

Research Article

Effect of Student, Family-Related Features on Academic Achievement

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The main objective of this study is to determine the effect of socio-familial characteristics, gender, class repetition, and extracurricular activities on school results using a quantitative methodology, based on a non-experimental and correlational study. The sample was composed of 695 students from two schools (middle and high school) in the provincial administration of Mediouna. In order to collect the information, the participants were asked to fill in a questionnaire on their personal and socio-family data. The results obtained were processed by IBM SPSS 26 software. The results showed that the effect of socio-familial characteristics had a partially significant relationship with school grades with a weak effect. Same for class repetition, revision aid and extracurricular activities contribute significantly to school grades variation. Some have highly significant and significant effects for others with a weak partial square condition, on several school subject scores, namely, revision help on the physical education and sports score, extracurricular activities on the physics and chemistry score, etc. In short, considerable effort is needed to better understand the multidimensionality of school success and to ensure effective and relevant educational intervention.

1. Introduction

Education is the most basic method to improve a nation's population's quality of life and education from childhood, influences individual achievement and pleasure, and also determines a child's ability for innovation [1].

In modern society, the influence of the family plays a very important role in student 'academic life' [2]. It is also supported by multiple studies [3] stating that effective learning involves a partnership between students, teachers, and parents. As a result, family engagement is regarded as a necessary component to determine emotional and material impact, as well as learning motivation level.

Family engagement as a motivator for student achievement is an important practice that has seen impressive results; when parents were engaged via more regular phone calls, student homework achievement increased [4]. As conclusion, these practices had a positive impact on student engagement, test scores, and even homework achievement. Parents with some particular characteristics on educational level, occupation, etc. were more likely to remain involved in students' academic progress for the rest of the year.

Research on class repetition shows that does not lead to long-term improvements for students, especially when used as an intervention [5]. From a psychological perspective, class repetition can have negative effects on students' well-

being, both socially and mentally; it is detrimental for the students [6]. When asked how they felt, students reported feeling sad, bad, punished, and upset about the situation; one adult who had been held back in elementary school reacted typically by saying that the experience made her lose her friends, that she felt silly, and that it was no help to her [6, 7]. It is also noticed in our context of study that the objective of repetition goes beyond the effect of the springboard towards an approach of punishment and a setting aside of the unwanted students.

Extracurricular activities are considered as an important contributor of students' personality, and many schools have set up resources to implement extracurricular activities. This can be an important factor in increasing students' sense of belonging to school [8]. Students with a strong sense of belonging to school tended to be interested, motivated, and less anxious, and performed better [8].

Briefly, all these factors discussed are not exhaustive and do not make a consensus in the literature, which deserves to be initiated in research. In addition, the Moroccan educational system is attracting interest, taking the attention of all actors to contribute to this complex system. Hence, this research is an attempt to ask the right questions and help to find practical and operational solutions.

Currently, the educational sector emphasizes the importance of student, which has become its top priority. Therefore, all countries worldwide in general and Morocco in particular are trying to put in place a set of learning approaches and teaching methods that allow students to learn in better conditions, but it is not easy to expect positive results without putting the finger on the factors that impact Moroccan students' academic achievement.

This study is significant; it is expected to be essential because it is an essay to conduct this kind of research in order to evaluate the effect of socio-familial characteristics, gender, class repetition, and extracurricular activities on academic outcomes. It may help the pedagogical specialists in Moroccan education system to determine which parameter is more affecting academic outcomes variation.

1.1. Question of the Study. To what extent do socio-familial characteristics, gender, class repetition, and extracurricular activities grade repetition have a significant effect on academic achievement.

2. Literature Review

Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college, and university. School systems mostly define cognitive goals that either apply across multiple subject areas (e.g., critical thinking) or include the acquisition of knowledge and understanding in a specific intellectual domain (e.g., numeracy, literacy, science, history) [9]. It is thus from a set of evaluation procedures adopted by educational actors that give an effective regard on student performance in a particular situation.

Hattie [9] in a quantitative synthesis of 815 meta-analyses discussed the determinants of educational outcomes according to student's home, school, and even himself; they found that teaching quality is the most impacting determinants. This synthesis touches all school subjects; it is about a million of students influence from home, school, curricula, teaching methods, and learning strategies. The study gives large results and statistically processed. However, results were focused only on cognitive and learning aspect with student's engagement without mentioning implicit factors in relation to it.

