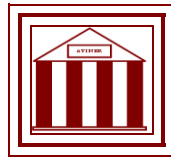# Athens Institute for Education and Research
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Developing Motivation to Learn among Arab Students in Arab Colleges and Mixed Colleges

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Athens Institute for Education and Research

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Abstract

This ongoing research attempts to get insights on the Arab pre-service teachers motivation to learn from a self-determination theory (SDT) perspective, and shed light on what is happening within the confines of the Arab colleges and mixed colleges - pedagogically and socially. The theoretical model consists of two levels: a micro level in which the effect of each of the following variables on students' autonomous and controlled motivation was examined in each college type separately: socio-demographic characteristics, Hebrew fluency, choosing the college type and special education department (CCSE), autonomy support, relatedness, competence, program evaluation and attitudes toward teaching. And a macro level in which the effect of the college type on the relationship between all the above variables and the two types of motivation was examined. Earlier studies focused only on the micro level, while this research combines the two levels in order to try to fulfill this gap, and examine issues that so far have not received enough attention, despite unique ethnic and cultural characteristics of the Arab minority in Israel. Quantitative approach was used. This research if intermediate results can assist in designing guidelines to the pedagogical supervisors and policy makers.

Keywords: self-determination theory (SDT), autonomous motivation, controlled motivation, Arab pre-service teachers, Arab minority, Arab colleges, mixed colleges.

Introduction

The Arab minority in Israel differs from the Jewish majority in religion, language, culture, history, nationality, living areas and lifestyle. The Arab in Israel maintained their language and culture, as 90% of them live in geographically separate cities and villages. Those who live in mixed cities in Israel are generally located in separate neighborhoods (Haidar, 2005).

The Arab society is characterized as collective, traditional, patriarchal and authoritarian (Dwairy, 1998; Dwairy, 2001). Fathers are the most important source of authority in the family and serve as the key decision makers in the family (Al-Haj, 2002). A collective society is a traditional and Homogeneous society. It is characterized by interdependence relationship between people. The extended family is the focus (Hofstede & Mc Care, 2004) and it affects clearly the life of the individual, and directs his behavior, and values through fixed norms. These norms emphasize the hierarchy and social harmony that is expressed under the control of men and their superiority on women. But along with that, it should be noted that these characteristics is changing in the Arab society (Abu-Baker & Dwairy, 2003; Al-Haj, 1989; Haj-Yahia, Bargal & Guterman, 2000).

The Arab family provides security and support in times of personal, social, relationship or family distress. Thus, the success or failures of the individual within the family are the whole family's concerns, not the individual's personal affairs. Arab family plays a role of protection to the individual, and usually provides his needs. Thus, an individual's self-image, self-esteem, excellence and success, confidence and identity, all are valued by their connections with the family. Threat to stop family support can damage an individual's self-confidence and cause anxiety and harm the ability to cope with the demands of life (Haj-Yahia, 1995).

Structural and cultural factors in Israeli society contributed to the formation process of individualization of the Palestinian society in Israel. Today the Palestinian society in Israel is in a continuous process of reshaping the values and the search for ways of action and expression trends. Palestinians in Israel are struggling and trying to define their own identity and nationality, goals, aspirations and ways of action. The transition process is reflected in various fields such as economics, education, culture, and the status of women in society and in the family (Haj-Yahia, 1995).

In the fifties Arabs were a traditional society and largely illiterate, and today there is still a considerable gap between them and the Jews in terms of social stratification, and their options are more limited than those available to the Jews because of the security situation as well as discriminatory (Ben-Raphael, 2002; Diab & Daas, 2013).

The Hebrew Language among Arabs- As a minority, the Israeli-Arab population in Israel learns Hebrew as second language (L2) and as the language of the dominant group (Abu-Rabia, 1999). Spolsky & Shohamy (1999) argued that the main problem in the education of Israeli - Arab is teaching Hebrew. Because it is taught as a second language, and not as a

foreign language - despite gaps in the level of exposure to Hebrew in the daily life between the citizens in cities and villages - many students do not reach the level required to study at the university, and as a result the language is a barrier to higher education. The Hebrew language is a major obstacle. Although Arab students study Hebrew in Arab schools, there is almost no use of language outside the class so there is an immediate difficulty in speaking, understanding, reading and academic writing (Shavev et al., 2013).

The Arab Students- In Israel there are two separate educational systems; Jewish schools and Arab schools. The purpose of the separation between the two systems is due to several reasons: the concentration of the Arab citizens in the Arab areas, where Arabs can learn in an appropriate environment consistent with their lifestyle and also enables the students to maintain the culture, religion and language (Al-Haj, 1996). In contrast, higher education in universities is mixed - Jews and Arabs, and the Jews are the majority (Peleg & Raslan, 2003).

