STUDENT MOBILITY: ACADEMIC ACHIEVEMENT AND THE EFFECT OF AN INTERVENTION PLAN

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STUDENT MOBILITY: ACADEMIC ACHIEVEMENT AND THE EFFECT OF AN INTERVENTION PLAN

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Abstract

This study is initiated to determine if students' mobility has a negative effect on the academic achievement in Math and English. It discusses findings based on interviews with families. It also covers the impact of an intervention program aiming to minimize mobility's effect on students.

The study extends throughout two years. In 2006-2007 the total number of students is 389, and in 2007-2008 the total number of students is 367. The sample comprises of students of grade 6, 7 and 8 who are divided into two groups: mobile and no mobile students. Their results of the year 2006-2007 are taken and compared. The comparison shows that the no-mobile (stable) students performed better than the mobile ones in Math and English.

The intervention program comprises a set of strategies used to lessen the effect of mobility. The analysis shows that these strategies are effective, and they helped the students to overcome some of the academic problems in English but not in Math.
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Students Mobility, Academic Achievement and the Effect of an Intervention Plan.

Most of the schools in Lebanon like everywhere else in the word have problems. And one of the major problems that a school may face is mobility. As reported by many researches mobility has a negative impact on the academic, social and behavioral performance of the students.

Adding to its effect on the students, mobility has a great effect on the school academic and financial state. One may hear some principals complaining about students’ turnover in their school. Others may complain about new comers and the lack of helping strategies to deal with them. Lash and Kirkpatrick, 1990; Sloan, Jason, and Bogat, 1984). It should be noted that it is not just the individual student who experiences distress from mobility, but also the entire school system.

Kathleen Vail states: “Look at mobility underside, and you’ll see Schools in chaos, unable to hold onto children long enough to teach them basic skills” (p20). In fact, this has a very negative impact, especially in math where the learning procedure should be continuous and without interruption.

In the schools that have a high mobility rate, teachers are complaining about the new students’ academic level which does not meet with the requirement of the school. Other teachers are complaining about the way these new comers should be tested. We have teachers held responsible for the achievement scores of students who are not able to sit for the tests because of their late coming to school. Principals as well are in a dilemma; should they admit new students or should they not. And what if they don’t would they be able to meet with the financial needs of the school? The Parents are also
affected by the problem they feel no commitment to the new school their children attend. It takes time to feel comfortable with new things what if the thing was a whole new society.

There are contradictory findings in the research on student mobility and academic achievement. Educational research provides some evidence that, schools with high levels of mobility (transfer, residential move, non-attendees, and dropouts) also have depressed levels of academic performance (Benson, Haycraft, Steyaert & Weigel, 1979; Cohen, Johnson, Stuening, & Brook, 1989).

In fact, Nelson, Simoni, and Adelman (1996) in a comprehensive overview of the literature since 1975 state that "there is compelling evidence that students who frequently change schools are more likely to experience academic, social, and emotional problems than students who do not change as often" (p.365).

One can clearly conclude that mobility is a serious problem that should be highly considered by all educators.

Is mobility in Lebanon similar to that in many other countries in the word? When asked about their knowledge of the effect of mobility, some school principals stated that they don't have a clear idea about the impact of mobility on the school as well as on the students.

Their only concern was the school financial situation ignoring other consequences. Some of them said that they are facing problems dealing with the issue; others were more into the case and suggested some strategies that they tried and found to be effective. Others were indifferent and satisfied with their situation since they were
not losing a lot; the number of the outgoing students was almost the same as that of the incoming ones.

**Statement of the problem**

Student mobility is a worldwide problem which is affecting the students’ academic performance as well as the whole school system. Mobility has a negative effect on the students’ academic performance in Math and English. Knowing that, in education, these two subjects are major indicators of the general academic status of a student. Therefore it was of great importance to explore whether mobility in Lebanon has the same impact as in the USA and Australia. It was also interesting to explore about a program that could help mobile students overcome their problems.

**The purpose of the study**

The purpose of the study is to show the educational community the reasons of mobility and the negative effects it has on the academic performance of the students. This study was initiated first to investigate about the issue of mobility of the students in general. And second to determine if mobility has a negative effect on the students’ performance in Math and English. It also sheds light on the number of moves a student makes and its effect on his or her performance. Finally it tries to examine if an intervention program is useful to lessen the effect of mobility on the students.

**Hypotheses**

1- Mobility has a negative impact on the students’ academic achievement in Math and English.

2- Students with higher mobility rate perform less than other mobile students in Math and English.
The students involved in the intervention plan perform better than other mobile students.

**Background to the Study**

Students' Mobility has a negative effect on all those involved in the education field. Administrators as well as students are complaining from the negative effect of mobility.

Several studies suggest a relationship between mobility and academic achievement as highly mobile students tend to perform at a level below that of their stable counterparts (Attles, 1997; Alexander 1996; Family Housing Fund, 2003; Temple & Reynolds, 1999)

The findings from Mehana and Reynolds' (1995) study of students in the Chicago area were consistent with those from Texas in that poverty was a significant predictor of Mobility and, thus, frequent Mobility was a significant predictor of lower reading scores by sixth grade. This study evaluated the effects of school mobility on reading and math achievement in the elementary grades (kindergarten to sixth grade). The achievement level of mobile students exceeded that of only 40% of the non-mobile students. This is equivalent to a 3–4 month performance disadvantage in achievement.

The major predictors of variation in effect sizes were frequency of mobility, socioeconomic status, and grade. They also found that the effects were most prominent in the earlier grades and, in most grade levels; the effect was stronger in math than in reading. This would seem likely because math skills must be built upon skill after skill. Frequent moves appeared to result in gaps in the learning process and in the skills taught. Innersole (1988) reached much the same conclusions when studying over 60,000 students in the Denver Colorado Public School System. Even when using
matched pair sampling to control for socioeconomic status, less mobile students consistently scored better on standardized tests.