Recent literature about gender effect on academic achievement is divided into two lines: social and biological aspects [10]; girls are more able to attend college remarkably than boys, which might explain why girls left boys behind at school [11]. But, research on student's biological attributes or their correlation with social aspect seems almost non-existent, which can give another vision to gender effect on academic achievement.

Research related to family structure [12–14] declared a set of demographic variables (number of siblings, parental education, father's occupation, region, and residence, etc.) that may be conducive to a positive education outcome. These variables change according to student characteristics and other implicit factors. However, a small literature declares that parent's involvement is an effective criterion determining student academic achievement and all parameters discussed (number of siblings, parents' occupation, parents' educational level, etc.) are not directly involved in student success [15].

Class repetition means that students with poor academic performance need to repeat same grade for another year, based on the proposition that grade repetition allows unmotivated students to make more effort [16]. But, OECD [17] suggested linking class repetition with inequality of educational opportunities based from the fact that students with low socioeconomic status. Also, grade repetition of negative points not only is a costly practice but also did not have a pedagogical legitimacy and utility.

In the same point, extracurricular activities had been considered as a means of expression and exteriorization of student' negative emotions due to their scholar, family, or even personal problems. Research found that 80% of students from elementary to middle and high school were practicing different extracurricular activities as sport, music, etc. [18]. This study did not correlate student's participation rate with their academic outcomes. Therefore, timing is considered as moderating factor of extracurricular activities effect on educational outcomes; a study by Crosnoe, Smith, and Leventhal et al. [19] concluded that students who participate in extracurricular activities during all education cycle in a consistent manner are able to achieve positive academic results. In contrasts, extreme involvement reaps fewer academic benefits [20].

Obviously, academic achievement arouses interest of all educational specialist as mentioned by Pisa [21]; studies have focused on predictors of academic achievement on an international and national level. They highlighted a set of concepts to compare their education system with the others

and to evaluate them on this basis. But it is worth to mention that many studies have focused only on family background or quality of teaching for example without relating other factors all together. This is why we will try in this research to work with some variables that we estimate appropriate from a methodological and pedagogical point of view.

3. Materials and Methods

3.1. Participants. We conducted an exploratory survey of 695 students at two schools (100% of their maximal capacity) belonging to the Mediouna provincial direction (*it is an administrative district that is independent but related to the Casablanca-Settat Academy in Morocco*) that enabled us to conduct our experiment. We opted for all grades at the secondary school level to give more exhaustiveness to our sample (three grades at the middle school level and the same at the high school level).

The students were contacted through their teachers explaining them the purpose of the research in full respect of the ethical rules of the research and asking their parents to sign a consent form to participate in this study.

The choice of these two schools as well as the provincial direction was not made at random. It is a fertile context where student's academic outcomes disparity arouses interest at the provincial and even regional level.

Before starting the research, the authors had requested the provincial direction of Mediouna approval and access to the information relating to the students (school results, age, etc.). The questionnaire distribution was made by the teachers and they had to choose between two periods: recess and before the beginning of the session since it is a short questionnaire of 15 items.

The pedagogical direction of the two schools was in charge to informing the parents and distribute the consent forms with the presence of the researchers, of course, to answer any questions that might arise. We would like to inform that participation in this study is on a voluntary basis, both for students and for their teachers, that we are grateful through their involvement.

For the middle school, there are 469 students (33.2% are males and 34.2% females) (Table 1), and 226 students are in the high school (12.9% males and 19.6% females) (Table 1). They were contacted through random sampling and before data collection; the academics were contacted to determine their availability and degree of agreement with the study's goal.

The average age of our population is 14.87 years. At the middle school, the males' average is about 14.04 years while the females' is about 13.91 years old.

In the high school, the average age is around 16.74 years (16.66 years for male and 16.80 years for female) (Table 2).

3.1.1. Instruments

- (1) Questionnaires of socio-familial characteristics: the participants were asked to complete a questionnaire on different socio-familial characteristics, gender,

TABLE 1: Percentage of pupils by gender and school cycle.

School cycle	Class	Female		Male		Total	
		n	%	n	%	n	%
Middle school	1st grade	77	11.1	81	11.7	158	22.7
	2nd grade	83	11.9	64	9.2	147	21.2
	3rd grade	78	11.2	86	12.4	164	23.6
	Total	238	34.2	231	33.2	469	67.5
High school	1st grade	67	9.6	30	4.3	97	14.0
	2nd grade	29	4.2	37	5.3	66	9.5
	3rd grade	40	5.8	23	3.3	63	9.1
	Total	136	19.6	90	12.9	226	32.5
Total	374	53.8	321	46.2	695	100.0	

class repetition, and extracurricular activities. It has 15 items.