Israeli-Arab citizens who wish to obtain teaching certificate are able to enroll in academic preparation for a teaching career in the universities, or enrollment in teacher training colleges of education. Some of those students choose to join the Arab colleges of education, but many others choose to join official public academic colleges (sometimes called Hebrew or Jewish colleges). Two options are available in the section of the academic colleges of education to Arab students: (1) joining the course of public education or; (2) enrollment in private separate sections carrying multiple names such as: Bedouin and Arabs education tracks or institute for the preparation of Arab teachers (Diab and Daas, 2013, p. 132; Raingold & Paul, 2013, p. 275; Yacov, 2012, p. 5). Most of the Arab attending Jewish colleges learn in Arab programs (Agbaria, 2010).

Theoretical Conceptualization

SDT identifies the core principles underlying sustainable motivation (e.g., see Deci and Ryan 1985; Ryan and Deci 2000). This perspective is one of the most comprehensive and empirically supported theories of motivation available today (Schunk et al., 2008, p.248). In fact, this theoretical perspective has generated a large amount of research in the field of education (see Deci et al., 1991). It has been used recently to better understand important educational outcomes such as dropout behavior (Vallerand & Bissonnette, 1992; Vallerand et al., 1997), personal adjustment in the school context (Connell & Wellborn, 1990; Skinner et al., 1990), as well as learning and school performance (see Fortier et al., 1995; Grolnick et al., 1991). Thus it will contribute to the understanding of the variables addressed in this research.

SDT is mainly interested in promoting students' curiosity in learning, growth in competencies, and wellbeing (Ryan & Weinstein, 2009). People are viewed as having inherent and deeply evolved propensities to receive knowledge and develop new skills. However SDT argues that these natural

propensities can be either supported or diluted by social contexts. School and classroom strategies, including the use of grades, evaluations, rewards and external pressures, are thus of particular interest within SDT as they impact our human potentials to learn and develop.

SDT distinguishes between intrinsic motivation and extrinsic motivation (Deci & Ryan, 1985; Ryan & Deci, 2000; Ryan & Weinstein, 2009). Extrinsic Motivation: is when a person does an action in order to fulfill his/her society expectation, avoid sanctions or to comply with external control. In other words, it is doing an activity for its instrumental value. On the other hand, Intrinsic Motivation: when a person is intrinsically motivated, in other words, the person is involved in a certain activity because of interest or satisfaction (Ryan & Deci, 2000).

The researchers Deci, Ryan, and their colleagues (e.g. Ryan & Deci, 2009) did not settle with a dichotomous definition of extrinsic and intrinsic motivation, rather defined a continuous process in their discussion of internalization. According to their new definition, "internalization is a process of transferring the regulation of behavior from outside to inside the individual". This process is necessary for the regulation of extrinsically motivated behaviors that are consistent with social norms to be transformed into personal values (Deci &Ryan, 1985). The process of moving from external to internal regulation involves several levels defined according to Deci, Ryan and their colleagues as :

- *External-regulation:* factors and circumstances outside the individual which affect their motivation;
- *Introjected-internal regulation:* where the individual feels that he/she should or has to do the behavior;
- *Identified-internal regulation:* which is based on the utility that the individual will gain from doing the behavior (e.g. as given by the authors: studying hard to get grades to get into college);
- *Integrated- regulation:* based on what the individual thinks is valuable and important to the self.

Even though the integrated level is self-determined, it still does not reflect intrinsically motivated behavior. Intrinsic motivation only occurs when the individual autonomously controls the behavior, which may not be the case even at the integrated level of regulation (Wigfield et al., 2012). Pre-service teachers with intrinsic motivation tend to engage in teaching because they enjoy it and they get satisfaction from doing so. Pre-service teachers with identified motivation are considered to be more autonomous than teachers with external or introjected motivation but they are not as fully autonomous as those with intrinsic motivation (Kim & Cho, 2014).

Autonomous and Controlled Motivation

The multidimensional view of SDT motivation distinguishes the quantity, amount, or strength of motivation from the quality or type of motivation. This distinguished conceptualization is a quite exceptional feature of the theory, as most currently popular motivation theories, including self-efficacy theory (Bandura, 1989) and expectancy-value theory (e.g., Eccles & Wigfield, 2002) consider motivation to be a unitary, quantitative construct and propose that a higher amount of motivation should lead to more optimal outcomes. SDT, in contrast, suggests that higher levels of motivation do not necessarily lead to more required outcomes if the motivation is of a poor quality, for example if the motivation is controlled rather than autonomous in nature (Ryan & Deci, 2000a).