School policies and practices need to change to address student mobility (Fields, 1997; Fisher et al, 2002; Mantzicopoulos & Knutson, 2000; Rumberger & Larson, 1998). One way is through increasing students' sense of membership in the school and engagement with the curriculum (Rumberger & Larson, 1998). “Schools should assume a key role in helping students construct and maintain a sense of stability and predictability within the school setting” (Mantzicopoulos & Knutson, 2000, p. 310). Teachers should to establish positive relationships with parents to maintain high expectations of students (Fisher et al, 2002). They need to be trained in flexible instructional strategies, multiple methods of assessment and the challenges of facing mobile families (Fisher et al, 2002).

Curricular services that support this include academic support such as tutoring and before-and-after school programs and personal development studies within the school (Fisher et al, 2002). Orientation and welcome sessions for new students would also help to engage mobile students (Ingersoll et al, 1988). Buddy systems, where existing students help to orient new students into the school, may also help to address the effects of mobility (Fisher et al, 2002). While these strategies seem to hold great potential in addressing the negative effects of mobility, Fisher et al (2002) note that “rarely are antecedents a focus of school-level interventions” (p.319).

Extra-curricular activities that support families and forge stronger bonds between the school with families are considered by Fisher et al (2002) to be the best strategy for preventing high mobility. These include: health services, breakfast and lunch programs, clothing pools, counseling, adult and parent education classes, family camps and multi-age
programs. These strategies would strengthen family bonds to help families work efficiently in spite of mobility. Keeping parents strong contributes to more effective partnerships between parents and schools in the academic and social development of their children (Fisher et al., 2002). Parents need more information about the impact on children of changing schools (Martin, 2002).

A principal from California high school stated:

"Since I've been here it's well over 800 students from July through December who have left. They have been replaced by 800 more coming in. We're about 3800 as far as active students right now . . . so you're constantly dealing with 1000 students leaving, 1000 students coming in". (Principal from California high school, as quoted in Rumberger, Larson, Ream, & Palardy, 1999, p. 29).

Moreover a student in the same school stated:

"Moving and changing schools really shattered my personality. I feel like there are all these little things I picked up from all of the different schools and I feel all disoriented all the time. There's no grounding. I always just feel like I'm floating. It's psychological damage, really . . . because you never feel like a complete person. That's how I feel-I feel fragmented. Every time I moved I felt less and less important (mobile student quoted in Rumberger et al., 1999, p. 37)

The United States General Accounting Office ([GAO], 1994) reported that, controlling for family income, children who have changed schools three or more times since first the grade are much more likely to have repeated a grade or to have low reading scores by the third grade. Wood, Halfon, and Scarlata (1993) also found that students who
moved frequently were more likely to have repeated a grade. Astone and McLanahan (1994), after controlling for several family and demographic factors, found that frequent mobility is associated with dropping out of school. As we can see students’ mobility is a problem affecting the whole educational body.

In the United State as well as in Australia the issue of mobility is well studied by the researcher, whereas in other part of the world there isn’t any publication on the subject. If we examine the situation in Lebanon we notice that no one has ever published anything about the issue of students’ mobility. Consequently it is a fair statement that this study is filling a gap in the field of education, in Lebanon as well as in other Arab countries.

**Significance of the study**

This study explores the issue of mobility from many perspectives; reasons of mobility whether personal, financial or both. It also sheds light on the negative effects it has on the academic performance of the students. This research fills a gap in the Arab world; since no one has approached the issue in such a comprehensive way before. It gives the educators a comprehensive view of the effect of mobility on the academic performance.

Once the teachers, the parents and the administrators are aware of what is really happening with the mobile students at all levels; socially, psychologically and academically, they would handle the problem with more understanding.

**Overview of methodology**

This study is examining the effect of mobility on the academic performance of the students, it also investigate about the impact of an intervention program. The present study extended for two years. In the first year the reasons of mobility were
collected by interviewing the parents. The average of the mobile students and the non-mobile students were compared. The sample was randomly chosen from three middle class schools in Beirut. The students aged between 11y and 14y from both sexes. In 2007-2008 the sample was divided into three groups; mobile students with intervention and mobile students without intervention and no-mobile students. The GPAs of the students of all categories were collected and compared.

Limitation

The study took place in Beirut area only. It was conducted in three middle class schools. It was limited to Beirut area because it was very hard to do it in the rural areas. This limited the generalizability of the study. Another thing to take in consideration is that the data of the previous years was not collected for lack of documents and because there was no access to the students previous schools. This happened because each student is coming from a different school and it was so hard to contact all the schools’ responsible. Noting that usually each student has to bring his or her grade report from the previous year, but what happened is that some of the students have illegal papers and consequently the grades are not good indicators of their academic status. This usually happens when the family has problems with the school administration. They leave without clearing their account so the school refuses to give them all the needed papers. Consequently they try to find other ways to get papers.

Finally one should mention that there was no gender identification in the students list. And this should be avoided in future research. Mobility may have more effect on girls than boys or vice versa.
Definition of terms

**Intervention:** care provided to improve a situation. (http://www.thefreedictionary).

**Mobile students:** Students moving from one school to another for reasons other than being promoted to the next School level. (Rumberger 1999).
Chapter 2

Review of literature

This chapter includes the theoretical finding about mobility its causes and its effect on the academic achievement of the students. It also includes an empirical part in which one can find reports on actual research relating to the case studies on the same subject. Finally it includes a connection of both theoretical and empirical finding to the present study.

Student mobility: meaning students moving from one school to another for reasons other than being promoted to the next School level is widespread in the United States. Over their Entire elementary and secondary careers, most students make at least one non-promotional school change (Rumberger 1999).

Mobility in schools means students relocating from one school to another during their years of study, often causing inconsistency or interruption in the educational experience of the student (Ligon & Paredes, 1992, in Fisher, 2002). It may happen for residential reasons (mostly in USA and Australia, but it may also happen for financial as well as personal reason and this mostly the case in Lebanon.

We are not saying that all moves have negative effect on the students' academic achievement, but in our study we found that the consequences of non-promotional school changes were profoundly negative," said Katherine A. Larson, a researcher in (University of California Santa Barbara) UCSB, Graduate School of Education. "The issue of student mobility has not received much attention from educational researchers, practitioners or policymakers," added Russell W. Rumberger, professor of education."
Theoretical literature

Many research have dealt with mobility issue. Following are some theories about mobility, its reasons and effect.

