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Concurrent high school-university studies as a route to higher education

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This research examined a program of concurrent high school-university studies aimed at promoting students living in underprivileged areas to continue on to higher education. High school students attended university once a week for learning enrichment or participating in full academic courses. Data were collected through interviews and documented meetings with students and their parents, university lecturers, and school staff. The high-achieving students were primarily interested in learning advanced topics in the exact sciences; formal rewards such as raising their probability of being accepted to the university after graduating from high school or credit for future studies at the university were of second priority. The low-achieving students perceived the program as being a window of opportunity to higher education; they truly enjoyed the courses that were anchored in their life contexts, for example, Medicine, Law, and Economics. The most successful courses were those that consisted of class activities, group work or projects, rather than the delivery of content by the teacher. Two principal factors influence the success of a concurrent high school-university studies program: close cooperation between the school and the university in designing courses that match the needs of students from a wide spectrum of scholastic achievements; and close supervision by the school of the students studying at the university and the provision of adequate support in case of difficulties.

INTRODUCTION

The lack of access to higher education for low-income groups continues to undermine economic growth and increase income inequality (ACSFA, 2000; Coles, 1999; Forsyth and Furlong, 2003; Van De Werfhorst et al., 2003). In a broad context, improving the high school-university transition has been recognized as an important factor in the knowledge-based economy and part of the concept of lifelong learning (OECD, 1996a, b). This research examined the effects on students and schools of a concurrent high school-university studies program aimed at promoting students living in underprivileged areas to continue on to higher education.

Since the access problem has financial, cultural, and academic dimensions, it should be concerned not only with K-12 education, but also with the higher education system. One model of high school-university partnership aimed at improving education for underprivileged students is concurrent enrolment programs, including opportunities for high school students to study academic courses and accumulate university credits. Figgis and

Parker (2002), for example, discuss in detail the applications of such a framework in Australia. Another approach of high school-university cooperation is pre-service teacher education, teacher tutoring models, and school improvement and restructuring efforts (Greenberg, 1992; Ascher and Schwartz, 1989). A third approach of programs aimed directly at underprivileged students is academic support, such as enrichment courses (Barak, 2005), pipeline courses, teaching learning skills, or test preparation. A fourth way is social support, such as parental involvement, peer support, cultural affirmation, and providing information about higher education admission and studies (Heather, 2000; Gandara and Maxwell-Jolly, 1999). Heather (2000) mentions that although pre-college programs providing a comprehensive approach and combining wide-ranging services are likely to impact students' access to higher education more than single-service programs; intervention programs frequently deal with only a few aspects of the problem mainly due to limited resources.

The program observed in this study aimed at introducing high school students into a university environment, enabling them to experience university study, and bringing them together with students from different socio-economic populations, such as from metropolitan areas, small towns in peripheral districts, rural villages, and various ethnic communities. In its third year, the program comprised 730 students from 29 Israeli high schools. Special arrangements were made to bring students living within a 50-kilometer radius to the university one morning a week. Each student could select two courses out of 40 on subjects such as Medicine, Psychology, Philosophy, Law, Physics, Mathematics, Chemistry, Biotechnology, Engineering, and English drama. Most of the courses were designed especially for high school students, but some were full academic courses. With the aim of opening doors to higher education for students from a diversity of neighborhoods, each school could recommend 15-20 high-achieving students (10th and 11th-graders) with no rigid prior constraints. Since the schools differ significantly one from another, the program comprised students coming from a wide spectrum of scholastic achievements and socio-economic backgrounds: from excellent students learning in the more established schools in the area, to relatively low achieving students from schools serving mainly low-income families.

In order to explore the potential advantages and limitations of a joint high school-university program aimed at promoting students from deprived areas to higher education, the study presented in this paper was guided by the following questions: What were the expectations of the students, their parents, and the high school teachers of the concurrent high school-university studies program? What is the school's role in the program? These questions are significant in expanding our knowledge about improving education in underprivileged neighbor-hoods and increasing the chances of students from these areas access to higher education.