- (2) Educational outcomes: student's grades were retrieved from the "MASSAR platform" (the "MASSAR" platform is a school management system adopted by the Moroccan Ministry of National Education.). These are 8 grades of school subjects as well as the general average as follows: Physical Sportif Education (PSE); Islamic Education (IE); Physics (PC); Life sciences (LS); Mathematics (Math); History & Geography (HG); French (Fr); Arabic (Ar).

3.1.2. Design. A quantitative approach is used: an empirical and correlational study that analyzes effect of socio-familial characteristics, gender, grade repetition, and extracurricular activities on academic achievement. We administered tests to students of different ages and grades at the same time. We find that the results can lead to a new direction in pedagogical thinking.

3.2. Data Analysis. Analyses of the relationship between age and the number of siblings are performed by Bravais Pearson correlation analyses and are presented in the form of correlation matrices (n , p , r , r^2). The results obtained at the level of the student's socio-family characteristics (father's job, mother's educational level, etc.) are processed by multivariate analysis of variance (MANOVA: ANOVA II and ANOVA III). They are presented on average and standard deviations. The threshold of significance is set ($p < 0.05$). The data were processed by SPSS 26 IBM. IC. CHICAGO.

4. Results

4.1. Correlation between Academic Achievement and Age and Number of Siblings. The correlation matrix presented in Table 3 identifies the correlation between 4 parameters. We noticed that, out of the 36 correlations calculated, 11 relations are significant ($p < 0.05$) which is equivalent to 30.55% of the relations. Table 4

The results of the age present (7/9) correlations of 19.44% of all the results: thus, they are significant correlations with the school marks. They present very significant

TABLE 2: Average Age by gender and school cycle.

		Female		Male		Total	
		Average	SD ¹	Average	SD	Average	SD
Middle school	1st grade	12.86	1.13	13.02	1.29	12.94	1.22
	2nd grade	13.71	0.97	13.80	0.98	13.75	0.97
	3rd grade	15.15	1.15	15.19	1.25	15.17	1.20
	Total	13.91	1.43	14.04	1.51	13.97	1.47
High school	1st grade	15.94	0.78	15.73	0.74	15.88	0.77
	2nd grade	16.93	0.75	16.73	0.69	16.82	0.72
	3rd grade	18.15	1.14	17.74	0.92	18.00	1.08
	Total	16.80	1.30	16.66	1.08	16.74	1.22
Total	374	14.96	1.97	14.78	1.83	14.87	

¹SD : standard deviation.

TABLE 3: Effect of number of brothers and sisters on academic achievement.

Parameters		General average	PSE	IE	PC	LS	Math	HG	Fr	Ar
Average	<i>r</i>	1	0.321**	0.785**	0.689**	0.725**	0.828**	0.768**	0.774**	0.834**
	<i>p</i>	695	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	<i>n</i>	695	691	695	695	695	695	695	695	695
Age	<i>r</i>	0.054	-0.095*	0.095*	-0.392**	-0.267**	0.122**	0.011	0.224**	0.239**
	<i>p</i>	0.158	0.013	0.012	0.000	0.000	0.001	0.775	0.000	0.000
	<i>n</i>	695	691	695	695	695	695	695	695	695
Number of brothers	<i>r</i>	0.009	0.079*	0.035	0.061	0.062	-0.01*	0.029	-0.030	-0.021
	<i>p</i>	0.810	0.038	0.358	0.110	0.101	0.769	0.447	0.426	0.576
	<i>n</i>	695	691	695	695	695	695	695	695	695
Number of sisters	<i>r</i>	0.075*	-0.006	0.105**	0.033	0.022	0.087*	0.067	0.059	0.048
	<i>p</i>	0.048	0.866	0.006	0.379	0.554	0.021	0.077	0.117	0.210
	<i>n</i>	695	691	695	695	695	695	695	695	695

**Very significant ($p = 0.009$ to 0.01). *Significant ($p < 0.05$).

TABLE 4: Effect of family rank and gender on student's academic outcomes.