In the United States, student mobility rates range between 25 and 40 percent in suburban schools and between 45 and 80 percent in inner-city schools (Skandera & Sousa, 2002). Martin (2002) reported that approximately one quarter of United States’ students change schools three or four times over the course of a public school career. By the end of third grade, one out of six children in the United States has attended three or more schools, often changing schools more than once during the school year (American Youth Forum, 2002). Mobile students are frequently from low-income families and ethnic minorities (Audette et al, 1993; Mantzicopoulos & Knutson, 2000; Skandera & Sousa, 2002; Wright, 1999). Alexander, Entwisle & Dauber (1996, in Wright, 1999) also note that higher income student frequently transferred into and out of the district, whereas lower income student more often transferred within the district” (p. 347). Astone and McLanahan (1994, in Rumberger & Larson, 1998) further say that students from single parent and step-parent families are more likely to change schools and less likely to complete high school than those from two parent families.

Australia has one of the most highly mobile populations in the western world (Settles, 1993, in Fields, 1997). The Australian Bureau of Statistics (2001, in DEST and Def, 2002) estimated that, within the overall Australian population, 30 percent of residents from households with children moved at least once over a three year period, with an increasing proportion of this relocation being movement between one State or Territory and another. Australians in general move more than eleven times during their
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lifetimes (Bell, 1995, in Fields, 1997). Regional areas such as Cairns record slightly higher moves (42%) than urban areas (40%).

Now that we had an idea about the issue of mobility in the US and Australia let us move to Lebanon where mobility takes another outlook. In Lebanon we notice the situation is entirely different. According to the center of research in Lebanon 52% of the Lebanese students are in private schools. The residential reasons for mobility are quite different than those in the States or in Australia where students have to attend their district’s school and whenever they move to a new district they have to change the school. The personal reasons are almost the same in all areas e.g. Divorce, problems in school financial issues etc...

Unfortunately, in Europe there is no finding worth enough to mention. Most of the mobility there happened because of relocation due to job reasons or travelling.

Reasons of mobility vary from financial to personal. There are a number of factors that contribute to student mobility stated that these factors are either family-based or school-based. Rumberger et, al, (2002) found that "some students change schools without moving, whereas other students move without changing schools". lick (1993, in Fields, 1997) further defined moves as forced, where families are displaced due to expulsion or natural disasters; imposed, where changes in the family, including divorce or death precede the move; and unforced, where relocations occur for closer proximity to family or friends, starting a new job or moving to a bigger dwelling.

Family based reasons for mobility are mostly caused by problems in employment lifestyle and housing changes, family changes (DEST and Def, 2002; Fields, 1997) and income (Martin, 2002; Wright, 1999)
Concerning employment moves are usually the result of one or both parents’ work commitments or their seeking employment, which requires relocation of the family to another geographical area (DEST and Def, 2002).

When things come to lifestyle movement, we see that the family makes a conscious decision to relocate to a larger home or better climate account for a large number of moves (DEST and Def, 2000). A study by Mantzicopoulos and Knutson (2000) found that 66 percent of families said they moved because they were looking for a better place to live.

The Social and financial difficulties are also major causes of mobility: death, divorce, separation, disharmony or conflict (Astone and McLanahan, 1994; DEST and Def, 2002; Fisher et al, 2002; Rumberger and Larson, 1998).

In Cairns, Australia low family income is a determining factor for mobility (Audette, Algozzine and Warden, 1993; Family Housing Fund, 2002; Fisher et al, 2002; Skandera and Sousa, 2002). According to Skandera and Sousa (2002), Children from low income families or children who attend inner-city schools are more likely to have changed schools frequently than those from middle to high income families.

Further, Alexander, Entwisle and Dauber (1996, in Wright,1999) state that “higher income students frequently transferred into and out of the district, whereas lower income student more often transferred within the district” (p. 347).

The problem of mobility in Australia is very evident among the native students. McCrae (2000) reported on three Commonwealth funded projects that focused specifically on native mobility. Of the 793 native students from 76 participating
schools, there were 1039 movements (both in and out and including transition from primary to secondary school, in a 9 month period.

Mobility affects almost all the educational body; students, teachers, schools and investors in the field of education. Many of the effects of mobility tend to be negative. As Rumberger and Larson (1998) suggest, “student mobility is generally detrimental both to students and to the schools they attend” (p.1). However, there are some benefits related to mobility (DEST and Def, 2002). For example, Whalen & Fried (1973) found that high mobility students with high IQ scores achieved higher in school than low mobility student with high IQ scores.

Academic effect

Frequent moves can have a negative impact on a student’s academic routine and potential success (Alexander, et, al, 1996; Family Housing Fund, 2003; Kariuki & Nash, 1999; Popp, et al., 2003).

While there exists an apparent relationship between mobility and academic achievement, Kerbow, Azcoitia, and Buell (2003) suggest that students who move once during their school career rarely suffer any lasting effects. After analyzing six years of mathematic achievement data from Chicago Public Schools, the researchers reported that students moving once during a school year may achieve academically 10% less than expected. If, however, the students remain in their new schools for the remainder of their education, they are likely to overcome losses (Kerbow, et al 2003). The story is not the same for students who move more frequently. Kerbow, et al. suggests that the recovery time increases as the student continues to move. A major concern is that students may fail to learn certain basic concepts that they need later in school. This educational disruption
may be particularly important for mathematics and reading. Likewise, highly mobile students enter classrooms at different times, possibly missing crucial information. It is also important to note that such students must adapt to different teaching styles and fellow classmates’ abilities with each move (Kerbow, et al.).

Student mobility adversely affects student achievement, behavior and social interactions. Scores on achievement tests may be lower in more mobile students (Mantzicopoulos and Knutson, 2000; Parades, 1993, in Wright, 1999). Below grade-level reading scores (Rumberger & Larson, 1998) and lower literacy and numeric performance (DEST and Def, 2002) have been associated with mobility. Academic competence in general is compromised by school moves (Astone & McLanahan, 1994; DEST and Def, 2002; Family Housing Fund, 2002; Fisher et al, 2002; Ingersoll, Scamman and Eckerling, 1988; Mantzicopoulos & Knutson, 2000). Mobile students are faced with learning new procedures in each new school (Fisher et al, 2002).

