Private Tutoring and Internet Use Case of Moroccan Pupils in Qualifying Secondary Education in Urban Area

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Abstract: Worldwide, tutoring is increasingly being developed, and students are using it to improve their academic success. Some of them use private tutoring, and others use websites. In this study, we question the perception of Moroccan pupils of the secondary education (private educational institutions and public-school system) concerning private tutoring, their reasons for using it and the number of weekly hours dedicated to tutoring. We are also interested in their use of the Internet for tutoring, and we collect the students’ preferences about the desired form of tutoring. We publish in this study, achieved in 2016, the results obtained from the exploitation of the answers of the pupils to a questionnaire, as well as their interpretation.

Keywords: private tutoring, need for tutoring, academic success, use of the Internet

I. Introduction


According to Bray (2011) [5], "private tutoring is deeply rooted in the culture of many countries. [...] At the beginning of the 21st century, it has become established in Eastern Europe and Central Asia and has become increasingly important in Western Europe, North America, Australsia and Africa".

Private tutoring is becoming more and more important in school life, and online tutoring is a trend that is taking hold in Morocco as well as in different countries. Several difficulties mark the learning path of high school students, which leads them to use different forms of tutoring to overcome them. Many students use private tutoring, which has grown significantly in recent years. Other students use the online tutoring.

Our study attempts to question the Moroccan secondary education students’ conception of tutoring in general and private tutoring in particular. We also try to identify students' interest in Internet-based tutoring. We therefore ask ourselves the following questions:

- Is there a real need for tutoring for Moroccan students?
- Why and to what extent do they use private tutoring?
- Do Moroccan students use the Internet for tutoring, and to what extent?

This study was carried out during 2016. The process was started by several interviews with the students, which allowed us to then develop a questionnaire concerning the need and the recourse to the tutoring of the learners.

According to the GLASMAN definition (2004) [6], private lessons are courses "given for a fee, outside school hours, in the academic disciplines that students learn at school". They are given "by providers who can be teachers or students, doing it individually or as part of a commercial structure that remunerates them or puts them in touch with customers". These courses are given individually, or to small groups of students, at the home of the pupil or provider, or at the premises of a specialized company.

There are different understandings of what private tutoring covers. It is most commonly defined as the “extra coaching in academic and examinable subjects that is given to students outside school hours for remuneration” (Foondun, 2002) [7]. Tansel and Bircan (2006) [8] define private tutoring as "the education..."
outside the formal schooling system where the tutor teaches particular subject(s) in exchange for a financial gain."

The most common form for Moroccan students is that of private classes, commonly called "overtime" or simply "hours". This is what we call "private tutoring" throughout our study.

II. Methods

2.1 Sample chosen, size and characteristics

The target population consists of Moroccan qualifying high school students in urban areas. We are targeting both public and private education. We did not take literary pupils from private education in our sample, since they represent only 6.2% of all students enrolled in private qualifying secondary education, which itself represents only 8.8% of all students enrolled in Moroccan qualifying secondary education - both public and private (Recueil Statistique de l’Education 2015 - 2016. [9]).

We opted for random sampling. For this, we determined the size of the sample to be taken at a 95% confidence level (coefficient z = 1.96 according to the normal centered reduced law), with a proportion p = 0.5 and a margin of error m = 0.06 (6%) [10]. We obtained a sample size of 267. We finally worked on a sample of 297 students in urban areas. Our sample has the following characteristics:

- Level: qualifying secondary.
- Environment: Urban.
- Number of questioned: 297.
- Gender of respondents: 48.5% boys, 51.5% girls.