Parameters	Significant	General average	PSE	IE	PC	LS	Math	HG	Fr	Ar
Family rank	<i>P</i>	0.248	0.148	0.084	0.455	0.577	0.645	0.011	0.095	0.153
	η^2	0.004	0.006	0.007	0.002	0.002	0.001	0.013	0.007	0.005
Gender	<i>P</i>	0.003	0.014	0.000	0.722	0.881	0.259	0.001	0.000	0.001
	η^2	0.013	0.009	0.030	0.000	0.000	0.002	0.017	0.022	0.016
Family rank x gender	<i>P</i>	0.981	0.746	0.416	0.735	0.746	0.951	0.365	0.980	0.903
	η^2	0.000	0.001	0.003	0.001	0.001	0.000	0.003	0.000	0.000

R -two = .068 (adjusted R -two = .062), η^2 : Eta-squared partial, p : significant, x : interaction factors.

relations (the case for French and Arabic) of ($p = 0.000$), positive (negative in relation to physical education and sports) with low r intensities of ($r = 0.122$ to $.239$; $r^2 = 1.48\%$ to 5.71%).Table 5

Nevertheless, it has negative, highly significant (physics-chemistry, life and Earth sciences of $p = 0.000$) and significant (physical and sports education and Islamic education of $p = 0.012$ to 0.013) relationships with a low correlation coefficient r of ($r = -0.393$ to -0.095 ; $r^2 = 0.90\%$ to 15.44%). (Table 6)

The number of brothers presents (1/9) correlations 2.22% of all results: in fact, it is a significant and positive correlation with a low r intensity ($r = 0.079$; $r^2 = 62.41\%$; $p = 0.038$). (Table 7)

At the level of the number of sisters, it presents (3/9) correlations 6.66% of all relationships; these correlations are

positive and significant (the case of physical education and sports as well as mathematics of $p = 0.021$ to 0.048) and Islamic education of .006. The correlation coefficient r is low in general average ($r = .075$; $r^2 = 0.56\%$), mathematics ($r = 0.087$; $r^2 = 0.75\%$), and Islamic education ($r = 0.105$; $r^2 = 1.10\%$).

4.2. Effect of Family Rank and Gender on Academic Achievement

- (1) Effect of family rank on academic achievement: analysis of variance (MANOVA,) shows that there is a significant relationship between family rank and geography history ($p = 0.011$) with a small size effect ($\eta^2 = 0.013$). Nevertheless, family rank shows no significant relationship with other academic outcomes ($p = 0.148$ to $.577$) > 0.005 .

TABLE 5: Effect of parents' job and educational level on student's academic outcomes.

Parameters	Significant	General average	PSE	IE	PC	LS	Math	HG	Fr	Ar
Father's educational level	<i>P</i>	0.561	0.907	0.908	0.144	0.342	0.447	0.97	0.818	0.443
	η^2	0.004	0.001	0.001	0.010	0.006	0.005	0.000	0.002	0.005
Father's job	<i>P</i>	0.150	0.398	0.136	0.209	0.402	0.040	0.669	0.077	0.109
	η^2	0.015	0.009	0.015	0.013	0.009	0.021	0.006	0.018	0.016
Mother's educational level	<i>P</i>	0.023	0.936	0.008	0.191	0.271	0.108	0.023	0.038	0.119
	η^2	0.014	0.000	0.018	0.006	0.005	0.008	0.014	0.012	0.008
Mother's job	<i>P</i>	0.146	0.407	0.602	0.107	0.660	0.099	0.180	0.092	0.822
	η^2	0.010	0.005	0.003	0.011	0.003	0.011	0.009	0.012	0.002

η^2 : Eta-squared partial, *p*: significant, *x*: interaction factors.

TABLE 6: Effect of parents' job x their educational level on student's academic outcomes.

Parameters	Significant	General average	PSE	IE	PC	LS	Math	HG	Fr	Ar
Father's educational level x father's job	<i>P</i>	0.000	0.595	0.469	0.000	0.015	0.368	0.403	0.857	0.093
	η^2	0.036	0.023	0.026	0.078	0.051	0.029	0.028	0.017	0.040
Father's educational level x mother's educational level	<i>P</i>	0.960	0.300	0.730	0.122	0.720	0.992	0.571	0.278	0.571
	η^2	0.003	0.013	0.007	0.018	0.007	0.001	0.009	0.013	0.009
Father's educational level x mother's job	<i>P</i>	0.284	0.312	0.310	0.691	0.088	0.962	0.326	0.283	0.074
	η^2	0.019	0.019	0.019	0.012	0.027	0.005	0.018	0.019	0.028
Father's job x mother's educational level	<i>P</i>	0.608	0.205	0.094	0.242	0.364	0.231	0.612	0.432	0.645
	η^2	0.011	0.020	0.024	0.019	0.016	0.019	0.011	0.014	0.011
Father's job x mother's job	<i>P</i>	0.306	0.369	0.912	0.027	0.173	0.522	0.655	0.391	0.577
	η^2	0.030	0.029	0.015	0.048	0.035	0.025	0.022	0.028	0.024
Mother's educational level x mother's job	<i>P</i>	0.088	0.689	0.132	0.421	0.210	0.094	0.168	0.039	0.429
	η^2	0.020	0.007	0.018	0.011	0.015	0.019	0.016	0.024	0.011

η^2 : Eta-squared partial, *p*: significant, *x*: interaction factors.