Social effect

As Mantzicopoulos and Knutson (2000) suggest, “Students who transfer from school to school may struggle with instructional practices that proceed at a different pace with each new teacher” (p. 310). Mobility has been linked to high school completion (Martin, 2002; Skandera and Sousa, 2002); with chances of completing high school diminishing as school moves increase (DEST and Def, 2002; Rumberger & Larson, 1998). However, Wright (1999) cautions that lower achievement should not be blamed solely on mobility. “Student mobility is subordinate in its effects on achievement to the risk factors for ethnic minority status and low family income”(p. 403). Behavior and social interactions seem to be affected by mobility (DEST and Def, 2002; Fields, 1997;
Fisher et al, 2002; Mantzicopoulos & Knutson, 2000). Nelson, Simoni and Adelman (1996, in Wright, 1999) found that more mobile students rated lower initially in behavior and school adjustment than less mobile students. Astone and McLanahan (1994) suggest that mobile families have less information about the school and this can undermine students’ relationships with teachers and peers. Children may feel socially isolated and consequently take up with other marginal students who may be involved in anti-social behavior. Finally, health and development may be affected by mobility.

Paredes stated that there is a significant relationship between higher numbers of moves and lower test scores on the state tests. Although Paredes did not claim that mobility caused lower achievement, his study did support the idea that mobility was one factor in students’ lives that can negatively affect learning.

**Behavioral effect**

Mobility not only affects students academically, but behaviorally and developmentally as well. Wood, et al. (1993) reported that children who moved frequently (at least six times in the child’s lifetime) were 50% to 100% more likely to experience a learning disorder, a delay in growth or development or have four or more behavioral problems than children who moved infrequently (few or no moves) it is also reported that mobility has an effect on students’ self-perception, with highly mobile students reporting themselves to be more insecure, inconsistent, complaining, critical, and with fewer friends than their less mobile peers (Audette et al, 1993).

Fields in a study about the social and academic effects of mobility on young adolescents in 1997 in Australia notes that moves prompted by peer problems, such as
bullying, behavioral problems and poor achievement are less likely to be successful as these difficulties tend to reappear in the new school environment.

**Effect on school system**

Moreover, mobility not only affects students and their families, but also has impact upon schools and system functioning.

Vandett found a significant impact of student mobility on the academic success of a school (Vandett, 1998). At the individual level, a student’s academic progress can be negatively impacted by frequent moves. At the aggregate level, high student mobility has a negative impact on the average achievement scores for the whole school. Thus, not only do individual students do worse if they change schools, but they also seem to do worse if they attend a school with a high student mobility rate—a greater proportion of students at their school changing schools in the past year (Reynolds and Wolf, 1999). This is important for school personnel who assert that student mobility negatively impacts the overall school performance rating when mobile students perform poorly on standardized tests (Mao et al, 1998).

The effects on school may also include disruption to teaching, difficulty with student records and lower overall school achievement. Students entering and leaving the class throughout the year may result in disruptions to teaching, and possibly less effective teaching Fisher et al, 2002; Martin, 2002; Rumberger & Larson, 1998). Untimely and often inaccurate placement and assessment of mobile students (Fisher et al, 2002) may result in teachers spending more time orienting these students (Martin, 2002) and reviewing material previously covered (Fisher et al, 2002). As Fisher et al (2002) note,“As new students enroll, teachers often must resort to review strategies in
lieu of more creative and innovative instructional approaches" (p. 318). This affects the quality of teaching not only to mobile students, but to their less mobile counterparts. Fisher et al (2002) suggest that effects of Mobility may lead to antecedents, giving the example that Mobility negative effects may lead to school staff becoming less caring. This, in turn, could lead to further Mobility.

Records of attendance, enrolment, assessment and placement become more difficult to maintain, both within the classroom and by school administration (Fisher et al, 2002). This can potentially hamper administrators’ efforts to build a stable sense of stability and community within the school (Fisher et al, 2002; Martin, 2002). Finally, schools with higher rates of Mobility tend to achieve lower on standardized tests. Audette et al (1993) reported that schools with highly mobile populations scored lower on achievement tests than more stable schools.

While we see that most of the researcher found that mobility has a negative effect on the whole educational body, we notice that some educators consider mobility as a positive factor that sometime helps the students perform better.

As school principal, Kylie (pseudonym), Deputy Principal of Wellington school, noted, "An upsetting routine to one child can be a challenge to another child – it depends on children’s resilience.” The experiences children bring with them may also assist them to excel in some school subjects. Dave said, “Some students have a wealth of experience and knowledge coming from different places, so they excel at subjects like science and history.

Bolinger and Gilman surmise from their study that mobility was related to lower achievement but cannot be determined to be the causal factor.
Some reasons of mobility may be of major importance. Consequently they lead to mobility and moreover they increase its bad effect. (eg.SES). It is reported that the social economic status of a students is a principal indicator for his academic achievement.

Tucker, Marx, and Long’s (1998) research investigated the possibility that poor school performance and mobility have a spurious relationship and are really both products of Student Economic Status (SES). Their research also found that, after controlling for SES, race, sex, and family structure, mobility continued to have a statistically significant relationship to academic achievement. All the findings above go on line with what the present study is trying to prove; that mobility has a negative effect on the students’ academic achievement in Math and English.

**Empirical Findings**

Many studies in Australia and in the United States investigated about the issue of students’ mobility and its effect on the academic performance of the students.