The table 1 shows the sample size according to education type:

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private education</td>
<td>73</td>
</tr>
<tr>
<td>Public education</td>
<td>224</td>
</tr>
<tr>
<td>Total</td>
<td>297</td>
</tr>
</tbody>
</table>

The global distribution is as follows:

Table 2: Global distribution

<table>
<thead>
<tr>
<th>Common Core Science</th>
<th>1st Year Letters and Human Sciences</th>
<th>1st Year Experimental Sciences</th>
<th>2nd Year Physical Sciences</th>
<th>2nd Year Letters and Human Sciences</th>
<th>2nd Year Mathematics Sciences</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private education</td>
<td>24</td>
<td>16</td>
<td>15</td>
<td>18</td>
<td>18</td>
<td>73</td>
</tr>
<tr>
<td>Public education</td>
<td>45</td>
<td>52</td>
<td>33</td>
<td>30</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>52</td>
<td>49</td>
<td>45</td>
<td>12</td>
<td>224</td>
</tr>
</tbody>
</table>

The scientific / literary distribution is as follows:

Table 3: Literary/Scientific

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literary</td>
<td>82</td>
</tr>
<tr>
<td>Scientific</td>
<td>215</td>
</tr>
<tr>
<td>Total</td>
<td>297</td>
</tr>
</tbody>
</table>

2.2 Questionnaire description

Before administering the questionnaire, we conducted a pre-test to collect data from a few high school students so that we could examine the quality of the questionnaire, improve it, and validate it.

The questionnaire was presented in Arabic. It consists of an introduction, followed by information on gender, education (public or private), grade level, and students’ specialization. The body of the questionnaire consists of 11 questions. We presented the responses on the Likert scale for the following questions: 1, 3 and 6. We will detail the questions when presenting the results, and present in this article the prominent results obtained in this study.

III. Results and discussion

3.1 Necessity of tutoring

It is a closed, single-choice question about the need for tutoring. We asked students to indicate the degree of need for tutoring among the following four modalities: unnecessary, relatively necessary, necessary, and strongly necessary. The following figure shows the obtained results:
The percentage of respondents estimating that tutoring was unnecessary is only 5%, while 94% consider it necessary (from relatively necessary to strongly necessary). We can therefore say that tutoring is felt as a necessity for the majority of students surveyed.

3.2 Reasons for recourse to tutoring

The second question is a multiple closed question, where the student can choose multiple answers among 9 modalities. This is to try to identify the reasons why students use tutoring. The results are grouped in the following figure (the sum of the percentages is not equal to 100 because of the multiple responses).

The most important reason is "better assimilate courses," chosen by nearly 59% of students. The following choices focus on the need to "overcome the lack of work at home" chosen by 43% and the need to "learn the methodology of work" chosen by 42%.

The first and second choices question Moroccan education: why do not students manage to assimilate their courses and work methodically?

3 – 3 – Help for academic success?

The third question is a unique closed question asking students if they think that tutoring promotes academic success and where they must choose between 3 modalities: No - Relatively - Yes. The results are shown in the following figure:
A large proportion of surveyed students (97%) think that tutoring promotes academic success (49% for "relatively" and 48% for "yes").

3 – 4 – **Number of courses in which the student takes private courses**

This question is a unique closed question where the student must indicate the number of subjects in which he/she takes private tutoring (from 1 to 10). Considering both the answers to this question and the next one (relating to the number of weekly hours devoted to tutoring), we obtain the following results:

The answers to this question show that more than a quarter of the students in our sample (27%) take private tutoring classes in 2 subjects, and 20% take them in 3 subjects. Only 15% of students say they do not use tutoring (0 subjects).

We will then compare the results for "promoting academic success" and those for "the number of subjects in which the student uses academic support". We get the following table:
Among the 4 students who answered "No" to the question "did tutoring promotes academic success?" Only one opted for the answer "0 subject of academic support" and another did not answer the question on "Number of subjects where he uses private tutoring".

Of the 288 students who chose the "relatively" or "yes" choices in response to the question "Did tutoring promotes academic success?", which are respectively 146 and 142, 40 students have chosen "0 subject of private tutoring" in spite of their choice concerning question "does tutoring help students to have better academic results?". This could probably be explained by a lack of material resources.