Autonomous regulation involves experiencing a sense of full volition, and choice. Autonomous regulation is when a behavior is felt to be personally important and compatible with the person's deeply believed values. The behavior derives from person's true sense of self, and is so considered self-determined. In contrast, controlled regulation involves a person feeling pressured or coerced by an external force. Once controlled, a person behave because of a rigid belief that they should do it, and that they 'have to' do the behavior to feel worthy, or because of a demand, threat or reward from an external agent (Williams et al., 2002).

Within SDT, extrinsic motives are further differentiated into those that are *controlled* versus those that are more *autonomous*. SDT-based research has always demonstrated that more autonomous forms of motivation are related with a mass of positive outcomes from better academic performance, creativity, and persistence, to enhanced learner wellness. In terms of social contexts, SDT suggests that autonomous motives, and the energy and engagement associated with them, are supported by contexts that enhance experiences of *autonomy, competence,* and *relatedness*. In this view, the effects of classroom events such as examinations, teacher feedback, or the introduction of a new curriculum on students' motivation are determined by the *functional importance*, or meaning, of these events with admiration to these three basic needs (Ryan and Deci, 2000). Similarly, the meanings of policies that reward or punish teachers or schools also have a practical importance as they will form the type and focus of consequent manager and teacher motivation. Particularly the functional importance of any incident can be either *informational, controlling,* or *amotivating* (Ryan & Weinstein, 2009).

Human needs- The main tenets of SDT focus on human beings having three inherent psychological needs: relatedness, competence and autonomy (Deci & Ryan, 1985; 2000; 2008). *Relatedness* refers to the need to feel that one is related to others and a sense of belonging to a social group. In the case of teacher-student relationship, relatedness support means providing acceptance, respect, and a feel of caring (Deci & Ryan, 1985). *Competence* is the need to feel that one is effective in performing the requisite actions. Competence and self-efficacy are closely similar, and of course, it is clear that

many students lose or fail to develop self-efficacy within educational setting. *Autonomy* refers to the need to express one's authentic self and to feel that self is the source of action. Autonomy is not independence or total freedom, but rather an internal acceptance of, and engagement with, one's motivated behavior. *Supporting autonomy* means taking the student's perspective, providing choice, and providing a meaningful rationale when choice is not possible (Deci & Ryan, 1985). According to SDT theses three needs, when satisfied, promote psychological well-being (Filak & Sheldon, 2003). Essentially, satisfaction of autonomy and competence needs is necessary in order to maintain intrinsic motivation. This view is contrary to what is theorized by self-efficacy theory (Bandura, 1989) which rejects functional significance to autonomy. Thus, students who feel competent, but not autonomous, will not maintain intrinsic motivation for learning. Many experimental studies have supported the SDT claim that both autonomy and competence are needed conditions for the preservation of intrinsic motivation (Niemiec & Ryan, 2009).

Several studies have shown the relationship between these three human needs and motivation (e.g. Connell & Wellborn, 1990; Deci et al., 1991; Deci & Ryan, 2000; Niemiec & Ryan, 2009; Ryan & Deci, 2000). If the three needs are satisfied, an individual's motivation, growth and well-being will be enhanced. In contrast, if the three needs are not supported, motivation, growth and well-being will be diminished (Deci & Ryan, 2000). In other words, the satisfaction of these psychological needs will result in the formation of different motives, which can range from intrinsic to extrinsic (Niemiec & Ryan, 2009).

The Current Study

The Research Problem: College student motivation for learning is a consistent problem at all levels of post-secondary education. Faculty and staff at colleges, in private and public universities all sigh on the lack of student motivation to learn (Pintrich & Zusho, 2007). Students seems to lack the desire to study or to try very hard, they also postpone and attempt to study for an exam at the last minute, or try to write a paper the day before it is due, they are neither organized enough, plan their work in a better way, nor they learn to perform very well. late arrival to class, absence from lessons, boredom, non-satisfaction and complaints, low grades, lack of persistence. Furthermore, nearly all of these students start teaching in Arab schools if they find a job opportunity (due to excess of Arab graduates from colleges of education). The entry to schools in the first years of the teacher's role is particularly difficult in light of the existing difficulties in Arab schools in terms of organizational and educational climate. The difficult and complex reality of Arab schools, new teachers often struggle for survival in the education system, and deal with feelings of frustration, lack of - helplessness, disappointment and loneliness. These sensations are impossible when it comes to teachers who applied for the

teaching profession in the first place due to lack of employment opportunities (Agbaria, 2009; Ilaiyan et al., 2007). This can have deep implications on the students' eventual contribution as teachers in the school system.

The Research Gap: In spite of the growing interest by researchers and state institutions in evaluating teacher training in Israel, the subject of Arab students in teacher training remains relatively far from being well studied compared to Jewish students. Arab students in Arab colleges and mixed colleges go through different socialization process: academically, pedagogically, psychosocially and linguistically (Agbaria, 2010).