In a study of highly mobile ten to fifteen year olds in Queensland, Fields (1995) found that 70% of the sample had experienced significant social and school adjustment problems. Peer acceptance ratings of these students were decidedly lower than their non-mobile peers. Problems with social adjustment could be due to having to adjust to new school environments, peers and social expectations (Fisher et al, 2002; Rumberger & Larson, 1998). They found that among Latino secondary students, 89 percent of those who made no school changes graduated from high school, compared to 63 percent who made one school change and 60 percent who made two or more.
Another study was done by Dr. Reesa Sorin and Rosemary Iloste. This study investigated the reasons for and effects of mobility in Cairns, a regional city in northeast Australia. Between 1997 and 2000, 4 out of every 10 adults in Cairns had moved at least once (Australian Bureau of Statistics (ABS), 2000). Of these, 72% had relocated within 20 kilometers and 49% within five kilometers of their previous home. Employment opportunities and changes in housing were the main reasons cited for the moves. Seventy percent of the moves were made by unemployed persons. Thirty-eight percent of couples with children and 43% of single parents with children moved during this period. Regional areas such as Cairns recorded slightly higher moves (42%) than urban areas (40%). Between 69% and 80% of people residing in units and townhouses had moved house during this time, as opposed to 36% of people living in separate houses (ABS, 2000). From the above given one can conclude that mobility is harming the students' life academically as well as socially.

In a study done by Dr. Reesa Sorin in Australia participants reported a number of negative effects of mobility on school achievement, social interactions and behavior of the child. All participants mentioned the negative impact of mobility on school achievement. Gaps experienced through missing chunks of schoolwork make it difficult for a mobile student to catch up with their new class. Lisa (pseudonym), a Year 4/5 teacher at Wellington School observed that there are “gaps in their skills and knowledge because they haven’t had the continuous curriculum, so that when we go to teaching something, or go back over something or something comes up, the rest of the class know it and they [the mobile students] are just sitting there.” If students have arrived from another area, particularly from interstate, they may be unfamiliar with the
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curriculum altogether. Year 6 teacher at Primbee School, Sydney, Australia Patrick (pseudonym) said, "Kids become disenfranchised – they often come in too late in the term to pick up on what is happening."(p9) Many of the mobile students were reported to require special support programs, such as Reading Recovery to address their academic needs. Yet mobility tends to disrupt these programs, and the length of time it often takes to transfer students’ records from the old school to the new one can mean the problems are not addressed for lengthy periods of time.

Warren (pseudonym), Principal of Nirdana School, Sydney said, "Generally, mobile students benefit from special programs and then these are disrupted. Appraisal is an example. It takes quite a bit of time and effort to carry out an appraisal on a student, and often you just get it carried out and they move.”

Besides schoolwork suffering and students needing to catch up on missed work, participants said that there are a number of social problems associated with student mobility. A large number mentioned the difficulties associated with settling into a new school environment.” The students themselves may not be able to fit in to the community of the school,” noted Dave. “It makes it very difficult for the students to build good relationships with other students, and friendships. They usually require a lot of catching up to get up to the level that we are at in the school, or within the school environment.” One mother added that some days her son seemed “really down” at home and didn’t want to go to school. Friendships and relationships with other students and teachers were mentioned by both school personnel and parents as one of the difficulties experienced by mobile students. This included both the component of disrupting established friendships, which caused sadness and grief in some children,
and the difficulty of making new friends in a new environment. Barbara, mother of 12 year old Mark, said that in new schools Mark has found it difficult to make friends, describing the friendships he had established as "on again/ off again" friendships. She said that as Mark has moved into the upper primary grades, he has felt less accepted by other children. This, she added may be partly due to his interests, which are more inclined towards the arts than to sport, which is a strong feature in the schools Mark has attended. Again we see how mobility is adversely affecting the social as well as the academic life of the students.

As the above review indicates mobility, whatever were the reasons, has a negative effect on the social, behavioral and academic life of the students as well as on the school system. Though the present study will concentrate on the academic effect more than any other effects one cannot neglect the social effect mobility has on the students.

Intervention to lessen the effect of mobility was done in the past. In this study the intervention will be oriented toward academic more than social issues. This study will try to examine whether mobile students in Lebanon score lower than other students in Math and English. It will also try to find out if the number of moves is a predictor of low achievement in Math and English. Finally it explores the effects of an intervention plan in decreasing the academic problems of the mobile students.
Chapter 3

Methodology

The research conducted is a pioneering study since no study on the effect of mobility has been done in Lebanon before. The research includes a comparison between the achievement of the mobile students and that of the no-mobile ones. It also includes an investigating part where an intervention plan is assessed to find out whether it helps overcoming the effects of mobility or not.

The research was conducted in three private schools in the area of Beirut and the suburbs. The sample comprises of students from grade 6, 7 and 8. This study extended for two years and was divided into two parts:

A quantitative part done in 2006-2007 in which the reasons of moving were collected together with the GPAs of the mobile and no-mobile students. The other part was done in 2007-2008 where an intervention was implemented into the curriculum of the schools involved.

The main objective of the study was to answer the following questions:

1- Does mobility have a negative effect on the academic achievement of students in Math ad English?

2- Is the achievement related to the number of moves a student has?

3- Does an intervention plan help the mobile students perform better?

Participants

As we have mentioned the study was extended for two years. In 2006-2007 the sample comprises of 95 students aged between 11y and 14y from both sexes. The sample was divided into two groups 60 mobile and 35 no-mobile. In 2007-2008 the
sample comprises of 117 students aged between 11y and 14y from both sexes. The sample was divided into three groups 55 no-mobile students, 31 mobile students that are in the intervention plan and 31 mobile students that are not in the intervention plan.

**Materials**

A- A list including the number and the kind of the reason for the move.

B- GPAs of term 1, 2 and 3 in 2006-2007 for mobile and non-mobile students.

C- GPAs of term 1, 2 and 3 in year 2007-2008 for mobile students with intervention and without intervention, as well as the GPAs of no-mobile students.

D- Strategies used in the intervention program

**I - Strategies used by teachers:**

1. Buddy system

2. Extra worksheet in math and English

3. Name tags (for grade 6)

4. Meet the parents at the earliest possible time.

5. When teaching, stand near the student the first week to make sure he/she is on track.

**II - Strategies used by administration**

1. Develop learning packets that give important background information of key units.

2. Make new students feel welcome.

3. Create a staff or teacher-mentoring program for new students.

4. Arrange for tutoring, if needed, before or after school.

5. Create inviting information packets of extracurricular activities.
Procedure

Parents who left the school were contacted. Their responses concerning reasons of the leave were taken. Then new comers’ parents were interviewed to find out the reasons behind their move from other schools. The same was done in three schools involved in the study. Students of grade 6, 7 and 8 from both sexes were randomly chosen from three schools in Beirut area.