TABLE 7: Effect of parents' job x their educational level on student's academic outcomes (suite).

Parameters	Significant	General average	PSE	IE	PC	LS	Math	HG	Fr	Ar
Father's educational level x father's job x mother's educational level	<i>P</i>	0.227	0.453	0.654	0.001	0.021	0.343	0.479	0.506	0.426
	η^2	0.029	0.023	0.019	0.058	0.045	0.026	0.022	0.022	0.024
Father's educational level x mother's educational level x mother's job	<i>P</i>	0.149	0.159	0.666	0.007	0.346	0.099	0.063	0.948	0.171
	η^2	0.050	0.050	0.033	0.072	0.042	0.054	0.057	0.022	0.049
Father's educational level x father's job x mother's educational level x mother's job	<i>P</i>	0.378	0.282	0.605	0.438	0.527	0.319	0.789	0.670	0.224
	η^2	0.010	0.011	0.007	0.009	0.008	0.011	0.004	0.006	0.013

η^2 : Eta-squared partial, *p*: significant, *x*: interaction factors.

- (2) Effect of gender on academic achievement: it is remarkable that the effects between some academic achievements and gender (Table 4) are positive, highly significant with French and Islamic education ($p = 0.000$), Arabic and history geography ($p = 0.001$), and significant with GPA ($p = 0.003$) and physical education and sports ($p = 0.014$). Regarding the strength of the η^2 effect, it is small and varies between (0.009 to 0.030). However, gender has no significant effect with physics-chemistry ($p = 0.772$) life and Earth sciences ($p = 0.881 > 0.005$), and mathematics ($p = 0.259 > 0.005$).
- (3) Effect of family rank x gender on academic achievement: family rank x gender effects had no

significant effect with school averages ($p = 0.981$ to $0.365 > 0.005$) (Table 4).

4.3. Effect of Parental Levels and Functions on Academic Achievement

- (1) Effect of father's grade level on academic achievement: analysis of variance (MANOVA,) shows that there is no significant effect between father's grade and academic achievement ($p = 0.14$ to 0.976) $> .005$ and the effect of height η^2 varies between 0.01 and 0.07.
- (2) Effect of father's job on academic achievement: in relation to father's job and school grades (Table 5), there is a significant and positive effect with