It is very essential to improve student's achievement, and most importantly nurture future teachers with responsibility and commitment to the mission of teaching profession. I believe we should invest our best energies in preparing our future educators in the field of special education, so that our students have better chances for development and progress. Thus, the motive of this research is out of a pedagogical concern and academic interest.

Research Goals: The purpose of this study is to examine the influence of the social and pedagogical learning context on developing motivation to learn among Arab pre-service teachers in special education departments. This research attempts to get insights on the Arab pre-service teachers motivation to learn from a self-determination theory (SDT) (Deci & Ryan, 1985) perspective, and shed light on what is happening within the confines of the Arab colleges and mixed colleges

Research Predictor (Independent) Variables:
- Student background characteristics *:* Socio- demographic: gender, age, current marital status, current household income, permanent residence, father's education, mother's education, religion, religiosity, current study year at the department, work.
- Level of Hebrew fluency.
- Student choices (CCSE): Choosing the College (college cultural characteristics- Arab college vs. mixed college), and the Department of Special Education.
- The three psychological needs: Autonomy support, competence, and relatedness. Previous research has documented the positive effects of autonomy and self-determination on school children and on differentially abled learners (e.g., Deci et al., 1992; Skinner & Belmont, 1993). The suggested research presented here will try to lend further support for the benefits of fostering autonomy within academic settings, and among the specific population of the research. Moreover, competence is the need to feel that one is effective in performing the requisite actions. Competence and self-efficacy are closely similar, and of course, it is clear that many students lose or fail to develop self-efficacy within educational setting (Assor, 2001; Dweck, 2000).
- Program evaluation: The students evaluation of the special education program in the college.

- <u>Attitudes toward the teaching profession:</u> The students attitudes toward the teaching profession.

Research Outcome Variables

Two dependent variables: <u>autonomous motivation</u> and <u>controlled motivation</u>. The level and type (autonomous versus controlled) of motivation were tested.

Main Research Question

Is there an influence of the social and pedagogical learning context on developing motivation to learn among Arab pre-service teachers for special education in two different types of teacher training colleges: Arab colleges and mixed colleges.

Sub questions that stem from the above mentioned main research question:

1. Do the autonomous and controlled motivation differ between students from mixed colleges and those from Arab colleges?
2. Do the variables of interest significantly explain the two types of motivation?
3. Does the college type affect the relationship between those variables and the two types of motivation (moderation)?

Research Hypothesis

1. The students in the Arab colleges will have higher levels of motivation and more autonomous motivation than controlled. The minority students face more difficulties at the universities of the majority. In addition, their achievements are lower than the others (Ying, Lee, Tsai, Hung, Lin, & Wan, 2001). It seems that Arab students face many challenges by the time they enter the university. As a result of that, they experience more pressure than Jewish students (Zeidner, 1992).
2. Different variables of interest will significantly explain the two types of motivation.
3. College type will be a significantly moderator factor in both type of motivation.

Theoretical Model

The flow chart below illustrates the research theoretical model that summarizes the above hypothesis:

Figure 1. *Theoretical Model*
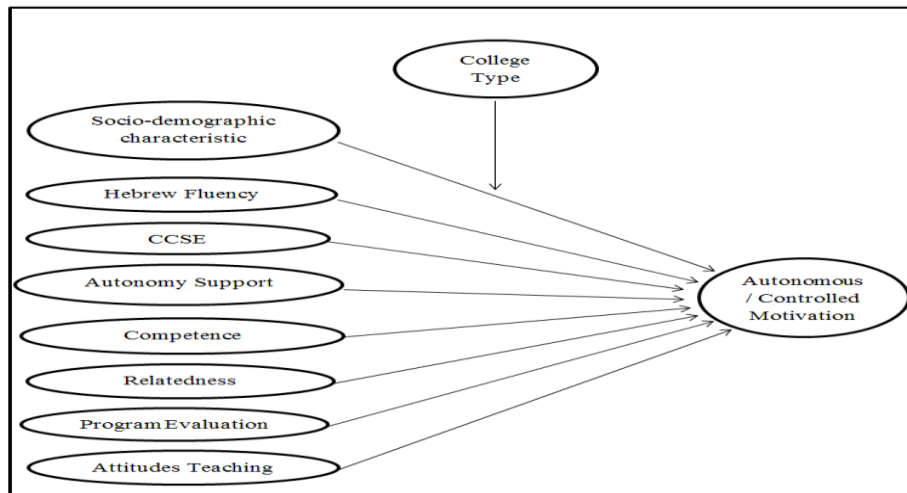
Theoretical Model Proposed

The proposed theoretical model consists of two levels :A micro level in which the effect of each of the variables of interest on students' autonomous and controlled motivation was examined. A macro level in which the effect of the college type (as a moderator) on the relationships between all the above variables and the two types of motivation was examined.

