide opportunity for more challenging work	5	14.3	14.3	22.9
	To get promoted to a higher position	2	5.7	5.7	28.6
	To remain competitive in the business field	1	2.9	2.9	31.4
	To change occupation area or current career path to a new one	3	8.6	8.6	40.0
	All of the above	17	48.6	48.6	88.6
	None of the above	4	11.4	11.4	100.0
	Total	35	100.0	100.0	

Table (1-11): Familial and Societal Variables (Question 5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	To fulfill family's expectations	7	20.0	20.0	20.0
	To obtain qualifications as regulated by law	7	20.0	20.0	40.0
	To act in accordance to social values	5	14.3	14.3	54.3

All of the above	9	25.7	25.7	80.0
None of the above	7	20.0	20.0	100.0
Total	35	100.0	100.0	

Table (1-12): Challenges Encountered during Higher Studies (Question 6)

While pursuing your higher studies, you were pressurized mostly by one of the following challenges

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Time constraints	5	14.3	14.3	14.3
	Family and societal duties	4	11.4	11.4	25.7
	Financial difficulties	2	5.7	5.7	31.4
	Discouraging universities' learning environments	2	5.7	5.7	37.1
	Current job duties and responsibilities	3	8.6	8.6	45.7
	All of the above	16	45.7	45.7	91.4
	None of the above	3	8.6	8.6	100.0
	Total	35	100.0	100.0	

Table (1-13): Support Receive (Question 7)

You received support mostly from

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Family members	20	57.1	57.1	57.1
	Friends	4	11.4	11.4	68.6
	Supervisors and colleagues	3	8.6	8.6	77.1
	Community organizations	6	17.1	17.1	94.3
	None of the above	2	5.7	5.7	100.0
	Total	35	100.0	100.0	

Table (1- 14): Organization's Support (Coalitions). (Question 8)

To increase the number of Saudi postgraduate females, Saudi organizations should

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Initiate academic majors demanded by the global work market	3	8.6	8.6	8.6
	Facilitate opportunities for employees from all sectors	3	8.6	8.6	17.1
	Facilitate opportunities for employees from all sectors	6	17.1	17.1	34.3
	Eliminate financial and career restrictions for employees who wants pursuing	2	5.7	5.7	40.0
	All of the above	20	57.1	57.1	97.1
	None of the above	1	2.9	2.9	100.0
	Total	35	100.0	100.0	

Table (1-15): The Ministry of Higher Education Role (Question 9)

The Ministry of Higher Education provides opportunities for postgraduate programs to empower Saudi females with the required skills and knowledge to be competitive in the global market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree strongly	7	20.0	20.0	20.0
	Agree	6	17.1	17.1	37.1
	Neutral	10	28.6	28.6	65.7
	Disagree strongly	5	14.3	14.3	80.0
	Disagree	7	20.0	20.0	100.0
	Total	35	100.0	100.0	

Table (1- 16): Extrinsic vs. Intrinsic Factors Hindering Saudi Females from Higher Studies

In your opinion, the extrinsic factors hinder Saudi female students from continuing their higher studies more than intrinsic factors (Question 10)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	7	20.0	20.0	20.0

strongly				
Agree	11	31.4	31.4	51.4
Neutral	14	40.0	40.0	91.4
Disagree strongly	1	2.9	2.9	94.3
Disagree	2	5.7	5.7	100.0
Total	35	100.0	100.0	

Table (1-17): Personal Development Variables Correlation

Correlation (r)	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving support	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Personal Development Variables	0.563	0.47	0.518	.107	0.616	0.443	0.401	.251

Table (1-18): Career Enhancement Variables

Correlation (r)	Personal Development Variables	Familial and Societal Variables	Challenges	Receiving support	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Career Enhancement Variables	0.563	0.923	0.956	-0.387	0.96	0.822	.329	0.619

Table (1-19): Familial and Societal Variables

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Challenges	Receiving support	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Familial and Societal Variables	0.47	0.923	0.903	-0.401	0.913	0.792	0.387	0.605

Table (1-20): Challenges Encountered during Higher Studies

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Receiving support	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Challenges	0.518	0.956	0.903	-0.511	0.939	0.843	0.353	0.697

Table (1-21): Support Received Correlation

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Receiving Support	.107	-0.387	-0.401	-0.511	-0.376	-0.387	.050	0.126

Table (1-22): Organization's Support (Coalitions) Correlation

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving Support	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Organization	0.616	0.96	0.913	0.939	-0.376	0.824	0.43	0.653

Table (1-23): Correlation of the Ministry of Higher Education Role

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving Support	Organization	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Ministry of Higher Education	0.443	0.822	0.792	0.843	-0.387	0.824	.292	0.37

Table (1- 24): Factors Hindering Saudi Females from Continuing their Higher Studies Correlation

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving Support	Organization	Ministry of Higher Education	Postgraduate's GPA
Extrinsic factors hinder more than intrinsic factors	0.401	.329	0.387	0.353	.050	0.43	.292	0.378

Table (1-25): Postgraduate's GPA Correlation

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving Support	Organization	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors
Postgraduate's GPA	.251	.619	.605	.697	-.680	.653	.370	.378

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