3 – 5 – Number of weekly hours of private tutoring

The fifth question is an open numerical question about the number of weekly hours spent by students on tutoring. Regarding this question, we only consider respondents who answered both the question about the number of private tutoring subjects and the number of hours of tutoring.

According to figure 5, 85% of students use private tutoring, students in private education more than those in public education (89% vs. 83% respectively), and among these, literary students less than scientific (75% versus 87% respectively).

![Figure 5: Percentage of students taking private tutoring, in weekly hours](image)

Among students using private tutoring, the average weekly hours devoted to tutoring are as follows:

**Table 5: Average weekly hours devoted to private tutoring**

<table>
<thead>
<tr>
<th>Private + Public education</th>
<th>Private education</th>
<th>Public education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Literary +Scientific</td>
</tr>
<tr>
<td>6,3</td>
<td>7,8</td>
<td>5,7</td>
</tr>
</tbody>
</table>
The following facts should be emphasized:

- The overall weekly average of tutoring hours for the ensemble is 6.3 hours / week, which is important.
- The average weekly hours of tutoring is higher in private education (7.8 hours / week) than in public education as a whole (5.7 hours / week);
- The average weekly hours of tutoring is higher (7.8 hours / week) for students in private education (a sample made up entirely of science students) than for science students in public education (6.0 h / week);
- The average weekly hours of tutoring is higher for science students in public education (6.0 hours / week) than for literary students in public education (5.2 hours / week).

These results show that a high percentage of the respondents benefit from tutoring, with a significant number of weekly hours. They push us to ask ourselves several questions:

1. Why do students in private schools, whose parents pay for schooling, use tutoring? Should the education provided in private institutions not be sufficient for the instruction of their pupils?
2. Don’t these results reflect the malaise of Moroccan education? Because such a massive use of paid tutoring doesn’t question the quality of the Moroccan education system?

These results, of course, concern students in urban areas, where tutoring is generally more developed than in rural areas, but nevertheless they are more than worrying.

3 – 6 – Internet recourse for tutoring

The sixth question is a single, bimodal closed question about Internet use for tutoring needs (yes-no). The counting of the answers gave the following results.

3 – 6 – 1 - Percentage of students using the Internet

We calculate without considering students who did not answer question 6 (Internet use for tutoring) and / or question 9 (number of hours of Internet tutoring). Figure 6 shows the results obtained.

![Figure 6: Percentage of internet use by type of education](image)

Overall, 65% of students say they use online tutoring, compared with 35% who say they do not use it. The use of the Internet is more important for students in private schools than for those in public schools (73% vs. 62% respectively), and among these, less for literary than for scientific students (respectively 54% against 68%).

3 – 6 – 2 - Internet use by grade level

In this section, we try to determine the percentage of recourse to academic tutoring by Internet according to the grade level: common curriculum (tronc commun) in the first year of secondary studies, 1st year of the Baccalaureate and 2nd year of the baccalaureate. Calculations were made based on respondents to both questions 6 and 9. The results are shown in the following figure:
Comparing the results, we note that the use of tutoring by Internet is higher in private education than in public education, and that overall, this recourse is accentuated in 2nd year of the baccalaureate (about 70% of students overall).

### 3 – 7 – Preference of sites or forums

The seventh question is a semi-open, multiple-response question in which the student is asked to indicate whether he or she accesses sites, forums and/or others and cites them. This question allows us to know the preferences of students when using the Internet: access to support sites, forums or other. The following figure shows the results obtained:

Two-thirds of students (67%) use only tutoring sites, 18% visit sites and forums, and only 8% attend forums. 4% of students use other resources such as YouTube. The biggest trend is the use of sites.

### 3 – 8 – Type of content

The eighth question is a single closed question: the student is asked to indicate the type of content to which he has access when using the Internet among 3 modalities: Courses - Exercises - Both at once. The results obtained are grouped in the following figure:
Almost two-thirds of students (65%) use both courses and exercises, 19% access exercises only, and 16% access courses only. Students are looking for both courses and exercises on the Internet. Of course, it remains to be seen whether these courses and exercises really meet their needs.