Conceptual framework

As previously noted, several factors might undermine access by talented students residing in underprivileged areas to higher education (Van De Werfhorst et al., 2003; Forsyth and Furlong, 2003): a lack of familiarity with higher education, which often resulted in choosing inappropriate courses or unsuitable institutions; a lack of funds, which limited the students' choices of courses, institution, or length of learning; a lack of confidence about both academic success and post-university job opportunities; and feelings of cultural isolation, particularly regarding studies in prestigious institutions. Consequently, in order to increase the participation of disadvantaged groups in higher education, schools and universities must cooperate not only to improve scholastic achievements, but also to break social and cultural barriers

that impede students from seeing higher education as a realistic alternative for them. In this study, however, the discussion of the potential contribution of high school-university cooperation focuses on issues related to teaching and learning, since the content of the courses the students are expected to learn and the quality of instruction in these courses are the central factors influencing students' motivation to learn.

Instruction that enhances learning

Dewey (1959) suggested the concept of contextual learning, which means relating what is learned in school to children's experiences and interests and to real-world situations. According to this approach, students are motivated to make connections between knowledge and its applications to their lives as family members, citizens, and workers. Strategies for contextual teaching and learning include, for example, anchoring teaching in students' diverse life contexts, emphasizing problem-solving, encouraging peer learning and cooperative learning in the class, and learning through reflective practice (Brown et al., 1989; Resnick, 1987; Slavin, 1990; Schon, 1983). One way of building a constructivist-oriented instructional environment is to provide learners with access to expert performance and modeling of processes; this can be realized by having students meet with researchers and engineers in academia and advanced industry (Herrington and Oliver, 1997; Brown et al., 1989; Collins et al., 1989; Lave and Wenger, 1991). Another important ingredient in meaningful learning, especially in the areas of science and technology, is hand-on activities with materials, tools and lab instrumentation, or using computer technologies and the Internet to enhance learning (Scardamalia and Bereiter, 1996). Jonassen et al. (2000), however, stress that advanced technologies promote meaningful learning only when used to engage learners in knowledge construction, conversation, articulation, collaboration, authentication, and reflection.

Bransford et al. (2000), in their book "How People Learn", mention four perspectives of a learning environment that supports significant learning. One perspective is a learner-centered learning environment, which is fairly close to the concept of contextual learning mentioned above. Another perspective, according to this model, is a knowledge-centered environment that deals with fostering learners' thinking skills, such as critical thinking, creative thinking and problem-solving, by learning well-organized bodies of knowledge. Instructional strategies aimed at developing students' thinking are infused into teaching a specific subject matter, for example in science and technology, and not detached from the current curriculum (Swartz, 1991). The third perspective in this approach is an assessment-centered learning environment, namely providing students with formative assessments aimed at helping them to improve their thinking and learning. The fourth perspective is a community-cen-

tered learning environment, which means encouraging students, teachers, and other interested participants to share norms that value learning and high standards; the term community includes, for example, the community of the classroom, school, home, community centers, after-school clubs or university, as found in the program discussed.

To what extent can a university enrichment program provide a learning environment, as characterized above, better than a high school? On the one hand, a university, more than a high school, is an advanced institute of knowledge and expertise; in addition, a university program is not obligated to a mandatory curriculum as are the schools. On the other hand, there is a question as to the extent of the university lecturers' pedagogical experience that is required for utilizing instruction distinct from frontal teaching often used in academia. These issues, together with the question of the school's role in a joint high school-university program, were the main subject of this study.

METHODOLOGY

Participants

The joint high school-university program examined in this study involved 730 students, most of them from poor socio-economic regions in Israel, who studied two courses once a week at the university. Twenty-one of the schools had accumulated one or two years of experience with the program, while eight were in their first year of the program. These schools were selected by the Regional Office of the Ministry of Education, jointly with local municipality, to represent fairly the different socio-economic populations living in the area.