Earlier studies focused only on the micro level, while this research combines the two levels in order to try to fulfill this gap, and examine issues that so far have not received enough attention, despite unique ethnical and cultural characteristics of the Arab minority in Israel.

Participants

A total of 353 Arab pre-service teachers were included in this study chosen out of four of the large teacher training colleges in the center of Israel: two Arab colleges and two Arab sections in mixed colleges. The sample was made up of 92.6 % females and 7.4 % males. Special Education Departments were chosen as a baseline for comparison and as a convenience sample**.**

Methods of Data Collection

In this research a mixed procedure was used: Closed questionnaires and focus groups. In this article the quantitative part of the research is presented.

Methods of Data Analysis

Quantitative Analysis of the results was done using multiple hierarchical regression.

Description of the Colleges

In this study, the experience in the learning context is not based solely on the student' experience in the classroom but on their general experience as students at a specific college which structures a holistic learning environment that has rules, relations, and varied learning processes. The main assumption of

this study is that this holistic experience affects students' motivation to learn. This study, therefore, deals with comparing the motivation to learn of students in the department of special education in two different types of teacher training colleges. These colleges represent two types of holistic learning environments. At the onset of this study two types of colleges were examined: two Arab colleges and two mixed colleges.

Similar colleges of each type were selected in terms of various parameters. The parameters of each college was examined prior to the distribution by college type in order to ensure the similarity of the two Arab colleges among themselves and the similarity of the two mixed colleges among themselves.

Descriptive Statistics of the Two College Types

Participants were 353 (26 male and 327 female) pre-service teachers for special education both in Arab or mixed colleges. The majority of participants were between the ages of 21-25 (63.4%). An alpha level of .05 was used for all statistical tests.

After checking for missing data and outliers, the data was screened for normality, linearity and homoscedasticity. The data was found to be fitting the requirements for parametric data analysis, and therefore proceeded to the hypothesis test. Tables 1and 2 below presents descriptive statistics for the predictor variables.

Table 1. *Descriptive Statistics- Arab Colleges*

College Type		N	Minimum	Maximum	M	SD
Arab Colleges	Program Evaluation	177	1.73	5.00	3.6754	.60688
	Attitudes Teaching	177	2.80	5.00	4.2311	.48920
	Hebrew fluency	177	2.00	5.00	3.9732	.75353
	CCSE	177	1.00	5.00	3.9054	.82220
	Autonomy support	177	1.00	5.00	3.1704	.75146
	Competence	177	.00	5.00	4.3432	.63776
	Relatedness	177	.00	5.00	3.8425	.75390
	LSR Autonomous Reg	177	2.00	5.00	4.1006	.60080
	LSR Controlled Reg	177	1.57	4.71	3.2478	.67407
	Valid N (list wise)	177				

Table 2. *Descriptive Statistics- Mixed Colleges*

Mixed Colleges	Program Evaluation	176	1.00	5.00	3.5124	.73908
	Attitudes Teaching	175	2.30	5.00	4.1634	.57638
	Hebrew fluency	176	1.00	5.00	3.9474	1.08549
	CCSE	176	.25	5.00	3.7898	.98299
	Autonomy support	176	1.33	5.00	3.2964	.78218
	Competence	176	.00	5.00	4.2045	.64536
	Relatedness	176	.00	5.00	3.7734	.70905
	LSR Autonomous Reg	176	.00	5.00	3.8670	.68172
	LSR Controlled Reg	176	.00	4.71	3.0771	.69498
	Valid N (list wise)	175				

Relationship between LSR and Socio-demographic (ordinal variables)

Spearman correlations were conducted among the following categorical variables: Age, income, fathers' education, mothers' education, religiosity and both types of LSR: Autonomous regulation and controlled regulation. The results of the correlations in Table 3 show that:

Significant positive correlation was found between age and religiosity (r_s = 0.144, n = 348, p = 0.007). Older students are more religious. A significant positive correlation was found between student family income and fathers' education, (r_s = 0.266, n = 343, p<0.0001) and between student family income and mothers' education (r_s = 0.284, n = 343, p<0.0001). Parents with higher levels of education have higher income. Also, a significant positive correlation was found between mothers' education level and fathers' education level (r_s = 0.489, n = 352, p<0.0001). Student autonomous regulation was found to be significantly negatively correlated to the parents' education level. Students of parents' with lower level of education have higher levels of autonomous regulation (Correlation with the fathers' education: r_s = -0.171, n = 352, p = 0.001; Correlation with the mothers' education: r_s = -0.114, n = 352, p = 0.032). Similarly, students of parents' with lower level of education have higher levels of controlled regulation (Correlation with the fathers' education: r_s = -0.105, n = 349, p = 0.049; Correlation with the mothers' education: r_s = 0.337, n = 353, p<0.0001). Religiosity was also found to be significantly negatively correlated to students' autonomous regulation (r_s = -0.138, n = 349, p = 0.010). The other correlations among the mentioned variables were not found significant.

