# The Technological and Vocational Education of the Bedouin population in Israel in its social context

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**Abstract.**
The Bedouin society in the South of Israel is going through deep changes in its structure and vocational habits. Specifically education, and particularly the technological and vocational education as an important part of it, are in the core of these changes. The focus of this article is on secondary technological and vocational education of this segment of Israeli society, dealing mainly with its social background and social impact on the future careers of the youngsters. The article, apart from analysing the present situation, foresees some coming changes in the near future.

## A first introduction: Bedouin people.

The Bedouin segment of Israeli population is concentrated mainly in the Negev – an historical and geographical area of the country, administrated by the Southern District. It consists of approximately 180,000 people. Until one generation ago, all Bedouins were nomadic (Kay, 1978). The Bedouin people are Sunni Islamic and have their own system of traditional religious law, separated from other arms of justice, with full financial support of the government. The population is strongly divided within the frames of tribes.

A common, yet unchanged, Bedouin phenomenon is a husband with several wives.

Subsequently, one of the main resources for their family economics is the governmental support for families with children. It is especially palpable within families with at least 3 children.

Such a policy along tens of years brought this community towards a rapid natural growth of population – about 5.5% per year. As a result, the population of the Bedouin community doubles itself every 13 years. In addition to the tribal diversity, some of the brides were historically brought from Africa. Consequently, their offspring are blackskinned and different from other children in the same family.

The traditional sources of tribal economics were nomadic agriculture (camels, horses, sheep, and goats) and local arts (embroidery of traditional female clothes and jewelry manufacturing). The Israeli policy from its very beginning was to support the process of sedentarisation of nomadic tribes. In 1968 the first Bedouin settlement Tel-Sheva was established (Amiram, Ben David and Shinar, 1976), and nowadays there are seven such settlements (Salzman P.C. (ed), 1980). The biggest of them, Rahat, was recognized at 1994 as the first Bedouin town and currently has more than 52,000 inhabitants.

Nevertheless, until the year 2000 about 40% of the Bedouin population was still nomadic (Central Bureau of Statistics of Israel, Yearbooks 51- 61). The next step of sedentarization started in January 2004, when the local authority Abu-Basma was established, gathering under it about 72,000 not-settled Bedouins. The goal of this move was to settle the still nomadic and very sparse population into a chain of 9 new settlements.

This move brought to these new settlements about half of the remaining nomadic population. The new settlements were spread over 43 square kilometers that were invested for this plan.

A new plan of settling the rest of the nomadic population of the Bedouin people was approved by the governmental decision in September 2011. After settling down in these new settlements, the Bedouin families are sometimes divided by their lifestyle: the young generation lives in modern homes with all the facilities, while the elders still stay at their tents – mostly in the backyards of their sons. The new employment in Bedouin society includes car-mechanics, trade, building, transportation, as well as a tangible amount of high educated professionals: teachers, medical doctors, engineers, auditors, etc.

The unemployment within the Bedouin population is by far higher than in the Jewish society. The high unemployment rate together with the huge natural growth of population and traditional low-paid livelihoods led to a situation where more than 60% of the community lives under the threshold of poverty. This in turn, puts the need to develop the immense potential of the Bedouin community into a vibrant segment of the Israeli society into the focus of the technological and vocational education in this area.

**A second introduction: Bedouin education.**

From the very beginning – the establishing of the State of Israel – the field of Bedouin education was weak. The pattern of studies was visiting small field-schools– mainly by foot. Starting at the 1950-th, bus routes along the main roads was established.

Nevertheless, most of the pupils still had to walk several kilometers to the bus stops, occasionally under rain or heavy heat. At this stage the Bedouin community was provided mainly by primary education. The drop-out was far more than at the same age categories in the Jewish population. The following two stages of school education were developed next:

- **Junior high** (intermediate) classes (7-th to 9-th grades).
- **High secondary** classes (termed "gymnasium") – 10-th to 12-th grades.

The development of the educational system in the Bedouin community of South of Israel was accompanied by an array of immanent problems. Many researchers discussed these problems, while most of them have seen them as a kind of discrimination (Abu Saad, 1990; Abu Saad, 1995; Abu-Bader and Gottlieb, 2009). Here is a place to emphasize, that in all the days of building the educational system of the community and specifically its technological and vocational part there were no attempts – for better or for worse - to create a system, different from the one in the Jewish schools.

The next discussion will deal only with problems of technological and vocational education of this sector – though some of them belong to other parts of the system in general.

