

The Creation of the Faculty of Sciences and Technology at Tel-Hai Academic College Marks a Significant Milestone in the Development of a University in the Northeastern Region of Israel

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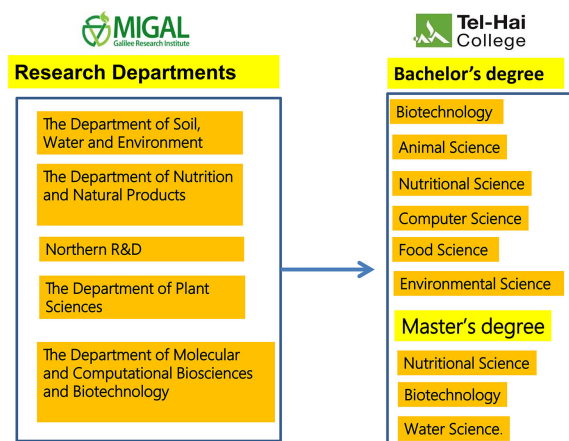


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Abstract

The creation of the Faculty of Sciences at Tel-Hai Academic College marks a significant milestone in the development of a university in the northeastern region of Israel. This article discusses the collaborative efforts of the Galilee Research Institute (MIGAL) and the Faculty of Sciences and Technology at Tel-Hai Academic College. MIGAL is composed of researchers in the fields of agriculture, biotechnology, nutrition, and other related areas. Its aim is to promote higher education in a remote region of Israel and a better quality of life. MIGAL has recently set up a branch Science and Technology Faculty at Tel-Hai Academic College, thus enabling the college to meet State requirements to become an academic college, an important step forward towards the establishment of a full-fledged university in this region.

Graphical Abstract



Keywords

Faculty of Sciences at Tel-Hai Academic College, Galilee Research Institute (MIGAL), Development of a University, Sciences, Academic College, Northeastern Region of Israel

1. Introduction

The Galilee Research Institute (MIGAL) was founded by Prof. Dan Levanon as a center for teaching, research and development in the peripheral area of the Northern Galilee in Israel. At its inception, the fields of study offered by the Institute were not sharply defined, similar to many other research institutes (Levanon, 2020). The overall mission of the Institute was to provide instruction in key fields of science and technology, while upholding high academic standards and academic freedom. The Institute's main goal is contribute to the development of scientific and applied research and technologies in the Galilee region. Initially the center recruited M.Sc. and Ph.D. researchers, and its staff were selected based on their ability to carry out applied research at a high academic level that would have direct benefits for the Galilee region (Levanon, 2020).

The original MIGAL staff came from a diverse range of fields, including some who worked at the regional Tel-Hai Academic College, and others who specialized in areas of science and technology related to the economy of the Galilee. These included the late Prof. Israel Levin, who specialized in field crops, and food technology engineer Gad Trigger, among others. During this time, the teaching staff played an active role in shaping MIGAL policies, through interactions with the academic council, internal and external administrative bodies, the national academic council and the Galilee Development Company (Figure 1).

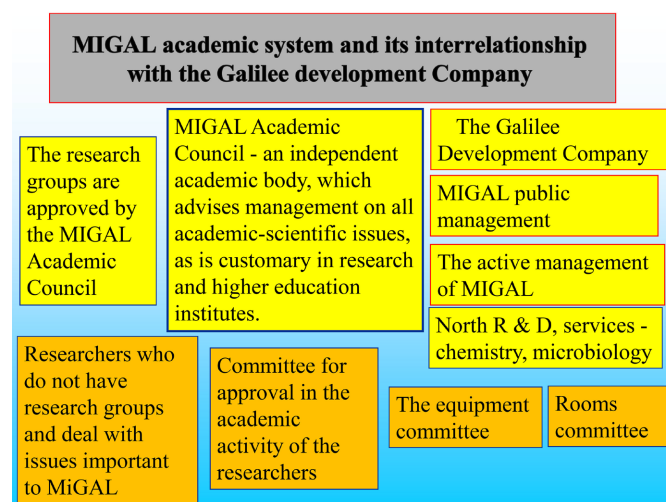


Figure 1. MIGAL's academic and administrative bodies as they existed in 1986-2010 supported the founding of a school of sciences that became the Faculty of Sciences and Technology in Tel-Hai Academic College.

The purpose of this article is to describe the interrelationship between an Institute for Applied Research (MIGAL) and the development of a Faculty of Science and Technology for an academic college in a peripheral area, with the potential for the development of a university in the future.

2. Methods and Results

The material on which this article is based is personal information of the authors who were partners in establishing the Faculty of Sciences at Tel-Hai College, published information on the establishment of the Faculty of Sciences at Tel-Hai Academic College (Degani et al., 2021; Levanon, 2020; Yom Din & Degani, 2020), and interviews with researchers who were involved in thirty in different aspects of the academic development of Faculty of Sciences at Tel-Hai College.