Table 3. *Correlations between Dependent Variables and Socio-demographic Variables*

		Autonomous	Controlled	Age	Income	Father Education	Mother Education	Religiosity
Spearman's rho	Autonomous	1.000	.337**	.019	-.022	-.171**	-.114*	-.138*
	Controlled	.337**	1.000	-.058	-.002	-.040	.001	-.105*
	Age	.019	-.058	1.000	-.043	-.071	-.104	.144**
	Income	-.022	-.002	-.043	1.000	.266**	.284**	.067
	Father Education	-.171**	-.040	-.071	.266**	1.000	.489**	-.021
	Mother Education	-.114*	.001	-.104	.284**	.489**	1.000	.023
	Religiosity	-.138*	-.105*	.144**	.067	-.021	.023	1.000

Group Mean Differences in Both Types of Motivation by College Type

SDT focuses not only on the quantity of motivation but also on the quality (Deci & Ryan, 1985), thus the first research question: Do the autonomous and controlled motivation differ between students from mixed colleges and those from Arab colleges?

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First question hypothesis: The students in the Arab colleges will have higher levels of motivation and more autonomous motivation than controlled.

An independent t-test and analysis of variance (ANOVA) were performed to examine whether there were significant group mean differences both types of motivation by college type. The results of the t-test revealed that a significant correlation was found between college type and autonomous motivation ($t_{(351)}$= 3.415, p=0.001). Autonomous motivation was found to be higher in Arab colleges (M= 4.1006, SD= .60080) than autonomous regulation in mixed colleges (M= 3.8670, SD= .68172).

A significant correlation was found between college type and controlled motivation ($t_{(351)}$= 2.342, p=0.020). Controlled motivation (M= 3.2478, SD= .67407) was found to be higher in Arab colleges than controlled motivation in mixed colleges (M= 3.0771, SD= .69498). These results are partly consistent with the research hypothesis that supposed students in the Arab colleges will have higher levels of motivation and more autonomous motivation than controlled.

Table 4. *Independent Samples Test*

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Autonomous Motivation	Equal variances assumed	1.351	.246	3.415	351	.001	.23352	.06839	.09902	.36802
	Equal variances not assumed			3.414	345.050	.001	.23352	.06841	.09897	.36807
Controlled Motivation	Equal variances assumed	.094	.760	2.342	351	.020	.17067	.07287	.02735	.31399
	Equal variances not assumed			2.342	350.540	.020	.17067	.07288	.02733	.31401

Summary of Hierarchical Regression Analysis for Variables Predicting Autonomous Motivation (N= 353)

Second research question: Do the variables of interest significantly explain the two types of motivation?

Second question hypothesis: Different variables of interest will significantly explain the two types of motivation. And according to SDT (Deci & Ryan, 1985; 2000) the three psychological needs will significantly explain the autonomous motivation.

The study applied hierarchical regression analysis to examination results in search for the best predictors among the variables of interest in predicting students motivation (LSR- autonomous and controlled). The variables of interest are: Hebrew fluency, CCSE, autonomy support, competence, relatedness, program evaluation and attitudes towards teaching. Control variables were religion and residence for autonomous motivation and religion for controlled motivation.

The religion variable was transformed from categorical variable (with the values 1 Muslim; 2 Christian; 3 Druze) to a dummy variable for each category in order to be used in the hierarchical regression. Also residence variable was transformed from categorical variable (with the values 1 Arabic city; 2 mixed city; 3 Arabic village) to a dummy variable for each category in order to be used in the hierarchical regression.

A hierarchical regression was conducted to determine the best predictors of the dependent variable autonomous motivation among the independent variables. Table 5 presented below is a 3-step hierarchical regression, which involves the interactions between the continuous scores. In step 1 (model 1) the socio-demographic variables were entered as a dummy variables, but none of the these variables were significant. But then again only religion and residence were chosen as a control variable in order to control the differences in religion and residence that both had significant correlation with college type. Model 1 is significant $F (6,346)=5.089$, $p<0.0001$. Neither religion nor residence were a significant predictor in the first step but they contributed to the variance explanation by R^2 change= .081, thus the adjusted R^2 =.065.