3 – 9 – **Number of weekly hours of internet tutoring**

The ninth question is an open numerical question: the student is asked to indicate the number of weekly hours dedicated to tutoring on the Internet. We are first interested in the percentage of students (among the respondents) using Internet-based tutoring. We perform the calculation by ignoring students who did not answer question 6 and / or question 9 and classifying them by weekly hours.

According to figure 10, 65% of students use Internet-based tutoring, students in private schools more than those in public education (73% vs. 62% respectively), and among these, literary less than scientific (respectively 54% against 68%). More than a quarter of the students surveyed use Internet-based tutoring (between 25% and 29% depending on the type of education) four or more hours per week. Between 29% and 47% of the students surveyed use Internet-based tutoring less than four hours per week.

Students using online tutoring reported an answer ranging from 1 hour to 12 hours per week. The averages of dedicated weekly hours are as follows:

<table>
<thead>
<tr>
<th>Table 6: Average weekly hours devoted to online tutoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private + Public education</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>3.9</td>
</tr>
</tbody>
</table>
The following facts should be emphasized:

- The overall weekly average of online tutoring hours for the ensemble is 3.9 hours / week.
- The average weekly hours is lower in private education (3.5 hours / week) than in public education as a whole (4.1 hours / week);
- The average weekly hours is lower for students in private schools (sample made up entirely of science students, 3.5 hours / week) than for students in public education (4.0 hours / week);
- The average weekly hours is lower for scientific students in public education (4.0 hours / week) than for literary students in public education (4.3 hours / week).

These results show that a high percentage of respondents use Internet-based tutoring, with a weekly volume of about 4 hours on average. This leads us to ask the same questions as those in paragraphs 3-5, which question the quality of the Moroccan education system.

### Table 7: Average weekly overall hours of tutoring (private + online)

<table>
<thead>
<tr>
<th>Private + Public education</th>
<th>Private education</th>
<th>Public education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literary +Scientific</td>
<td>8.2</td>
<td>7.0</td>
</tr>
<tr>
<td>Literary</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Scientific</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Private + Public education</td>
<td>9.9</td>
<td>8.7</td>
</tr>
<tr>
<td>Literary</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Scientific</td>
<td>11%</td>
<td></td>
</tr>
</tbody>
</table>

According to this figure, 90% of students use tutoring (private and / or via the Internet), students in private education more than those in public education (96% vs. 88% respectively), and the latter literary almost as much as scientists (respectively 88% against 89%).

These figures show the intensive use of tutoring by students. On average, nearly 80% of students attend at least 4 hours of tutoring (private and / or Internet) per week.

The overall averages of weekly hours dedicated to tutoring are as follows:

Overall, the use of tutoring is more important for students in private education than for those in public education (respectively 9.9 hours / week against 8.2 hours / week).

We also note that the number of weekly hours of tutoring (private and public education combined) is around 9 hours / week, which is almost 2 hours / day 5 days / week, which is high.
3 -11- Comparison with other countries

An official study cited by Sobhy (2012, p.49) [11] revealed that in Egypt 81% of households had children receiving private tutoring at secondary level, while 69% had primary tutoring and in middle school (74% in middle school and 50% in elementary school).

In Jordan, studies show that in the final year of secondary education (grade 12), the scientific sector has the highest demand for private support (84%), followed by the literary branch (78%) and other programs (38%). This distribution shows the crucial importance of the 12th year as a point of transition to higher education and other life opportunities for parents and students (Ali 2013, p.112) [12].

In the United Arab Emirates, when asked about their experiences with private tutoring, 66% of students reported using private tutoring during their last year of high school, for one or more subjects. In the previous year, only 53% of students surveyed reported having taken courses in one or more previous years (Farah 2011, p.2) [13].

Regarding Canada, Aurini and Davies (2013, p.157) [14] reported that 33% of Canadian parents paid extra education to their children, and 21% of 9-year-olds received private support.