Despite difficult economic conditions, MIGAL developed a number of successful higher academic education programs, including collaborations with institutions such as the Hebrew University's Faculty of Agriculture and the University of Haifa. MIGAL researchers also implemented new biotechnology projects at Tel-Hai College, tutored high school students for their matriculation exams, and supervised M.Sc. and Ph.D. students in the institute's laboratories in conjunction with other research institutions in Israel. These activities established MIGAL as an applied academic research institute, whose researchers took part in all decisions concerning the institute's development and research directions.

Research at MIGAL was conducted by academics, which were ranked (Degani et al., 2021) as in all other institutions of higher education in Israel, and individuals choosing the research track, who were ranked by a research committee. MIGAL's leadership considered academic excellence to be crucial for the organization's reputation, and researchers at MIGAL received salaries based on their academic activities at Tel-Hai College comparable to university faculty members. A comparison of the scientific achievements of MIGAL researchers and Tel-Hai college lecturers found no difference between the two (Degani, 2015).

MIGAL's academic and administrative bodies fully supported the establishment of a Faculty of Sciences and Technology at Tel-Hai College, with the head researchers at MIGAL leading the effort. The decision to found the Faculty of Sciences and Technology went through MIGAL's academic and administrative decision-making bodies before the process began. Prof. Dan Levanon, who is also the Chief Scientist at the Ministry of Agriculture, was elected Chairman of the executive committee of Tel-Hai Academic College. Prof. Gad Degani, a well-known educator, was elected Scientific Director of MIGAL. These two professors were initial supporters of the establishment of Tel-Hai Academic College and hoped to set up a research university in the Galilee in collaboration with MIGAL. During a meeting held by Prof. Degani in 1990, he discussed his plan for the establishment of a Faculty of Science and Technology with Aliza Amir-Zohar, the Head of Tel-Hai Academic College, and Jacob Arzi, who was appointed director of MIGAL. This was the beginning of the process that led to the establishment of Tel-Hai Academic College, based on the concept presented

by Degani, which was approved by MIGAL's academic and administrative bodies.

The researchers at MIGAL had a clear and focused vision for this establishment. In 1996, Tel-Hai Academic College received approval to offer two new majors: biotechnology and the environment, and computer sciences. At that time, Prof. Gabriel Warburg was President of Tel-Hai Academic College, and Prof. Degani was the Head of the Faculty of Sciences. They were asked to propose two other departments for approval to MIGAL: a Nutrition department and a Zoo technology department. However, Prof. Warburg asked Degani to submit only one plan, so he chose the Department of Nutrition, given the food manufacturing plants in the Galilee Development Company, to which MIGAL belonged. Together with Dr. Mira Payne, they set up the Department of Nutrition. Later, Prof. Snait Tamir was brought in to head the Department. This was the first department of its kind in an academic college in Israel. Tel-Hai Academic College recruited faculty members, and MIGAL provided them with a research infrastructure. MIGAL's academic council approved a proposal for MIGAL to lead Tel-Hai's M.Sc. program which would emphasize research. This was an important step toward the establishment of a university associating MIGAL and Tel-Hai Academic College. The structure of the Faculty of Sciences and Technology at Tel-Hai was designed by MIGAL's researchers and is comparable to other research universities (Degani, 2015; Degani et al., 2021) (Figure 2).

This expanded Faculty of Sciences and Technology at Tel-Hai Academic College consists of the Department of Biotechnology, the Department of Nutritional Sciences, the Department of Food Technology, the Department of Environmental Sciences, the Department of Animal Sciences, and the Department of

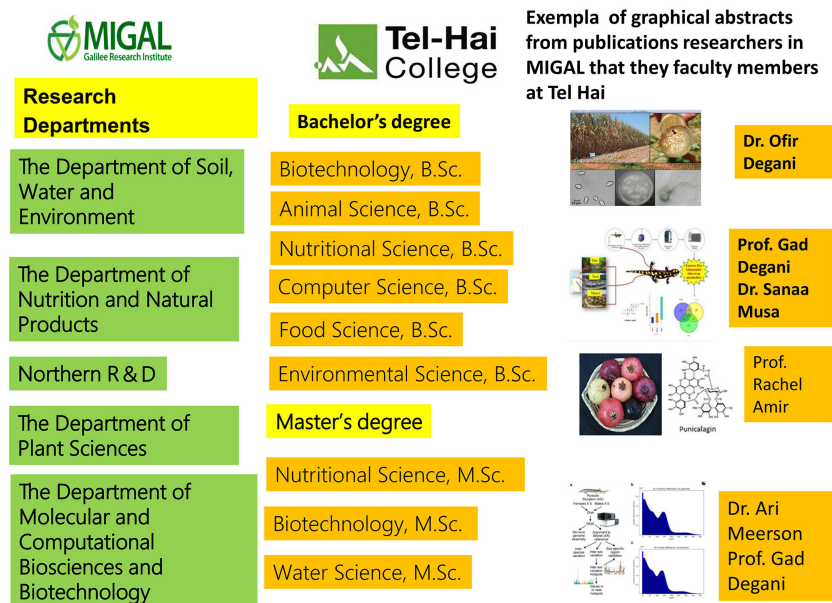


Figure 2. MIGAL's research departments are staffed by researchers, most of whom are faculty members and the founders of the undergraduate and graduate programs at the Faculty of Sciences and Technology at Tel-Hai Academic College.

