

Establishment Of The Faculty Of Sciences At Tel-Hai Academic College: An Important Step In The Establishment Of A University In The Northeast Of Israel

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I. INTRODUCTION

MIGAL – Galilee Research Institute was initially established by Professor Dan Levanon, as a knowledge research and development center by Professor Dan Levanon in the Northern Galilee periphery area; at the time, as many research institutes started (Levanon, 2020), he did not sharply define the precise fields in which it would engage, as many research institutes do (Levanon, 2020). As its abbreviation reflects indicates, as in its original name— MIGAL – Galilee Knowledge Center—it was meant to be serve the community as a center of knowledge in the broad realms basic fields of science and technology, but not only those realms— while observing a high academic -level science, along with academic freedom and flexibility., and its contribution to the development of the Galilee region were not. The main and most important driving forces behind the inception of for this institute were its contribution to the development of the scientific and applied research and technologies in the Galilee. Masters and PhD level researchers were admitted to the center. Employees were hired not according to their discipline but according to their ability to integrate and perform applied research at a high academic level for the benefit of the Galilee (Fig. 1).



Fig. 1. The goals formulated in the various discussions in MIGAL's first years (Degani et al., 2021).

These researchers therefore came from different and distant fields; some were involved in work at the regional college in Tel Hai, and others came from fields of science and technology that were far from teaching and academia; for example, the late Prof. Israel Levin who studied Field Crops, the Food Technology Engineer Gad Trigger, Prof. Gad Degani from the Animal Sciences with rich experience in educational management, and a long list of other professionals (Degani et al., 2021; Levanon, 2020). The academic bodies during this period, such as the assembly researchers, the academic council—which became the internal academic council, the usual administrative bodies in internal and external management, and a supreme academic council were all highly influential. At this stage, when MIGAL's economic conditions as a regional enterprise were difficult, a number of initiatives were developed for higher academic education programs, practiced in higher education institutions in Israel but which did not require recognition by the Higher Education Council, and for teaching at Tel Hai's regional college under the cover of institutions of higher education such as the Hebrew University's Faculty of Agriculture or the University of Haifa. MIGAL researchers would implement new activities in biotechnology at Tel-Hai college, seeking science students as was customary in several higher education institutions, and would tutor high-school students for their final theses at a high level to strengthen the schools in the area. All of these activities were recognized by the academic bodies of MIGAL; they were part of the evaluation of researchers' work at MIGAL, without whom it would have been impossible to promote these activities. Another equally important activity was the training of research students for master's and doctoral degrees in MIGAL's laboratories in cooperation with covering research institutions in Israel (Fig. 2). All of these activities positioned MIGAL as an academic applied research institute in practice, and influenced both the researchers who were full partners in all decisions of MIGAL's development directions and the level of research. The research at MIGAL expanded with the academic tools that were customary in Israel according to two main routes.