- mathematics ($p = 0.040$) and a weak effect strength $\eta^2 = .021$. But it has no significant effect with other school grades ($p = 0.136$ to $0.669 > 0.005$).
- (3) Effect of mother's grade on academic achievement: the mother's school level shows a highly significant and positive effect with Islamic education ($p = 0.008$), history geography ($p = 0.023$) with a low η^2 partial square state (0.18 and 0.14). However, we noticed that there is not a significant effect with other school grades ($p = 0.191$ to $.93 > 0.005$) (Table 5).
 - (4) Effect of mother's job on academic achievement: the results for the effect between mother's occupation and school averages were not significant ($p = 0.107$ to $0.882 > 0.005$) (Table 5).
 - (1) Effect of father's grade \times father's job on academic achievement: in relation to father's school level \times father's job, there is a highly significant, positive effect on physics-chemistry grades and GPA ($p = 0.00$) with a low partial square state ($\eta^2 = 0.078$ to 0.036) and highly significant, life and Earth sciences ($p = 0.015$) with a low partial square state ($\eta^2 = 0.051$). Nonetheless, they maintain no significant effect with the remaining academic grades.
 - (2) Effect of father's grade level \times mother's grade level on academic achievement: it showed (Table 6) no significant effect with academic achievement ($p = 0.122$ to 0.992).
 - (3) Effect of father's grade level \times mother's job on academic achievement: it had no significant effect with school averages ($p = 0.074$ to 0.962) (Table 6).
 - (4) Effect of father's occupation \times mother's grade level on academic achievement: this effect (Table 6) did not have a significant relationship with academic achievement ($p = 0.074$ to 0.645).
 - (5) Effect of father job \times mother job on academic achievement: father occupation \times mother occupation showed a significant and positive effect ($p = 0.027$) with a small effect size $\eta^2 = 0.048$ (Table 6). Nevertheless, there was no significant relationship found in the other subjects
 - (6) Effect of mother's job \times mother's grade on academic achievement: it maintains a significant and positive effect with French ($p = 0.039$) with a weak partial square state ($\eta^2 = 0.024$), but there is no significant relationship with the other school averages (Table 6).
 - (1) Effect of father's educational level \times father's job \times mother's educational level on academic achievement: this effect is highly significant and positive at the physics-chemistry level ($p = 0.001$) with a low partial square state of ($\eta^2 = 0.058$) and no relationship is found at the other academic grades.
 - (2) Effect of father's level \times mother's job \times mother's grade on academic achievement: it is not significant in all academic outcomes (Table 7).
 - (3) Effect of father's grade \times father's job \times mother's grade \times mother's job on academic achievement: it shows no significant effect (Table 7).
- 4.4. *Effect of Gender and Grade Level on Academic Achievement.* Table 8 presents the effect of grade level on school grades. It is remarkable that gender presents a highly significant and positive effect in physical and sports education, Islamic education and French ($p = 0.00$) with a small effect size varying between $\eta^2 = .0018$ and 0.070 and significance of ($p = 0.030$) of a small effect size ($\eta^2 = .07$) (Table 8).
- For other subjects, they have no significant relationship with academic grades. Class shows highly significant and positive effects with all academic grades ($p = 0.000$), and a weak partial square state range from $\eta^2 = .277$ to 0.088 (Table 8).
- Gender \times class scores show a highly significant, positive effect with physical education and sports of ($p = 0.00$) and a size effect of $\eta^2 = .072$ (Table 8).
- 4.5. *Effect of Class Repetition, Review Assistance, and Extracurricular Activities on Academic Achievement.* Table 9 presents the effect of grade level on school grades. It is remarkable that gender presents a highly significant and positive effect in physical and sports education, Islamic education, and French ($p = 0.00$) with a small effect size varying between $\eta^2 = 0.018$ and 0.070 and significance of ($p = 0.030$) of a small effect size ($\eta^2 = .07$) (Table 9).
- (1) Effect of revision assistance on academic grades: this effect has a highly significant, positive relationship on physical education and sports ($p = 0.00$) with a weak partial square condition ($\eta^2 = 0.052$). The other subjects have no significant effect (Table 9).
 - (2) Effect of repetition on academic grades: repetition maintains highly significant, positive effects with all academic subjects ($p = 0.000$) and a small effect size varies ($\eta^2 = 0.029$ to 0.120). For the other grades, they show no significant effect (Table 9).
 - (3) Effect of extracurricular activities on academic grades: the results of this effect hold a significant, positive relationship with physics-chemistry ($p = 0.030$) with a small effect size $\eta^2 = 0.07$ (Table 9).
 - (4) Effect of review assistance \times repetition on academic grades: revision aid \times repetition show highly significant, positive effects compared to that with physical education and sports ($p = 0.000$) and weak partial square state $\eta^2 = 0.062$ (Table 9).
 - (5) Effect of revision assistance \times extracurricular activities on academic grades: they maintain significant effects with physical education and sports ($p = 0.011$) and physics-chemistry ($p = 0.036$) with a small effect size of ($\eta^2 = 0.06$ to 0.09). The other grades had no significant effect (Table 9).

TABLE 8: Interaction of gender and class effects on educational outcomes (MANOVA I, II, and III).

		General average	PSE	IE	PC	LS	Math	HG	Fr	Ar
Gender	<i>P</i>	0.030	0.000	0.000	0.563	0.491	0.487	1	0.000	8
	η^2	0.070	0.041	0.032	0.000	1	1	0.017	0.018	0.01
Class	<i>P</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	η^2	0.126	0.094	0.112	0.225	0.169	0.088	0.140	0.265	0.277
Gender \times class	<i>P</i>	0.319	0.000	0.263	0.371	0.728	0.696	0.550	0.333	0.431
	η^2	9	0.072	9	8	4	4	6	8	7

η^2 : Eta-squared partial, *p*: significant, *x*: interaction factors.

TABLE 9: Interaction of the effects of review assistance, class repetition, and extracurricular activity on academic achievement (MANOVA I, II, and III).