In year 2006-2007 the principals of some selected schools were contacted, and the study was introduced to them and they were shown the benefit of the study to the school and the students. Some of the principals refused to have the study done in their schools. Finally, three schools agreed to cooperate knowing that a major part of the study was for the benefit of the schools.

Meetings were held with the supervisors who provided the name list of the new students in school. The sample was taken from 3 private middle class schools in Beirut and the suburbs. The mobile group includes the students who have changed school more than once within 2 successive years. Some of the students; mainly for personal reasons have changed 2 or three schools in one year. The sample comprises of 60 students that were randomly selected from grade 6, 7 and 8 since these were the classes with high rate of mobility. The reasons of the move were taken as well as the number of moves they had in one or two successive school year.

After selecting the mobile students the non-mobile ones were also randomly selected (35 students). First the grade point averages of the 1st, 2nd and 3rd term in Math were collected from the office. Then the grade point averages of the 1st, 2nd and 3rd term in English were collected. Finally the year average was calculated.
In Year 2007-2008 the total number of students was 367 out of which the sample comprises of 62 mobile students aged between 13y and 14y and 55 non-mobile students of the same age. Both sexes were included in the sample.

A panel of educators was found. The members were contacted by mail phone or through meeting held with them. The members of the panel were asked to provide some strategies to lessen the effect of mobility on students. As reported by the members of the group most of the strategies they suggested were applied before and proven to be effective. To select the best strategies a filtration of the outcome was done according to the following:

1- the school ability to apply the strategies

2- The staff availability to implement the strategies.

3- The validity of the strategies.

The mobile students were divided into two groups:

1- Mobile with intervention (31 students).

2- Mobile without intervention. (31 students).

After the diagnostic test that is usually done at the start of each year, we started applying the strategies with a group of 31 mobile students the other 31 mobile students were not in the intervention plan. ten strategies were used with every student in the intervention plan. The strategies were divided into two sections; the administration part and the teacher’s part.

Administration part

We agreed with the administration first: to make new students feel welcome in order to lessen the tension a new student usually has, 2nd to create a staff or teacher-mentoring
program for new students in order to keep track of these new comers, 3rd Arrange for
tutoring, if needed, before or after school, 4th Create inviting information packets of
extracurricular activities. Finally, develop learning packets that give important background
information of key units so that the new students are aware of what he is expected to know
as a prerequisites of the course.

Teacher's part

Teachers had to assign a pal for each one or two new students in order to help
them get acquainted with the new atmosphere of the school. This pal may help by
showing the different part of the school building. He or she may help introducing the
new comers to the staff or to other students etc...

Teachers also helped by using name tags for grade 6 only so that new comers won't
have difficult time recognizing the names of their class mates. Teachers involved in the
intervention plan had to meet the parents as early as possible in order to investigate as
much as they can about the students status. When teaching, the teachers were asked to
stand near the student the first week to make sure he/she is one the right track. Finally
teachers were asked to prepare extra worksheet for the new students in Math and
English.

After applying the strategies the grades were collected and compared in order
to find out whether the intervention program was effective or not.
Chapter 4

Results and discussion

The plan of this chapter is as followed: first the presentation and the discussion of results pertaining to the hypotheses dealing with the effect of mobility on the academic performance of the students. Second the results and discussion of the impact of an intervention program implemented to lessen the effect of mobility on the performance of the students.

This chapter includes the analysis of the results of tests made on the three hypotheses. In the first part of the study the result outcome tells whether mobility has negative effect on the academic performance of the students or not. The results also tell about the effect of multiple moves on the academic performance of the students. On the second part of the study one can examine the effect of an intervention program on the students’ performance.

The chapter ends with a demonstration of how, the kind (personal, financial or personal and financial) and the number of reasons affect the average score of the students in Math and English. The data about reasons was collected but it was not part of the analytical part because the number of the students was not large enough to be taken as a sample for the study. Moreover this study is limited to the effects of mobility on the academic performance and the intervention program implemented to help the students overcome the academic difficulties they face because of mobility.
Results

Hypothesis 1

Mobility has a negative impact on the students’ academic achievement in Math and English.

Table 1: The averages of the no-mobile students vs. the average of the mobile students in Math and English in 2006-2007.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>St. dv</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math mobile</td>
<td>60</td>
<td>59.52</td>
<td>16.71</td>
</tr>
<tr>
<td>Math no-mobile</td>
<td>35</td>
<td>71.65</td>
<td>9.89</td>
</tr>
<tr>
<td>English mobile</td>
<td>60</td>
<td>58.25</td>
<td>15.56</td>
</tr>
<tr>
<td>English no-mobile</td>
<td>35</td>
<td>69.03</td>
<td>9.89</td>
</tr>
</tbody>
</table>

Achievement in math and achievement in English were separately tested. The independent t-test was conducted comparing average scores of the three terms in math for the mobile students of 2006-2007 vs. the average scores of the non-mobile students of the same year.

The average score in math for non-mobile students was 71.65 while the average score in math for the mobile students was 59.52. As the result of the analysis shows the difference in Math score average of the mobile students and of the non-mobile students was 12.12, t (93) = 0.71, p = 0.0001 this makes the difference very significant.

The same was true for the English. The average score in English for non-mobile students was 69.03 while the average score in English for the mobile students was 59.52. The difference between the score average was (10.78), t (93) = 3.68, p=0.0002 which makes the difference significant.
Hypothesis 2

Students with higher mobility rate perform less than other mobile students in Math and English.

Table 2: The averages of English and Math and the number of moves.