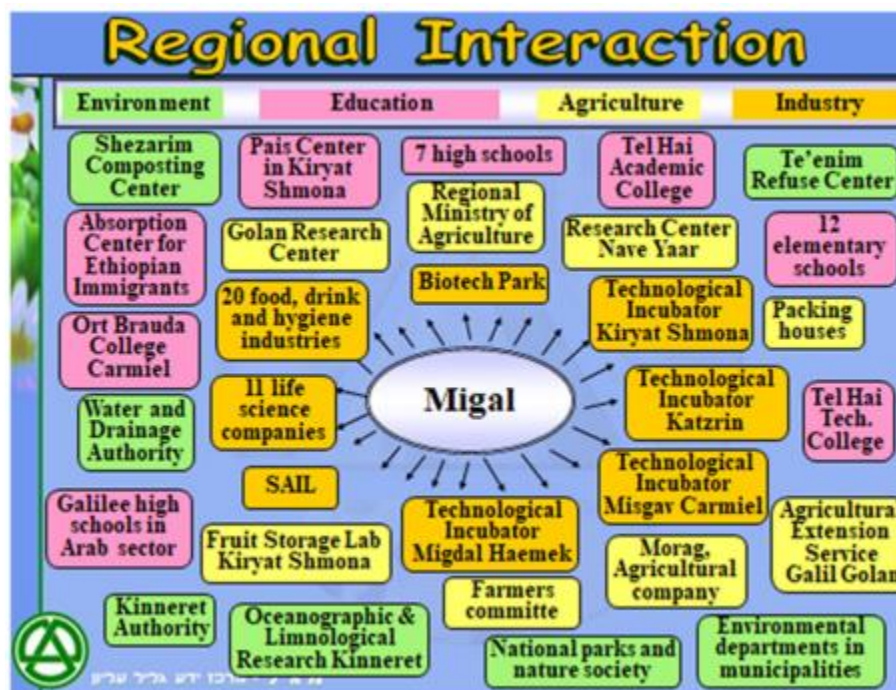


Fig. 2. . The direct and indirect effects of MIGAL on development of the northeast of Israel (Levanon, 2020).

One route was academia, where the individual's rank was determined exactly as in all institutions of higher education in Israel, from lecturer to full professor; the other was the research track, to the A1 level as ranked by a research committee. MIGAL's academic management considered academic excellence as an influential requisite for MIGAL's name and reputation. The head of the regional council of the Upper Galilee Aharon Valenci also stated that MIGAL researchers would receive a salary from teaching at Tel-Hai college commensurate with university faculty members so that the cost of each researcher would be based on their academic activity at Tel Hai. It should be noted here that in a comparison of the scientific achievements of professors who are researchers at MIGAL and

lecturers at Tel-Hai Academic College's Faculty of Sciences and their colleagues in academic institutions in Israel, no difference was found between the two (Degani, 2015). All of MIGAL's academic and administrative bodies supported the establishment of a science school that became the Faculty of Sciences at Tel-Hai college. This support was put into action with central researchers at MIGAL leading the process. The decision to establish a science school in Tel Hai first went through MIGAL's academic bodies, the internal and supreme academic council, and MIGAL's administrative bodies and public administration, and then the process began. Prof. Dan Levanon was elected chairman of the executive committee of Tel-Hai Academic College in addition to his position as Chief Scientist of the Ministry of Agriculture, and Prof. Gad Degani was elected Scientific Director of MIGAL, where he was known as an educator. These two professors supported the establishment of Tel-Hai Academic College, with future ambitions of establishing a research university in the Galilee in cooperation with MIGAL. In a meeting held by Prof. Degani, the Scientific Director of MIGAL in 1990, with the Head of Tel-Hai Academic College Aliza Amir-Zohar, a member of Kibbutz Bar'am who had served as the Head of Tel-Hai regional college and the late Jacob Arzi, who was then appointed to be the director of MIGAL, the first seed was sown for the establishment of a school of sciences. Degani presented his plan for the establishment of a science school whose concept would later form the basis for the establishment of Tel-Hai Academic College as decided by MIGAL's academic and administrative bodies. The vision that stood before the MIGAL researchers was clear and focused.

Degani explained the stages of implementation for the establishment of the science school to the meeting partners and received their blessing to submit three academic programs for approval by the Higher Education Council: biotechnology, environmental studies and computer engineering studies. The three programs formed the basis for opening a Faculty of Science and Technology and thus contributed to Tel-Hai college becoming an academic institution. Prof. Degani led the process as MIGAL's scientific director, with the support of important colleagues at MIGAL who greatly influenced his actions at the beginning and were among MIGAL's founders. One of these was Prof. Levanon from Kibbutz Kfar Blum, who was then serving as chairman of the executive committee of Tel-Hai Academic College when it was established as an independent academic body; others were Prof. Carlos Dosoretz, a former member of Kibbutz Amir, who was then responsible for service laboratories at MIGAL and Yehuda Levy, who was the academic head and academic secretary.