Then, the following independent variables: Hebrew fluency; CCSE; autonomy support; competence; relatedness and program evaluation were added at step 2 (model 2). Model 2 is also significant $F (12,340)=22.284$, $p<0.0001$, R^2 change=.359, thus the adjusted R^2 =.420. Adding these variables in step 2 created a stronger model. From the set of the independent variables CCSE, autonomy support, competence, relatedness and program evaluation were significant. CCSE were found to be the strongest predictor (β= .258, $p<0.0001$), followed by competence (β= . 221, $p<0.0001$), autonomy support (β= . 198, $p<0.0001$), relatedness (β= . 184, $p<0.0001$) and finally program evaluation (β= . 129, $p=0.003$). This implies that higher values for the five motivational predictors are associated with higher value for autonomous motivation. However, Hebrew fluency did not prove to be a significant factor for predicting autonomous motivation. Attitudes towards teaching and program evaluation are significantly correlated (r_p= 0.433, $p<0.001$), so they couldn't fit both in the model. Therefore, Attitudes towards teaching was not entered to the regression. Thus, the hypothesis did not receive full support.

Third research question: Does the college type affect the relationship between the variables of interest and the two types of motivation (moderation)?

Third question hypothesis: College type will be a significantly moderator factor.

Table 5. *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.285[a]	.081	.065	.63047	.081	5.089	6	346	.000	
2	.664[b]	.440	.420	.49640	.359	36.357	6	340	.000	
3	.691[c]	.478	.450	.48380	.037	3.991	6	334	.001	1.866

In step 3 (model 3) the interactions between college type and the independent variables were added. Model 3 with the interactions is also significant F (18,334)= 16.970, p<0.0001, R^2 change=.037, adjusted R^2 =.450. And then again, the addition of the interactions created even more explanation of the variance. Thus the third model as a whole explained 45% of the variance in autonomous motivation. The following interactions were found to be significant: college type and competence (β= . 841, p=0.006) followed by college type and relatedness (β= . 564, p=0.016), and finally college type and program evaluation (̄β= . 584, p=0.013). From the significant interactions with college type two were positive except with program evaluation. This implies that college type affects the relationship between the independent variables and autonomous motivation. Higher values for the independent variables are associated with higher value for autonomous motivation. In contrast, the interaction of college type with program evaluation is negatively correlated with autonomous motivation.

Summary of Hierarchical Regression Analysis for Variables Predicting Controlled Motivation (N= 353)

Table 6 presented below is a 3-step hierarchical regression, which involves the interactions between the continuous scores. In step 1 (model 1) only religion as a dummy variable was chosen as a control variable in order to control the differences in religion that had significant correlation with college type. Then, the following independent variables: Hebrew fluency; CCSE; autonomy support; competence; relatedness and program evaluation were added at step 2 (model 2). In step 3 (model 3) the interactions between college type and the independent variables were added.

Model 1 is significant F (4,348)=3.019, p=.018.Variables in model 1 contributed to the variance explanation by R^2 change= .034, thus the adjusted R^2 =.022. Contrary to autonomous motivation religion was significant with controlled motivation. Then, the following independent variables: Hebrew fluency; CCSE; autonomy support; competence; relatedness and program evaluation were added at step 2 (model 2). Model 2 is also significant F (10,342)=5.725, p<0.0001, R^2 change=.110, thus the adjusted R^2 =.118. Adding these variables in step 2 created a stronger model. From the set of the independent variables autonomy support and program evaluation were significant. Program evaluation were found to be the strongest predictor of controlled motivation (β= .260, p<0.0001), followed by autonomy support (β=

. 132, p<0.021). This implies that higher values of these two motivational predictors are associated with higher value for controlled motivation. However, Hebrew fluency, CCSE, competence and relatedness did not prove to be a significant factors for predicting controlled motivation. In step 3 (model 3) the interactions between college type and the independent variables were added. Model 3 with the interactions is also significant F (16,336)= 4.602, p<0.0001, R^2 change=.036, adjusted R^2 =.141. Thus the third model as a whole explained 14% of the variance in controlled motivation. The only significant interaction with college type is relatedness (β= . 765, p=0.009). There is a need for further investigation of the variables that could predict the Arab students controlled motivation.