<table>
<thead>
<tr>
<th># moves</th>
<th>N</th>
<th>Mean English</th>
<th>Std. Dev English</th>
<th>Mean Math</th>
<th>Std. Dev Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 move</td>
<td>34</td>
<td>64.97</td>
<td>14.97</td>
<td>66.66</td>
<td>16.04</td>
</tr>
<tr>
<td>2 moves</td>
<td>18</td>
<td>51.24</td>
<td>9.72</td>
<td>53.07</td>
<td>11.42</td>
</tr>
<tr>
<td>3 moves</td>
<td>6</td>
<td>50.44</td>
<td>13.64</td>
<td>49.05</td>
<td>10.06</td>
</tr>
<tr>
<td>4 moves</td>
<td>2</td>
<td>30.66</td>
<td>7.07</td>
<td>27.66</td>
<td>8.95</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>58.25</td>
<td>15.56</td>
<td>59.52</td>
<td>16.71</td>
</tr>
</tbody>
</table>

Two tests were run to test the significance of the hypothesis. A regression analysis was conducted to estimate the average scores in English and Math, knowing the number of moves per students. According to the regression output: $Y = a + bx$.

Applying this formula shows that if the number of move is set at zero or in other term the student was not mobile (stable) we expect the average score to be around 77.56 grade points in English and 66.66 in Math. If we increase the number of moves of a mobile student by an additional move, we expect a drop of 10.03 grade points on average in English and 11.27 in Math. The global test run for the regression gave (P-value = 2.04E-05 in English and 0.0001 in Math). This shows that the average score and the number of moves are related.

ANOVA test was run to depict the differences of the average scores of English and Math across the number of moves. The ANOVA test showed a significant difference among the average scores of English and Math for a different number of moves. Furthermore, a post hoc analysis was conducted to check on pair-wise differences and the results showed that the highest English or Math scores was for the students with one move, the scores went into
a descending order going down as the number of moves went up ending with the lowest score for students with four moves.

Hypothesis 3:

Students within the intervention plan perform better than other mobile students.

Table 3: Averages of the students: mobile with and without intervention and no-mobile

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math with intervention</td>
<td>31</td>
<td>64.53</td>
<td>12.18</td>
</tr>
<tr>
<td>Math without intervention</td>
<td>31</td>
<td>62.34</td>
<td>12.16</td>
</tr>
<tr>
<td>English with intervention</td>
<td>31</td>
<td>62.73</td>
<td>10.80</td>
</tr>
<tr>
<td>English without intervention</td>
<td>31</td>
<td>57.39</td>
<td>11.83</td>
</tr>
</tbody>
</table>

Achievement in Math and English were separately tested. The independent t-test was conducted comparing average scores of the three terms in Math for the students who had intervention and those without. The evidence was not significant enough to state the intervention improves the students’ achievement on the Math scores.

The average in math for the students who are in the intervention program (n=31) SD=12.18 was 64.53 while the average of the students who are not in the intervention program (n=31) SD= 12.16 was 62.34. The difference was 2.19. t (60) =071, p =0.24 thus the analysis showed no significance.

On the other hand the evidence was significant for the English scores where the difference was (AV English with intervention - AV English without intervention = 5.36). The evidence shows significance p-value = 0.03.
Discussion

Hypothesis 1:

Mobility has a negative impact on the students' academic achievement in Math and English.

Many other findings stated that mobility has a negative effect on students' performance in math and English. Mao (1997) also found that mobile students scored lower than non-mobile peers on state mandated tests in both reading and math.

In this study one can notice that the reasons for mobility are mainly personal reasons. In this we are different from the United States and Australia where mobility is mainly caused by the financial situation of the family.

Figure 1:

Average of the mobile vs. no-mobile students in 2006-2007

In this graph we see that by the end of the year the average score of the mobile students came closer to the average of the n-mobile students. This support the idea that mobility has negative effect on the students because by the end of the year the students are now acquainted with the new school environment and consequently their averages rose.
Hypothesis 2

Students with higher mobility rate perform less than other mobile students in Math and English.

Scores on achievement tests may be lower in more mobile students (Mantzicopoulos and Knutson, 2000; Parades, 1993, in Wright, 1999). If we examine the scores of the students with two moves we notice that the average score for English and Math dropped significantly. The students who made two moves in one year were rather shocked. They met new peers and new teachers for the second time in one school year. Students started to realize that they have an abnormal case and they are not able to perform as well as they use to do. Therefore, their grades dropped in that drastic way. If we compare the average of the students who moved for two times with those who moved three times, we notice that the difference was not that significant; may be because the students accepted their status and they are giving no more effort to change it. With the students who have four moves, we come again to a very drastic drop. Here the students became academically challenged because of the interruption they face in the learning procedure. They cannot cope with all the changes which lead to their grade point average fall. One should note that this is a very special case. yet it gives the study more evidence that mobility is a highly determining factor in the academic performance of the students. Here we have to mention some facts about those students with four moves (2 cases) they were living abroad (in Riyadh) then they left to Jeddah for job reasons. Later the parents were divorced and the kids came with the mother to Lebanon where they attended an international school outside Beirut. In the mother wanted their kids to stay in the same system (international system). but for residential causes they moved again to the school where the study was made (in Beirut). thus summing up their moves to four.
My finding supports what Mantzicopoulos and Knutson (2000) suggest, “Students who transfer from school to school may struggle with instructional practices that proceed at a different pace with each new teacher” (p. 310). The results show that $R^2 = 0.271$ which means that 27.1% of the variation in the average English score is explained by the variation of the number of moves while in Math $R^2 = 0.29$.

Figure 2:

**Averages of the mobile students with different number of moves**

![Graph showing average scores for English and Math across different number of moves](image)

From the results we can see how the number of moves affects the grade point average in Math and English. The more a student move the more negative effect mobility has on his/her performance. It is worth to note that there is no significant difference between the third and the second move. This maybe because the students accepted their status and they are not giving any effort to change it.
Hypothesis 3

Students with intervention perform better than those without intervention.