First of all, we should describe this part of educational system in Israel. The **technological and vocational education is concentrated only in the high secondary school** and an amount of 54 learning hours are invested through 3 years of studies (about 18 hours every week). In general, every student of such trends receives during those 3 years about 1500 hours of professional studies. These invested hours are divided into three essentially equal parts or disciplines:

- **Basic science** (physics, chemistry, biology, or general technology).
  The pupil has the right to choose one of these subjects according to his/her preferences and type of trend that was chosen.
  In fact, this right is fully implemented only in big secondary schools that propose a full choice of such subjects.

- **The core discipline of the trend**. For example, in the trend of computer engineering such a subject is "computer programming"; pupils, that have chosen the trend of accounting, learn the theory of computerized accounting – and so on.
- Writing a **practical project in some specialization of this trend**. There are 19 trends and they have about 50 specializations – all of them open in an equal way to boys and girls (Grinshpoun, 2011). There is no clear division of trends into "technologic" or "vocational". For example, students learning electricity on high level and making the three exams or projects also on the highest level – their education could be seen as typically technological. A student, finishing the same specialization with exams of the lowest level with low marks is a typical graduate of the school with only vocational training.

**Such a structure of trends brought the Bedouin sector to a list of problems:**

- **Lack of qualified Arabic speaking teachers** of science and technology.
- Difficulties in **establishing the logistic base** for such a trends.
- Difficulties in **organizing in-job advanced studies of changing technologies** in a sparsely populated and remote sector.
- Difficulties in **recruiting mentors for advanced projects** of the high technological specializations.
- Lack of **examples** in the local communities **for carrier role** of students.
- Lack of **local qualified teachers**, which usually are substituted by Arabic speaking teachers from the more educated North of the country. These teachers do not compose a solid base of the professional teams and look for the opportunities to go back to the North.

The majority of the problems were already solved or will be solved in the near future thanks the huge amount of investments in Bedouin education since 1999, when every year an average sum of 1,400,000 $ is added to the sector. Starting 2011 we expect about 2,800,000 $ to be invested specifically into the technological education of the sector during next 5 years (The Decision of Government of Israel "Arab 15", 2011).

**Methodology.**

The study is based on two main sources:

- Gathering the **data about the present situation of technological and vocational education and analyzing it**.
- My own professional activity as an educational inspector in this very area during the last 23 years, being in charge of developing and managing technological, scientific, and vocational education of Bedouin young people. **My personal experience** includes receiving all the relevant data through my inspectorial visits to the schools and local authorities, as well as on-line data.

**Process and evaluation.**

As a step of this analysis, let us examine the current situation in the education of Bedouins and its structure in different levels of the school, as presented in table #1.

**Table #1.**

**Comparative statistics of the Bedouin population in the educational system of the Southern District of Israel**

| No. | Definition of the group | Pupils in the entire Southern District | Pupils in the Bedouin education | Percentage of Bedouin pupils in this group |
|---|---|---|---|---|
| 1 | Number of pupils in all the levels of educational system | 234,489 | 75,690 | 32.3% |
| 2 | Number of pupils in kindergartens | 41,596 | 11,252 | 26.8% |
| 3 | Number of pupils in primary schools (1-6 grades) | 117,290 | 44,289 | 37.8% |
| 4 | Number of pupils in the secondary schools (7-12 grades) | 75,603 | 19,608 | 25.9% |

Sources: List of Schools 2010-1011 school year (2010).
Ministry of Education of Israel, the Southern District.

Basing our analysis on this data, **we can conclude**:

1. The proportion of **Bedouin pupils in the kindergartens is lower than their proportion in primary schools**. This reflects the social situation in the sector, where most women do not work out of their homes. As a result, they do not have the need to send their children to kindergarten (which is not an obligatory and free-of-charge level of education until the age of 5) and usually they have difficulties to pay for such an educational facility.
2. The proportion of **Bedouin children in the primary schools is the highest among all the levels**. It reflects the part of the Bedouin population in the general population.
3. The number of Bedouin **pupils in the secondary education is less, than it would be expected, based on their amount in the primary education**. Moreover, the amount of pupils in secondary education in the Bedouin sector is just 44.3% of the equivalent amount in the primary education.

More than 20,000 potential secondary-schools pupils are missing. Following my long experience of meetings with teachers, school psychologists and principals leads me to the following explanation of this phenomenon:

- Part of the boys **leave the schools in order to help their families** in their earnings.
- Part of the **girls get married or engaged** without finishing the school. This is part of their tribal

traditions.

- Another part of the **boys leave for educational institutes outside the schools of the Ministry of Education**. Such institutions belong to the Ministry of Trade and other bodies. These give the youngsters elementary vocational education as builders, mechanic workers, carpenters, etc. Unlike the vocational trends and specifications of secondary schools of the Ministry of Education, these schools usually do not provide their graduates with any matriculation in general studies - which in most cases denies them of the opportunity of earning further education in the future. These kinds of educational institutions are especially attractive for youngsters, coming from socially weak families: already during the studies the pupils are involved in real work (sometimes about 50% of the learning time), which gives them pocket-money and the ability to help their families.