Table 6a. *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.183[a]	.034	.022	.68115	.034	3.019	4	348	.018	
2	.379[b]	.143	.118	.64687	.110	7.310	6	342	.000	
3	.424[c]	.180	.141	.63863	.036	2.481	6	336	.023	1.961

Table 6b. *Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.714	.681		2.517	.012
	College Type	-.194	.076	-.141	-2.562	.011
	Muslim	1.535	.683	1.009	2.247	.025
	Christian	1.634	.688	.937	2.374	.018
	Druze	1.481	.694	.618	2.136	.033
2	(Constant)	.470	.726		.647	.518
	College Type	-.152	.073	-.110	-2.063	.040
	Muslim	1.126	.659	.740	1.709	.088
	Christian	1.219	.662	.699	1.843	.066
	Druze	.964	.669	.403	1.442	.150
	Hebrew Fluency	.057	.041	.077	1.388	.166
	CCSE	.015	.040	.020	.386	.700
	Autonomy Support	.118	.051	.132	2.327	.021
	Competence	-.007	.061	-.006	-.109	.913
	Relatedness	.015	.052	.016	.297	.767
	Program Evaluation	.263	.053	.260	4.945	.000
3	(Constant)	1.236	.801		1.543	.124
	College Type	-1.645	.637	-1.196	-2.581	.010
	Muslim	1.075	.660	.706	1.630	.104
	Christian	1.143	.665	.655	1.719	.087

Druze	.875	.670	.365	1.307	.192
Hebrew Fluency	.042	.068	.056	.615	.539
CCSE	.034	.062	.045	.554	.580
Autonomy Support	.084	.072	.094	1.166	.244
Competence	-.092	.087	-.086	-1.055	.292
Relatedness	-.105	.071	-.112	-1.492	.137
Program Evaluation	.322	.087	.318	3.711	.000
College Type _Hebrew Fluency	.008	.085	.024	.091	.928
College Type _CCSE	-.024	.081	-.070	-.294	.769
College Type _Autonomy Support	.063	.102	.159	.619	.537
College Type _Competence	.152	.123	.475	1.239	.216
College Type _Relatedness	.270	.103	.765	2.621	.009
College Type _Program Evaluation	-.088	.109	-.234	-.802	.423

Results and Discussion

Arab students in Arab colleges have higher autonomous and controlled motivation than those in multicultural colleges. Furthermore, program evaluation and autonomy support are significant in both types of motivation; Students that evaluate more positively the department program have higher motivation and students with higher autonomy support have higher motivation.

Competence, relatedness are significant only with autonomous motivation. Students with higher competence and feeling of relatedness have higher autonomous motivation. This finding is consistent with SDT theory which suggests that autonomous motives, and the energy and engagement associated with them, are supported by contexts that enhance experiences of *autonomy, competence,* and *relatedness* (Ryan and Deci, 2000; 2008).

CCSE is significant only with autonomous motivation. Students who chose to study special education from free choice, and not of any constraint, were found to have higher autonomous motivation. This finding backs the concept of autonomy, volition and well-being.

Hebrew fluency was not found to be significant in spite of the difficulty in using second language described in the literature (Shavev et al., 2013; Spolsky & Shohamy,1999).

College type as a moderating factor affected part of the previous relationships in autonomous motivation regression model. Competence have higher impact in multicultural colleges; Relatedness have higher impact in multicultural colleges, and program evaluation have lower impact in multicultural colleges.

College type as a moderating factor affected relatedness in controlled motivation regression model. Relatedness have higher impact in multicultural colleges.

Limitations

The present study has several limitations. First, the study examined students only from four colleges, and despite its size and diversity, the testing of other colleges would allow a more comprehensive picture. Second, the participants were selected through convenience sampling from the departments of special education- and therefore do not represent students in other departments. It will be interesting to conduct the research among students from other departments, and from other colleges, in order to validate the research results. Third, the study included a small number of males, this reflects the reality facing teacher training colleges that students are mostly women, but it may be a limitation of research. Fourth, the study examined pre-service teachers in one point of time. Long-term testing throughout the four years of study will obtain more information and will give more complete image. Fifth, a qualitative analysis can give further insights on how the different factors affect both types of motivation in different colleges.

Conclusion and Recommendations

Lecturers who facilitates interactive discussions, learn about students' lives and develop a good relation, can encourage a sense of social integration, belonging, relatedness and competence. Student autonomy should be taken into consideration when choosing strategies through which students are motivated for learning and achievement, by sharing enthusiasm for the subject, and making the learning materials more appealing to the student. Showing patience, persistence and understanding with students' various difficulties, which can moderate and reduce the students resistance in dealing with their own difficulties.

These results can assist in designing guidelines to the pedagogical supervisors and policy makers, such as running an intervention program that will operate in parallel circles. Develop programs and a support system for new students in particular, and workshops aimed to help students to deal with the

challenging experience, especially in mixed colleges. Also develop workshops for lecturers, and pedagogical supervisors in order to become more student-oriented, more accessible to students, and responsive to their needs and concerns.

The study raises the question of multiculturalism. How can the college adapt to different cultures. In order to provide the Arab minority with the essential tools to deal with the complex reality of the cultural and national uniqueness in Israel, it is important to start from an early stage, by applying a multiculturalism policy at all educational systems.

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