Method

The study adopted a qualitative-constructivist approach (Lincoln and Guba, 2000) to investigate the program's issues and implications (Marshall and Rossman 1995). Data collection adopted the "participant observation" approach (Marshall and Rossman, 1995), where the investigator is immersed in the setting and experiences the reality as do the other members. The investigator was fully engaged in following up the entire program in its third year and during the preparation phase in the fourth year. Data were gathered as follows: 1. Documenting the meetings held with the students and the school staff from the 29 high schools that participated in the program. The program team, including the principal researcher, visited each school at least once and met with the students, the school principal, and 2-3 senior teachers .2. Documenting two meetings with representatives from each school that were held at the program headquarters. In these 60-90 min meetings, the participants discussed the program's objectives, the school's experience in the program, and future expectations. A detailed protocol was prepared during these meetings. 3. Observing the meetings of the school staff with parents and students from three schools, and participating in informal discussions with the teachers, students, and parents during these meetings. 4. Documenting a mid-year meeting of 25 university course lecturers with program management aimed at obtaining feedback and suggestions for improvement. 5. Informal talks with the university course lecturers. 6. Short interviews with the students during their stay at the university. 7. Attending an end-year meeting of all 29 school princi-

pals and the schools' program coordinators with program management, including representatives from the university and the Israeli Ministry of Education. 8. Making information available on students' attendance in the courses and their achievements. 9. Using an internal report of an independent evaluation team as a complimentary data source for the current study. This team interviewed the students, parents, and school teachers, and distributed an attitude questionnaire to a sample of students.

Data analysis

In qualitative research, the core of data analysis is categorization. In the first stage, the information collected was classified into segments, such as descriptions of activities, events, opinions, and expectations. In the second stage, the main subjects that linked the various segments and gave them significance were re-identified. The data analysis was reorganized according to these categories using an interactive approach, whereby categories were created, merged or removed until a reasonable and significant structure was created (Maykut and Morehouse, 1994; Marshall and Rossman, 1995). This process was carried out by the principal researcher, together with three program team members who are experienced mathematics, English, and Physics teachers.

FINDINGS

University courses

The students attended the university once a week during the academic year (two semesters) and studied two courses of their choice each semester from 40 courses in humanities, the exact sciences, and Medicine. Some of the courses were identical to academic courses taught at Ben-Gurion University of the Negev for students studying towards their B.A. or B.Sc. degrees, while others were designed particularly for high-school students.

The students' achievements in the courses varied from class to class, as detailed below. At the end of one semester, 971 grades were reported for 688 students participating in the program, an average of 1.41 (instead of 2) courses per student. From these data, 126 grades (13%) were in courses relating to Medicine, having a 92% success rate (minimum grade of 60 on a scale of 0-100); 425 grades (44%) were in humanities and language courses, characterized by a 80% success rate; and 420 grades (43%) were in the exact sciences, Engineering, and Mathematics, with a 63% success rate. Approximately 15% of the students dropped out of the courses, mostly during the first few weeks of the semester, mainly because they did not get accepted to the courses they wanted. Other students had to complete several course assignments to be given a final grade. The highest average grades (over 90) were in the courses "Medicine," "Introduction to Logics," and "Oceanography"; the lowest average grades (under 30) were in the courses "Mathematics for Engineering," "Introduction to Physics," and "Digital Electronics."

The general conclusion from the above data is that the majority of students were more successful in the courses relating to social sciences and Medicine than in the cour-

ses in the exact sciences (except for a group of Arabic-speaking students, as noted later in the article). This conclusion has to do not only with the content of the courses but also with the distinct instructional approaches taken by the lecturers in different courses. As seen earlier, the main objective of a joint high school-university program is to enhance students' learning competencies and motivation to learn, rather than delivering a specific subject matter. This requires the teacher to shift from content-oriented teaching to process-oriented teaching, which is based on principles such as knowledge construction, contextual learning, peer learning, hands-on learning, and learning through reflective practice. This approach differs somewhat from the conventional teaching of Mathematics, science, and Engineering courses, especially at the university level. In the program discussed, many of the lecturers in the exact sciences courses adhered to the delivery of the content, and perceived the use of flexible instruction as reducing the course level.

In meetings with the lecturers, the participants said the following:

"If we turn the courses into a high school level, there is no use for the entire program.

Since the students come to the university, they should complete the same curricula as the other students.

Let's not cheat ourselves or the students."

The following is a specific example. In a course in the exact science, most of the students encountered difficulties; many did not complete the course or they failed the final exam. The lecturer could enrich the course by guiding the students to use instructive materials such as books and simulation software that are used successfully in technological colleges and other high schools countrywide. Moreover, integrating lab work could significantly change students' learning. Although this lecturer was very committed to the high school students and invested considerable efforts in personally helping them out, he saw it as his duty to teach the course exactly as it was delivered to the university students, namely through conventional chalk-and-board lessons.