		General average	PSE	IE	PC	LS	Math	HG	Fr	Ar
Review assistance	<i>P</i>	0.842	0.000	0.300	6	0.010	0.963	0.443	0.255	0.183
	η^2	1	0.052	5	0.018	0.017	0	4	6	7
Class repetition	<i>P</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	η^2	0.120	0.080	0.063	0.083	0.104	0.053	0.043	0.029	0.056
Extracurricular activity	<i>P</i>	0.579	1	0.426	0.030	0.298	0.816	0.418	0.125	0.349
	η^2	0.000	0.015	1	7	2	0.000	1	3	1
Review assistance * class repetition	<i>P</i>	0.723	0.000	0.118	0.069	0.062	0.624	0.996	0.229	0.111
	η^2	2	0.062	9	0.010	0.011	3	0.000	6	9
Review assistance * extracurricular activity	<i>P</i>	0.515	0.000	0.771	0.010	0.219	0.642	0.937	0.598	0.835
	η^2	3	0.069	2	0.017	7	2	1	3	1
Class repetition * extracurricular activity	<i>P</i>	0.153	0.011	0.338	0.036	0.290	0.452	0.674	0.573	0.943
	η^2	3	9	1	6	2	1	0.000	0.000	0.000
Review assistance * class repetition * extracurricular activity	<i>P</i>	0.969	0.000	0.895	0.126	0.433	0.969	0.725	0.446	0.402
	η^2	0.000	0.068	1	8	4	0.000	2	4	4

R-two = .243 (adjusted *R*-two = .227), η^2 : Eta-squared partial, *p*: significant, *x*: interaction factors.

- (6) Effect of review assistance \times repetition \times extracurricular activities on academic grades: this effect has a highly significant effect with physical education and sports of ($p = 0.000$) with a size effect of $\eta^2 = 0.068$. The others have no significant relationship (Table 9).

5. Discussion

This section shows the discussion of results obtained to answer the core question of this study that this articulated as the following: to what extent do socio-familial characteristics, gender, class repetition, and extracurricular activities grade repetition have a significant effect on academic achievement.

The findings from the effect of socio-familial characteristics showed that they have partially significant relationships with school grades with a weak effect. Some have a significant effect, namely, gender with French, Islamic education, Arabic, and history geography as well as physical education and sports grades. Others have no significant effect with the school results like mother’s occupation, family rank \times gender, etc.

This is consistent with what is shown in the literature. Family dimensions and their effects on educational outcomes can be traced in different approaches such as those [22]. More specifically, beginning in the 1960s, some studies have focused on the relationship between student

achievement and social disparity [23]. In addition, family size is another variable that has been shown to have explanatory potential with educational outcomes. Most studies confirm that as the number of family members increases, children’s academic performance deteriorates [24].

Parental education is an important predictor of school success. Along with family income and parental occupation, parental education is a central variable in the structuring of social class. Studies have shown that low-income parents have children who consistently perform poorly on the PISA test, regardless of country origin within the OECD [21]. Statistically, PISA report [17] published in 2007 concludes that the difference in academic achievement between families with basic education and families with university education is about 85 points. In Spain, this difference increased to 100 points in 2009.

It can be also related to socioeconomic background as mentioned in some studies [25, 26]. Children growing up in low-income families tend to deal with difficult situations that impact their academic achievement [27]. The influence of family income is more notable in the early years of childhood than in adolescence [28].

Unlike our results, previous research has suggested that girls generally do better in school than boys in secondary, who in particular develop gender stereotypes and perceived as academically superior in motivation, ability, performance, and self-regulation [29].

However, studies suggest that socioeconomic status effect is not as strong once one controls for other variables correlated with family income, such as parental education, cultural capital, or the degree of support that parents provide to their children [25]. Similarly, students are socialized within their families and therefore family characteristics influence the students' motivation development and academic achievement [24]. Research attests the importance of process-related family characteristics as predictors of student academic outcomes [30, 31].

Regarding to parents' educational level, student's academic success is more ensured when the family practice is based on a universal authority model since this model takes as reference the general normativity and the idea of self-control and child autonomy. This model was found both in families with a high level of education and who shared school values [19, 32]. According to a study [33], the effect of family structure was not as significant when controlling for variables such as income or in the case of separated families. The main conclusion is that, under equal economic conditions and parental devotion, family structure does not explain the divergence in educational outcomes.

In some studies, boys outperform girls in terms of mathematics achievement; in others, no gender differences were found [34]. For example, research [35] argued that the mixed evidence of gender differences in academic achievement could be explained in part by higher variance in academic results.