We notice that the intervention was not as efficient in Math as it was in English. As we know there are many skills in English that are repeated through different levels. So the intervention program helps the students to improve their scores. (The difference= 5.36). Whereas for the math the difference was 2.19. This maybe due to two factors: First: the students were better in math than they were in English so the intervention made little improvement. The other reason is that the skills in math need more time to be acquired than those in English. The findings from Mehana and Reynolds' (1995) study of students in the Chicago area were consistent with those from Texas in that the effect was stronger in math than in reading. This would seem likely because math skills must be built upon skill after skill. Frequent moves appeared to result in gaps in the learning process and in the skills taught.

Figure 3:

The average score of the no-mobile students, the mobile with intervention and the mobile without intervention in 2007-2008
In this figure we can see how the average score of students evolved throughout the year 2007-2008. The graph below shows that the students that are in the intervention program performed better than those who are not in the intervention program. But both performed less than the stable students. These results show that the intervention plan was not efficient especially by the end of the year. As the figure shows the scores of the mobile students outside the intervention plan are very close to the scores of those in the intervention plan and way less than those of the no-mobile students; this may have happened because the teachers did not follow up with the plan till the end of the year. We should note that after the 2nd term the teachers start to compact the curriculum so that they can finish the required materials by the end of the year.

Figure 4:

*Math and English averages of the mobile students with and without intervention*

If we compare the English average scores of the mobile students that are not in the intervention program to that of those in the intervention plan we notice that the difference is slightly significant (p= 0.03.) While if we compare the Math average scores of the mobile
students involved in the intervention program to the Math average scores of the students not involved in the intervention plan we notice that the difference is not significant (p= 0.24). This would seem likely because math skills must be built upon skill after skill. Frequent moves appeared to result in gaps in the learning process and in the skills taught as Mehana and Reynolds’ (1995) stated. Another reason may be that the students have basic weakness in Math from the previous years. That’s why, as I mentioned before in the limitation part, it is highly recommended to get the results of the mobile students from their previous schools.

Finally it is worth to mention that the number and the kind of the reasons leading to the move have different effects on the students’ performance.

Figure 5:

*Financial, personal and personal + financial reasons for the move.*

![Graph showing averages of mobile students with financial, personal and both personal and financial reasons for the move.](image)

This graph shows the difference in the averages of the students having only financial reasons, only personal reasons and those who have both financial and personal reasons for the move.
If we examine the average of the mobile students who have only personal reasons for their move, we notice that the majority of the students fall on the area between 60% and 70% we know that one reason may be more dominant than the other. e.g. the death of one of the parent may lead to deterioration in the financial status; it also can lead to a change of residence which consequently leads to a change in the school. In this case the students come to school with two burdens being a mobile students and having emotional instability caused by his family’s conditions. Another problem may be with the school principal or any of the school staff; it may also lead to a change in the school. Both are personal reasons, but are these two reasons of the same importance? Definitely they are not. That’s why we notice that a mobile student may not be academically affected especially if the reason of the move is not of vital importance. Moreover some students may perform better when they change school. This may happen because some students get used to the teachers and supervisor and consequently they feel kind of secure even if they misbehave. when they change school they meet new teachers and new superintendent so they are obliged to behave better.

If we examine the averages of the mobile students who had financial reasons for their move, we notice that their averages are the highest among the other students. The graph tells that most of the students scored above 60%. One has to note that these students were obliged to change school for financial reasons. They may be originally good students. And this seems to be logical because by the end of the year we notice that their scores increased. This means that once they got used to the new system, their performance improved.
The findings of Mehana and Reynolds' (1995) study of students in the Chicago area were consistent with those from Texas in that poverty was a significant predictor of Mobility and, thus, frequent Mobility was a significant predictor of lower scores. This is not the case in our study. This proves that one should look at mobility in Lebanon from a different perspective than that in the states or Australia.

In the results we see that the students who had both personal and financial reason for their moves are the worst performers. This is because they have many burdens that they cannot handle so their GPA dropped to 50% and less. One should notice that the average of these students, though still very low, started to rise by the end of the year. The students may have got acquainted with the new system and they are now less tensed. Taking in consideration that adaptation to the new system could improve the academic performance, these students are expected to achieve better next year. This shows again that mobility is a major factor which affects the performance of the students.
Chapter 5

Recommendations and Conclusion

A-Recommendations for future studies.

Concerning Sampling having equal number of males and females is recommended. Doing so gives more objectivity to the study; moreover it gives a wider horizon about mobility causes and effects.

The data collected in 2006-2007 and 2007-2008 was done on those students who were considered mobile in these two years. It would be better to collect data about the students from previous years, or at least the year before the move. Collecting the students’ data of the previous years is recommended in order to have a more accurate figure about the status of the students.

It is recommended for future research to investigate about the reasons and find out which kind of reason is more impairing the performance whether the financial or the personal reasons. Thus in the intervention program one would emphasize more on the most harming reasons and work on them to lessen their effect on the students.

The number of schools I had was only three and consequently I had a small number of students. I recommend having more schools involved in the study so that one can have a more comprehensive overview of mobility and its effects.

Concerning the intervention plan I recommend that it would be handled with more stability so that the positive effect it has at the beginning of the year proceeds till the end.
B- Conclusion

The findings of this study support the existence of a negative correlation between mobility and the academic performance of the students. The study also confirms that the number of moves a student makes is a major factor in predicting the level of the academic performance.

Moreover, this study proved that when an effective program of intervention is applied one can diminish the harm mobility is causing.

This study will help educators on different levels, parents, principals and teachers.

1- Principals will have a clearer idea about mobility and its effect. They will recognize how mobility hinders the smooth sequence of the curriculum in their schools. Finally it will help them diminish their financial loss. Once they know the reasons for mobility they would able to avoid them and consequently keep the enrollment in their school as stable as possible.

2- Parents will identify the effect of mobility on their kids and thus they would try to avoid it as possible as they can.

3- Teachers will have a better idea about the mobile students and hopefully they will be more understanding in dealing with them.

4- Finally this study will be of great help for those who invest in the academic field. They should found schools in areas that are easily accessed by most people. Thus they would eliminate one of the major factors for mobility which is the residential factor. Consequently they will diminish the chances of loosing students for the reason of housing.
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*Student mobility - reasons, consequences and interventions*


Students Mobility and Academic Achievement