Computer Sciences (Figure 2). The national academic council then approved a master's degree program at Tel-Hai Academic College, as detailed in a recent publication. The program was developed in collaboration with the Tel-Hai faculty members who are also researchers at MIGAL, including the CEO, Yaakov Arzi, who viewed this achievement as a significant milestone for the College. The article also highlights the heads of the different master's degree programs: Prof. Gad Degani for biotechnology, Prof. Sanait Tamir for nutrition, Prof. Martin Goldway for agricultural biotechnology, and Prof. Iggy Litaor for water sciences. MIGAL researchers aim to connect biotechnology and agriculture in the Galilee region, consistent with the organization's original goals. This combination of fields was deemed essential for achieving their objectives.

Professor Gad Degani, who chaired the MIGAL academic council from 1986 to 2010 during the establishment of the Faculty of Sciences and Technology and most of the departments, together with all MIGAL researchers, received the Yakir Tel Chai award. This award confirms the contribution of the faculty to Tel-Hai and the region (Figure 3). Each step taken in the founding of the Faculty of Sciences at Tel-Hai Academic College was approved by the MIGAL Academic Council, including the obligation of all researchers to lecture at the Faculty of Sciences. At that time, there was a lack of academic lecturers in these fields (Degani, 2015).

The number of both undergraduate and graduate students has grown at Tel-Hai College and MIGAL has contributed considerably through its supervision of research conducted by M.Sc. students (Figure 4).



Figure 3. Approval by the president of the Tel-Hai College, the chairperson of the board of trustees and the chairperson of the management committee of Tel-Hai College for the establishment of the Faculty of Sciences by MIGAL researchers with the authorization of Professor Gad Degani.

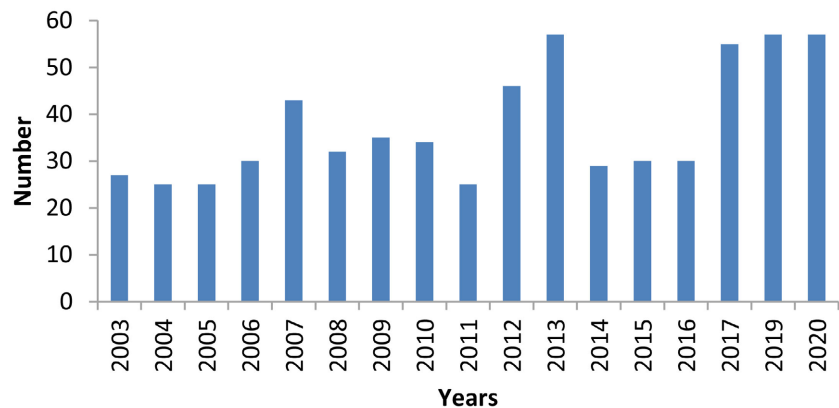


Figure 4. Number of students who completed their Master's degree at the Faculty of Sciences and Technology, where the lecturers are all MIGAL researchers. The students' theses were carried out in MIGAL's laboratories.

3. Discussion

This article presents the collaborative efforts of MIGAL researchers in the field of agriculture, biotechnology, and other related areas to promote academic development in a remote region of Israel for the betterment of education and quality of life. According to Degani et al. (2021), the collaboration between MIGAL, a regional applied research center, and Tel-Hai Academic College, an institution of higher learning, has resulted in the creation of two applied institutes. These institutes and MIGAL have grown in tandem, showcasing their strong collaboration and joint academic business development. This partnership has enabled the hiring of high-level academics for positions that encompass both teaching and research, a practice commonly found in higher education institutions. This has been achieved through practical solutions, rather than by stipulating it as part of the development of the research university (Degani et al., 2021).

An overview by Degani et al. (2021) highlights MIGAL's significant contribution to the development of the Galilee region, particularly in industry, agriculture, and education. The authors point out that academic freedom has played a critical role in allowing researchers to develop academic fields and conduct applied research that led to the founding of a highly skilled workforce. MIGAL's efforts in recruiting personnel and providing support to Tel-Hai Academic College have been instrumental in laying the groundwork for a future university (Yom Din & Degani, 2020). This is clear from the increasing number of academic professionals employed at MIGAL, many of whom are associated with Tel-Hai Academic College, resulting in the development of an academic infrastructure essential for a university.

4. Conclusion

This article highlights the great contribution of an institute for applied research to academic development in a peripheral area. The presented model shows a scientific cooperation between a research institute and academia for applied re-

search that has made an important contribution to regional development, in particular in a peripheral area.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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