In contrast to the difficulties encountered in the exact sciences courses, the social sciences and Medicine Courses were easier for the students and more accepted. Very often, the lecturers of these courses adopted a diversity of teaching methods, such as discussions, demonstrations, and teamwork. For example, in a course entitled "Introduction to Law," the class simulated a court in which the students acted as judge, prosecutor, defense attorney, and accused. Several lecturers described their experience with the students as "wonderful," "exceptionally enjoyable," or "even better than the first-year university students."

In light of the results of the courses at the end of the academic year, and feedback from the students and the lecturers, it was decided to group some of the exact sciences courses into an "Introduction to Academic Studies" course, with the aim of better suiting the course content and instruction methods to the students' prior knowledge, rather than aiming to provide a full academic course.

Students' viewpoints on university learning

The students' attitudes towards the university courses were examined by holding short interviews with them during their studies at the university, informal talks in their schools, and documenting the meetings with school staff, students, and parents prior to registering for the new academic year. In these discussions, the students were asked about the reasons why they participated in the program, their expectations, and their satisfaction from the courses they were taking. Another source of information in this regard was an internal report prepared by an independent evaluation team that interviewed 53 students, inspected 12 lessons at the university, and distributed an attitude questionnaire to 160 students.

The majority of the students who attended the university courses for their first or second semester (mainly 10th-graders) were highly satisfied from the mere learning experience in the university. A vast majority of the students agreed that they expected to learn new subjects and expand their knowledge; in contrast, these students were less interested in improving their grades at school or their Bagrut certificate (an Israeli term for the formal matriculation exams taken by the students in the 11th and 12th grades, which is a major factor influencing their acceptance into university after high school). In an attitude questionnaire (n =160), about 80% of the students marked that their motive for joining the program was to gain knowledge in new subjects. Approximately 60% of the students indicated that they selected the courses according to their personal interests. Additional reasons, such as influence by friends or teachers, or long-term considerations, were marginal in their answers. While conducting discussions with the students, however, further points were observed. For example, many students requested to study courses in English because, as some stated:

"English is the key to working in the high-tech industry".
"Without English you can't succeed in university".
"Today it is important to know as many languages as possible."

The courses in Medicine were also in high demand among the students. Students who completed one or two years in the program were asked about their satisfaction from the courses and whether they would like to continue the program in the upcoming year. The answers to these questions were generally positive, both in the interviews and the questionnaires; average scores ranged from 4.0-4.5 on a scale of 1-5. Some students described the university studies as "something different" or "another world" in comparison to high school. These results, how-

ever, did not reflect the difficulties some of the students encountered or their dissatisfaction, as discussed below.

From high- to low-achievers: School considerations in selecting students for the program

Schools not only selected the students for the program, but also arranged exemption for them on Friday morning classes and provided them with supplementary lessons to compensate for those they missed that day. The principal and program coordinator from each school often reported that they personally handled the case of any student who encountered difficulties in the university courses or wanted to drop out of the program. This fact demonstrates that many of the school principals regarded participation by their students in the university program as a matter of prestige for the school, and felt that they were personally responsible for the program's success for the students and their parents. Since the school educators were well acquainted with their students and could draw a comprehensive picture of the program, the information gathered from the school staff was of great value in understanding the program's development and its influence on the students. The school's involvement in the program is presented here through examples of how high- and low-achieving students were handled, and emphasizes some of the program's particular aspects.

High-achievers

To illustrate the participation of outstanding students in the program, it is useful to examine two specific examples. One school, located close to the university and among the more established institutes in the region, selected 17 students for the program, all of them high-achievers. As previously mentioned, each student could study two courses per semester. In one semester, the following results were observed: 11 grades were in the exact sciences, with a mean of 88.5 (on a scale of 0-100) and standard deviation of 11.6; 12 grades were in general studies, the humanities, and Medicine, with a mean of 92.4 and standard deviation of 4.8; 10 students were granted an award of excellence in at least one course; and three students failed at least one course, all in the exact sciences.