In England and Wales, in 2009, 40% of London's youth reported taking private lessons, compared with an average of 17% in the rest of the country. In 2014, this gap narrowed slightly but remained significant (37% versus 20%). This survey highlights the gap between London and the rest of the country (Sutton Trust 2014, p.2) [15].

In Tunisia, a particularly high number of secondary students, rather than following the courses offered by the schools, prefer to follow courses outside of any school context: 70% of students in the country attend classes outside school, and 54 % of future high school graduates take private lessons from teachers in their school (OCDE, 2013, p.170) [16].

The use of private tutoring in Morocco (85% of students in our study - in urban areas) is at the height of Egypt (81%) and Jordan (nearly 80%), and more important than Tunisia (70%) and the United Arab Emirates (66%). Canada (33%) and England and Wales combined (between 20% and 37% depending on the region) are far behind.

3 – 12 – Preferences concerning tutoring

The tenth question is a multiple closed question about students' preferences about the type of tutoring, among four modalities: in the current form (private tutoring), free in high school by your own teachers, free in high school by other teachers and / or the Internet.

To simplify the different choices, we used the symbols presented in the following table:

<table>
<thead>
<tr>
<th>Choice</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the current form (private tutoring)</td>
<td>CF</td>
</tr>
<tr>
<td>Free in high school by your own teachers</td>
<td>FOWT</td>
</tr>
<tr>
<td>Free in high school by other teachers</td>
<td>FOTT</td>
</tr>
<tr>
<td>Online</td>
<td>OL</td>
</tr>
<tr>
<td>No response</td>
<td>NR</td>
</tr>
</tbody>
</table>

The different choices were as follows, as shown in the following figure:

Figure 12 shows that 43% of the students surveyed would prefer free tutoring in their school, provided
by their own teachers. Similarly, 28% of them would prefer free tutoring in their school, by other teachers, and 15% chose tutoring over the Internet (only or in other forms).

Note nevertheless that 5% of the pupils questioned would opt for the current form (private tutoring).

3 – 13 – Miscellaneous proposals of students
The eleventh question is an open question where we collect students’ suggestions about tutoring. We mention those who came back most often:

- Strengthen and generalize tutoring within the school itself and increase the number of hours dedicated to this purpose.
- Have students benefit from tutoring by their own teachers or other teachers from the same high school, but in their own school.
- Book Saturdays for tutoring in high school.
- Make tutoring during the holidays and make it compulsory.
- Use the Internet for high tutoring.
- Use tools and developed techniques for tutoring.
- Decrease the number of students in the classroom.

IV. Conclusions

Tutoring has become an "almost normal" phenomenon in Morocco. Our study shows that 94% of students surveyed believe that tutoring is a necessity, 97% think it is a way to improve their performance in class, and 85% of them take private tutoring classes (paid). This places Morocco almost at the same level as Egypt and Jordan, but with a greater use than Tunisia or other western countries like Canada and England which are far behind.

The reasons given for this intensive use of tutoring are mainly "better assimilate the courses", "compensate the lack of work at home" and "learn the methodology of study". Pupils take private lessons in one to five subjects (15% vs. 7% respectively), and 65% of them use the Internet for tutoring, focusing in both courses and exercises.

The weekly average of hours dedicated to tutoring (paid + Internet use) is about 9 hours a week, which is about 2 hours a day 5 times a week. This average is higher in private education than in public education. In addition, the students surveyed are looking for tutoring support with a preference for free support provided in their school, either by their own teachers or by other teachers.

In view of these results, which show the massive use by the questioned students of private tutoring (paid), we ask ourselves several questions among which:

- What prevents them from learning effectively in high school in regular classes?
- What prevents them from working alone at home?
- Why do private school students attend private tutoring classes (paid) more than students in public schools?
- Have “overtime” become “the necessary evil to survive” in high school?
- Are teachers doing their job properly? Are curricula and programs involved?
- Should we institutionalize (by providing the necessary means) and generalize tutoring in public secondary schools?
- Could using the Internet help institutional tutoring?