The second part of the results concerns the impact of class repetition, revision assistance, and extracurricular activities on academic achievement. They have highly substantial and significant effects on some academic subject scores, such as revision assistance in physical education and sports, extracurricular activities practice in physics-chemistry, and so on, with a weak partial square condition. Following a debate over the value of extracurricular activities in education, papers [36, 37] corroborated this. When faced with limited resources, a growing number of teachers and school officials are prioritizing academics above extracurricular activities, reducing or eliminating them entirely.

Extensive studies designed to specifically examine the relationship between extracurricular activities and academic achievement have led to an increase in research conducted by students and teacher-practitioners [38, 39], as well as studies conducted outside the United States [40,41]. These studies, conducted in a variety of elementary and secondary school settings, support the theory that academic achievement may be related at some level to participation in extracurricular activities, although the exact nature of this relationship is unclear. Patall et al. [42] concluded that the overall effect of parental involvement in homework was small and often not significant.

In addition to this, in a study of 363 students at equal risk of repeating the first grade, Moser et al. [43] claimed that being made to repeat a grade protected students from repeating subsequent grades. This finding was corroborated by results from Florida's test-based promotion policy, which involved students who outperformed their promoted peers in reading and math for several years after repeating the

third grade and were also less likely to be retained in subsequent years [44].

Nonetheless, a study of 52 junior high school students [42] showed that students who spend time in activities such as community services have higher academic performance than students who are interested in other areas such as music. Reeves [45] conducted a similar survey of about 2,000 high school students but found that the academic impact of extracurricular activities was related to the number of extracurricular activities in which the students participated, not the type. These results are supported by Jansen [39] and McLaren [40]. According to their study, the number of hours of extracurricular activities a student participates in is positively correlated with the average grade score (as a function of the number of hours). McNeil [46] found a positive link between parental controls and children's performance. However, this effect was seen in the middle class. The problem is that different types of management have the same impact on academic performance, as managing children's homework is related to cultural capital and does not necessarily help them complete.

Tingle et al. [47] conducted a study on the impact of grade retention on learners' academic outcomes. In this study, they examined the characteristics and consequences of student retention in elementary and middle school classrooms. Based on the results of the study, they concluded that while grade retention is a popular method of academic intervention, it does not guarantee positive outcomes. They believe that there is a need to identify and use research-based educational interventions to provide remediation for struggling students. This study combined elementary and upper elementary students, while the current study focused specifically on lower elementary students.

From a psychological point of view, studies were conducted to analyze differences in student achievement, motivation, and self-related variables based on student performance retention [48]. After examining all categories of repetitive learners, past or recent repetitive experiences and effects have been found to leave these learners with significant psychological scars that undermine their achievements and social and emotional well-being, etc. Despite these apparently negative findings of repetition, this practice continues to be a popular reaction to poor school performance in many countries.

Certainly, the act of teaching remains a complex process requiring the intervention of several factors in order to lead students to develop the necessary skills. The results obtained constitute a step towards a more in-depth vision on the part of all the actors in the Moroccan educational system. We note that the intervention of parents plays an important role in academic life and also complements the school to give a profile of informed and effective students. In addition, the psychosocial dimension seems to be a factor to be taken into consideration for an effective and relevant pedagogical intervention. The student is an entity with a fragile character and goes through sensitive periods on the physiological and psychological level, which gives more interest to the accompaniment and coaching to bring out the best in him and consequently positive academic results.

5.1. Recommendations. In light of this study, some recommendations seem to be mentioned as follows: giving more importance to parent's practices and attitudes and implement a parent's supporting system for a regular accompaniment, providing teachers with updated studies about psychological consequences of student's class repetition so they can treat them well. There is a need for further research on neuro-educational attributes of Moroccan student in order to appreciate the gender effect on academic achievement. Researchers are encouraged to broaden the research according to geographical location in the same territory to identify the cultural parameter that seems to have more attention.

As for the implications, teachers can be more aware about student's academic behavior, needs, and problems that impact their school results. In addition, the role of the class councils and their activation in student's school life is primordial in terms of identifying or proposing practical solutions that can help him to learn in better conditions, which was recommended in the strategic vision 2015–2030 (a state-led project to reform the Moroccan education system) [49].

Our study's limitations appear to have been mentioned: from a statistical standpoint, it was likable to work in numerous contexts rather than focusing on one in particular (the case of the provincial directorate of Mediouna for our study), in order to give more reliability to our sample and prevent selection bias. We may then expand it to include primary school and university students. The authors used a self-designed questionnaire, which is a major limitation in this research [50].

Data Availability

The data presented in this study are available on request from the corresponding author. The data are not publicly available due to confidential reasons.

Conflicts of Interest

The authors declare no conflicts of interest.

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