A different situation was found in another school, also a well-established institute, which selected 23 students for the program (10th-graders), most of them high-achievers. Unexpectedly, half of them dropped out of the university courses during the academic year, and only a few participated in continued university courses in the following year during their 11th grade. In meetings with the school principal and the teaching staff, they explained that the students had expected to study advanced subjects in Mathematics and science in the university, beyond what they learned in high school. The program did not meet their expectations for several reasons: most of the stud-

ents didn't study "real" university courses; they participated in the same class with less-achieving students from other schools; they realized that studying university courses during high school would not affect their chances of being accepted to the university in the future; and finally, the university coursework represented an additional load for them and sometimes conflicted with their school exams. In the subsequent year, this school sent only 12 students (10th-graders) to the program, in which the majority of them were from the schools' second-best achieving class. Seeing the preparation of the students for matriculation exams as their main goal, the Mathematics and Physics teachers in this school did not make any serious efforts to convince their best students to join the university program. These teachers cited that their students excelled academically on a regional level, but not in comparison to excellent students from schools in the country's center. In their opinion, there was the question as to the extent that the university program helped the students in bridging this gap.

Low-achievers

A different situation was found in one of the schools that served students from primarily low-income families. In this school, as is common in the area, less than ten 10th-grade students were relatively high achievers.

In the discussions with the teaching staff, the following was said:

"Since there are only few excellent students in our school, we included a few lower-achieving students in the group, those who at least behaved properly.

In the beginning, the students were enthusiastic and had high expectations that university studies would be different. Very soon afterwards, however, they encountered difficulties.

Many of our students lack basic leaning skills, such as reading, writing, homework preparation or studying for an exam. How will they be able to study in a university?

Could the university courses develop their learning skills better than we can?

Some of the students attended the university courses only because we told them that it is important for them. Sometimes we had to convince them to get on the bus.

Our school is the only one in town. We are expected to participate in the program to avoid our town falling behind.

Despite our efforts, most of our students dropped out of the program."

In another school, also serving a very weak socio-economic population, some students studied the course "Introduction to Medicine," designed especially for high school students. The school teacher who accompanied the students said:

"The students enjoyed the course tremendously. One of the girls told me that she would like to become a doctor because of this course.

I believe she understood that on the basis of her current situation in high school, she would be unlikely to be accepted to a faculty of medicine.
I don't want to lower her morale… she is very content and has dreams for the future… what's the matter with that? Perhaps, thanks to the course, she will make an effort to improve her Bagrut certificate after high school."

The cases described above regarding the schools' viewpoints about the program emphasize one of the most difficult questions relating to a joint high school-university educational initiative – determining the target population. This issue is addressed further below.

Parents' expectations

Taking students out of high school to study at a university every week is unusual in the Israeli educational system. In a meeting between 20 students and their parents with three senior teachers and the program representatives prior to the students' registration for the program, the students and their parents asked questions such as:

"Would the courses held on Fridays award the students with academic credits that could be used for future university studies?

Would succeeding in the courses improve a student's chance of being accepted to the university after high school?

Would the university studies help to improve the students' Bagrut scores?"
Would the university courses not be extra load on the students and disrupt their learning at school?"

The teachers explained to the children and the parents that studying in the university on Fridays was aimed at enriching students' knowledge and developing their learning skills; accumulating academic credit points was marginal. In this case, the parents were aware of the possible implications of the program on their children in the long term, and saw the school and the teachers as being responsible for the children. A similar viewpoint was expressed in the interviews with the parents of students who participated in the program for one or two years, as presented in an internal report. Many parents worried about the great pressure their children would be under in studying at the university in parallel to high school, and expected that the school would help the students overcome this problem. In the discussion with the teachers immediately after the above-mentioned meeting with the students and their parents, some teachers noted that that they were trying to convince the students to participate in the university program even though they themselves did not exactly know what the students would study there. The teachers feared that if their students failed in university, this would adversely affect the school; one teacher suggested that the school would provide help to students who encountered difficulties in the university courses. This example illustrates the teachers' sense of responsibility for the students even

though the program under discussion took place outside the high school framework.

In another school, the teaching staff selected 22 candidates of varying academic achievements. Other important criteria, according to the teachers, were student's motivation and socio-economic backgrounds. One of the teachers reported:

"Some parents of excellent students who had not been accepted to the program put pressure on the principal to include their daughter or son.