Now let us examine how the Bedouin pupils of technological and vocational education are involved in the **most attractive trends of nowadays Hi-Tech**. A most important inside of statistics in the table #2 is, that the learning pupils were not "sent" to such a trends – they choose them by themselves.

**Table #2.**

**Comparative statistics of the Bedouin population in the Hi-Tech trends of Technological education in the Southern District of Israel.**

| No | The Hi-Tech trend of technological education | Number of students of this trend in the entire Southern District | Number of students of this trend in Bedouin schools | Percentage of Bedouin pupils in these trends |
|---|---|---|---|---|
| 1 | Electronics | 1,588 | 494 | 31.1% |
| 2 | Computer-programmers | 2,702 | 777 | 28.8% |

Sources: The Technological Education in Israel (2010).
The Authority for Science and Technology, Ministry of Education, Jerusalem, Israel.

Following the analysis of this data we can conclude that **pupils of technological education in Bedouin secondary schools clearly prefer the Hi-Tech trends** and the amount of Bedouin pupils in such trends is higher than in secondary education in general, It is important to stress out that there are still Hi-Tech trends that do not exist at all in the schools of the sector:

- **Biotechnology**
- **Mechanic engineering**
- **The technological-scientific trend**

This situation usually is explained by the **lack of teachers speaking the Arabic language (all the Bedouin education is based of their mother-tongue; the Hebrew is taught as second language) in these fields and the**

**need (biotechnology) of very expensive equipment**. Nonetheless, an additional explanation of such a phenomenon, could be that these youngsters are **far away socially from such industries and do not see them as their future carrier**.

- Starting 2010, the Israeli educational system is acting to widen the amount of pupils, determined as **"scientific-technological reserve"** of the country`s industry and science. This refers to pupils, who learn in the most wide and deep pattern a scientific subject (usually physics), a main technological subject from one of the Hi-Tech trends, as well as the English language as an instrument for high-level further studies and research. Until now, **only 14% of such frameworks come from the Bedouin sector**.
- The system is acting in the last 3 years to establish **new trends of computerized communications**. These new trends are dealing not with the software of computers – but with their hardware. The SISCO Company supports these new trends and provides the youngsters, who finish them, with a SISCO certificate.

**Table #3.**

**Comparative distribution of the trends with double matriculation (general certificate of studies and a technician diploma) in the Southern District of Israel.**

| Number of comprehensive schools, having a trend with double matriculation | Number of such schools in the Jewish sector | Number of such schools in the Bedouin sector | Percentage of the Bedouin sector in such schools |
|---|---|---|---|
| **24** | **17** | **7** | **29.2%** |

Sources: The Technological Education in Israel (2010).
The Authority for Science and Technology, Ministry of Education, Jerusalem, Israel.

Before analyzing this case, let us briefly present this kind of trends. Usually in order to receive a technician diploma, a graduate of the secondary school (technological trend) has to study an additional year (the 13-th grade) and has no need in the additional very tightly determined studies for full matriculation (an addition of at least 71%). In the framework of this project all the graduates of the 12-th grade receive, after very intensive studies, both kinds of matriculation– the full general matriculation and a technician diploma in electricity or mechanics. This project started at 2008 and as table #3 shows, the **schools of the Bedouin sector participated in this project in a higher rate than their percentage in the general population**.

**Conclusions and recommendations.**

**Conclusions and plans:**

1. **The Bedouin population** of secondary technological trends in the comprehensive schools (the main existing type in Israel) **is already learning in frameworks similar to those of the Jewish sector**.

2. In many technological trends and special projects **the Bedouin sector outnumbers its part of the system in general**.
3. According to the new governmental decision (The Decision of Government of Israel "Arab 15", 2011), **the number of Hi-Tech trends in the Bedouin sector will rise in about 30%**.
4. According to the same source, **the number of trends with double matriculation will double itself during the next 5 years**.
5. Currently, the Bedouin technological students have only one possibility to receive a technician diploma in the framework of double matriculation. According to the aforementioned decision, **a chain of 6 colleges (14 grades) preparing practical engineers will be established in the next 5 years**.

**Recommendations:**

- There is a need **to establish new trends, which will match the local needs** (for example – "architecture and building") **and thus reduce the unemployment rate**.
- There is a need to develop **new specializations, which will match the future carriers for girls in the fields of services**.
- There is a need to develop **new platforms for on-line studies that will enable the technological teachers of this group to learn and teach new technologies**.
- There is a need **to attract big enterprises (even out from outside of the geographical area) in order to supply the needs of mentors for projects**, especially in the levels of technicians and PE (practical engineers).

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