The aforementioned results challenge the actors of the Moroccan education system and are quite the opposite of those expected by Moroccan decision makers, despite the implementation of the National Charter of Education and Training (CNEF, 1999)[1], the GENIE program (launched in 2006) [17], the Emergency Program for the period 2009 – 2012 [2], the National Report EFA (School for All, 2011)[3] and more recently, the Strategic Vision of the Reform 2015-2030 [4], elaborated by the Higher Council of Education.

Moreover, the disappointing results of Moroccan students at TIMSS 2015 (International Survey , Trends in Mathematics and Science Study) [18] place Morocco below the international average (500 points). For middle school students (grade 8), the math score of 384 points ranks Morocco in 37th place among the 39 participating countries. The science score (for the same level) of 393 points places the country in 36th place among the 39 participating countries.

Finally, the results of this study are trends that reflect students' concerns about ways to improve their academic performance. They still lead us to ask questions about institutional tutoring in Morocco, and the potential use of the Internet for tutoring by the Moroccan education authorities, and that could be an interesting alternative.
Appendix: Tutoring Questionnaire

As part of an educational research, you are asked, dear students, to answer anonymously and accurately this questionnaire on tutoring. You can give several answers to questions 2, 7 and 10.

General information:
Gender: ☐ Boy  ☐ Girl
Teaching: ☐ Public  ☐ Private
Level: ☐ Common Core  ☐ 1st year Bac  ☐ 2nd year Bac
Stream: ..........................................................

In your opinion, tutoring:
☐ Is not necessary  ☐ Is relatively necessary
☐ Is necessary  ☐ Is strongly necessary

You have recourse to private tutoring (Several answers are possible):
☐ To better understand the course  ☐ To overcome the lack of work at home
☐ To learn the methodology of work  ☐ To finish the program
☐ To satisfy the desire of parents  ☐ Approaching controls
☐ Under pressure from the teacher  ☐ Because of overstaffing in class
☐ Programs are overloaded

Did tutoring promotes academic success?
☐ Yes  ☐ Relatively  ☐ No

How many subjects do you use for private tutoring this year?
0 1 2 3 4 5 6 7 8 9 10

What is the number of weekly hours spent on private tutoring? .................

References

[10]. The formula used is: \( n = \frac{z^2 \cdot p (1-p)}{m^2} \), with the following values: \( z = 1.96 \), \( p = 0.5 \) and \( m = 6\% \), \( z \) = confidence level according to the normal reduced centered law (for a 95% confidence level, \( z = 1.96 \); for a 99% confidence level, \( z = 2.575 \)).
[17]. TIMSS & PIRLS, International Study Center, Lynch School of Education, Boston College, and International Association for the Evaluation of Educational Achievement. [https://timssandpirls.bc.edu/timss2015/].
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you use the Internet for tutoring?</td>
<td>☐ Yes ☐ No</td>
</tr>
<tr>
<td>You access: (Multiple answers are possible)</td>
<td>☐ Sites ☐ Forums ☐ Other (quote them)</td>
</tr>
<tr>
<td>When you work on the Internet, you are interested:</td>
<td>☐ In courses ☐ In exercises ☐ Both at the same time</td>
</tr>
<tr>
<td>What is the number of weekly hours devoted to tutoring over the Internet?</td>
<td>...................................................................................................................................................</td>
</tr>
<tr>
<td>What kind of tutoring would you prefer? (Many answers are possible)</td>
<td>☐ In the current form (private tutoring) ☐ For free, in high school and by your own teachers</td>
</tr>
<tr>
<td>☐ Free, in high school and by other teachers ☐ On the Internet</td>
<td>...................................................................................................................................................</td>
</tr>
<tr>
<td>Do you have any other proposals?</td>
<td>...................................................................................................................................................</td>
</tr>
</tbody>
</table>


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