Despite that collecting money is often a difficult task at our school, parents came with cash for the program fees and waited in line at the principal's door.

One parent insisted that his son attend the 'Introduction to Medicine' course. The teacher quoted him as saying 'I am a doctor, my father is a doctor and my son must study Medicine.'"

Different expectations from the program were found in a school located in a settlement of Bedouins, an Arabic-speaking ethnic group living in the Southern and Northern regions of Israel (Abu-Saad and Lithwick, 2000; Karnieli, 2000). This is a conservative society whereby the majority of the families are characterized by low socio-economic backgrounds. First let us examine a specific case of achievements by Bedouin students in the university program. One school sent 12 students to the program, all of them high-achievers in their school. Each student studied two courses, with the following results: 11 grades were in the exact sciences, with a mean of 67.3 and a standard deviation of 14.4; six grades were in general studies, the humanities, and Medicine, with a mean of 53.8 and a standard deviation of 23.3; six students failed at least one course. Since the mother tongue of the Bedouin students is Arabic and the university courses were delivered in Hebrew, some of the social-oriented courses were more difficult for these students than the Mathematics and science courses. It should be emphasized that despite the relatively low achievements of these students, their mere participation in the university courses was seen as a success. In a meeting in one of the schools, the principal said:

"In our society, studying in the university is important. Most of the students, or parents, have never even seen a university.

After high school graduation, the students could study social work or nursing at the university."

In an informal discussion with the teachers who accompanied the students on the university campus, he told that the parents had placed massive pressure on having their children accepted to the program. "For them," he stated, "this was a matter of prestige."

Another example that illustrated a common viewpoint among the educational staff and the parents to the program was a small high school located about one-hour's drive from the university, from which 10 students (10th-graders) participated. Pleased by the students' serious-

ness, the principal openly admitted that he had been doubtful as to whether the students would get up every Friday (a free day at that school) at 7:30 a.m. to travel to the university. "They go to the university willingly and come back full of experiences," stated the principal. Yet, other teachers confessed that they were hardly aware of what their students were studying in the university. Since most of the students were average-achievers in school, the teachers perceived the university program as being a general enrichment framework. According to one of the teachers, "the students go willingly to the university because this is a way for them to break away from school routine, to escape from the small city borders, and to make new friends; the learning issues are less important." In a meeting with the students and their parents during the registration process for the new academic year in this particular school, parents made the following remarks:

"It is important for them to see what the university looks like.
I hope the program will impart to them the feeling of excelling, being a selected group.
It is important that they get together with students from the best school in the region."

DISCUSSION

This study addressed a program intended to promote the access of students from low-income areas to higher education through their enrolment in university enrichment courses concurrent to their high school studies. As previously mentioned, although the problem of poor access by students from underprivileged area to higher education has educational, social, and economic dimensions (Forsyth and Furlong, 2003), in the core of the problem lie issues relating to teaching and learning in the broad sense of this term, since the bottom line is that this is the major activity of both the high school and the university. Accordingly, the following paragraphs deal with two main aspects highlighted by this study: What do high school students expect to learn at university concurrent to high school? And, what is the schools' role in a joint program with the university?

What students are expected to learn at university concurrent to high school

The observed program, aimed at opening doors to higher education for students from a wide spectrum of scholastic achievements and social backgrounds, avoided any measures intended to check the students' prior knowledge or classify them into specific groups. Since the responsibility of students' selection to and registration for the different courses was given fully to the schools, the participating students demonstrated a multitude of expectations, which depended heavily on their scholastic back-

grounds. At one pole were the outstanding students, who anticipated learning challenging subjects in university in areas such as Mathematics, science, and computer science, beyond what they were learning in school. From the perspective of contextual learning (Dewey, 1959), which means relating what is learned to children's experiences and interests and to real-world situations, the high-achieving students in the current study were already fully involved in planning their enrolment to higher education after high school since they expected that the program would help them achieve this end. For these students, the term learning community (Bransford et al., 2000) meant not just meeting other talented high school students or sitting in class next to regular university students, but also interacting with scholars and scientists in academia, being exposed to state-of-the-art scientific research or working in an interesting laboratory. Formal rewards granted by a university enrichment program to high school students, such as raising their chances of acceptance to the university after graduating from high school or accumulating credits for future studies at the university, were less important for the students; this type of reward could have increased the students' motivation to complete a course or faithfully attend the program under the condition that their expectations for learning high know-ledge subjects were fulfilled.

A different picture was drawn regarding the students who participated in the university courses during high school although their scholastic achievements at school were insufficient for enrolling into the university upon graduating from high school. These students knew that they would perhaps need to take complementary preparation courses in order to enter tertiary studies in reputed academic institutions. Why did these students attend the university once a week during high school? What were their expectations? The above-mentioned concept of contextual learning, which means adapting learning to students' interests, knowledge, skills, attitudes, and beliefs, defines quite well what the majority of the students in the observed program were interested in. As we have seen, the most popular and successful courses in the university program were in subjects like Medicine and Health, Law and Economics, or Arts and Theater. The students were interested in courses that: 1. Involved real-life problems, issues of concern to youngsters, lit up their imagination or stimulated their artistic talent. 2. Took place through class activities, group work, projects, circles of action, and reflection rather than by delivery of content by the teacher to the students.3. Dealt with subjects distinct from what they were learning at school and that did not rely on specific knowledge learned at school.

Although the students realized that the courses they studied at the university had only little to do with their chances of getting accepted to the university after graduating from high school, many saw this experience as opening a window of opportunity to higher education or building some hope of being a doctor, a lawyer, a nurse

or a businessman/woman in the future.

At this point, it is useful to return to the question of defining the objectives of the joint high school-university program. 1. If the program is aimed primarily at high-achieving students, it can really prepare these students for higher studies; such an approach, however, some-what limits the program's scope and target population, and increases gaps between students from different socio-economic backgrounds. 2. If the program adopts an open-door approach and provides opportunities to stu-dents from diverse learning backgrounds, as in the cur-rent case, it should focus on granting the lower-achi-evers social and cultural enrichment and developing their interest and confidence in learning.

Schools' Role in a Joint Program with the University

Undoubtedly, enrolling students in a university for a few hours every week can complement, but not replace, the educational work done at the high school level. Since the task of motivating students and enhancing their cognitive abilities relies heavily on the school teachers, only those teachers who have a strong sense of belief in their stu-dents can enhance their intellectual development (Pa-jares, 1992; Borko and Putnam, 1996). Although sending students to the university once a week was only one piece in the complicated puzzle of school work, the cur-rent study showed that the majority of school principals and teachers who were involved in the program took the task very seriously since the school saw the program as a means for: 1. Providing the students with the best edu-cational opportunities. 2. Promoting excellence at school and 3. Reinforcing the school's image in the eyes of the students ,the parents, and the authorities.

In light of the schools' objectives identified above, the schools invested considerable efforts in selecting the stu-dents for the program, supervising their attendance at the university, and following up on their achievements in the courses. In practice, the principal and program coord-inator in each school performed these tasks, while the professional teachers in areas such as the exact sciences or the humanities were rather disconnected from the program.

Certainly, the question of the schools' involvement in planning or selecting the university courses requires fur-ther investigation, particularly in regard to enrichment courses designed specifically for the high school students. On the one hand, students expect to learn different things in the university than what they encounter at school; on the other hand, as this study showed, the pedagogical knowledge of university lecturers is not always greater than that of school teachers. Figgis and Parker (2002), in their report on providing university credit to Australian high school students, emphasize the need for "sustained conversation and information sharing within and between the higher education and school sectors." This recomm-endation is even more critical in designing instruction aimed at students who are not included among the high-est achievers in their schools.

Concluding remarks

The affiliation of high school students to the university could represent an important tool in fostering the beliefs of students from underprivileged areas in their capabi-lities to acquire a higher education by exposing them to academia and providing them with a rich and challenging learning experience. Two main factors can be marked as influencing the success of programs aimed at this end: 1.Close cooperation between the high school and the university in designing courses that match the expect-ations and needs of the students from a wide spectrum of scholastic achievements and learning habits, and 2. close supervision by the school's educational staff of students' studying in the university and the provision of adequate support in the case of difficulties.

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