Two features were approved for the academic college In 1996— biotechnology and the environment, and computer sciences—and the establishment of Tel-Hai Academic College was approved. While Prof. Gabriel Warburg served as president of Tel-Hai Academic College, and Prof. Degani was head of the Faculty of Sciences, the president was instructed to submit two new departments for approval by MIGAL: a nutrition department and a zoo technology department. Degani was asked by Prof. Warburg to choose only one department to submit. He chose to submit the plan for the Department of Nutrition. During this period, there were a number of food factories in the organization Development of the Galilee to which MIGAL belonged. Therefore, the Department of Nutrition seemed more suitable for Tel-Hai Academic College with MIGAL in the Faculty of Science and Technology. Together with Dr. Mira Payne, a nutritionist, they began to establish the Department of Nutrition, and later Prof. Warburg proposed to take in Prof. Snait Tamir, a researcher at MIGAL and lecturer at Tel Hai, who came from the field of nutritional science, to lead the move and head the department. The result was approval to open the Department of Nutrition, the first in an academic college. Once again, MIGAL was used a workplace for faculty members who were recruited to Tel Hai, but needed a research infrastructure. MIGAL's internal academic council approved the proposal that MIGAL would lead Tel Hai's academic master's studies with the college, with research being the main focus and an important step toward the establishment of a university that would be composed of MIGAL and Tel-Hai Academic College. The structure of the Faculty of Sciences at Tel Hai, which was designed by MIGAL's researchers, was exactly as is customary in various departments at research universities (Fig. 3). The Faculty of Sciences and Technology at Tel-Hai Academic College was composed of the following main departments: Department of Biotechnology (BSc and MSc degrees), Department of Nutritional Sciences (BSc and MSc degrees), Department of Food Technology, Department of Environmental Sciences (BSc and MSc degrees – water), Department of Animal Sciences and Department of Computer Sciences.

Faculty of Sciences and Technology

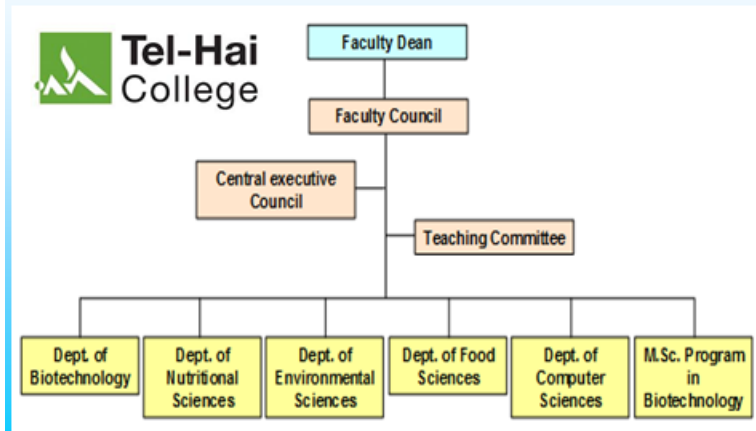


Fig. 3. The structure of the Faculty of Science and Technology.

An article was written about the approval for conferring master's degrees at Tel-Hai Academic College (Fig. 4). This was achieved in cooperation with all Tel Hai faculty members who were also researchers at MIGAL, including the CEO of MIGAL, General Director Yaakov Arzi, who saw this success as an important milestone in the Galilee Academy.



Fig. 4. Article in the Tel Hai newspaper describing the final approval for the master's degree program in biotechnology established by MIGAL researchers. Translation of the article in Hebrew: Prof. Gad Degani, insisting on the master's degree program in biotechnology in a collaboration between Tel-Hai Academic College and MIGAL, and standing at the head of it for 5 years when he was MIGAL's scientific director, from the moment of submission until permanent approval. This is an important contribution to building the academy in the North (Degani et al., 2021).

Development did not stop. Prof. Martin Goldway developed a major in Agricultural Biotechnology that relied on the master's degree in Biotechnology, and Prof. Iggy Litaor developed the master's degree in water sciences that supported the Department of Environmental Sciences. In light of the goals for which MIGAL was established, MIGAL researchers connected biotechnology to agriculture in the Galilee region and combined these fields (Fig. 5).

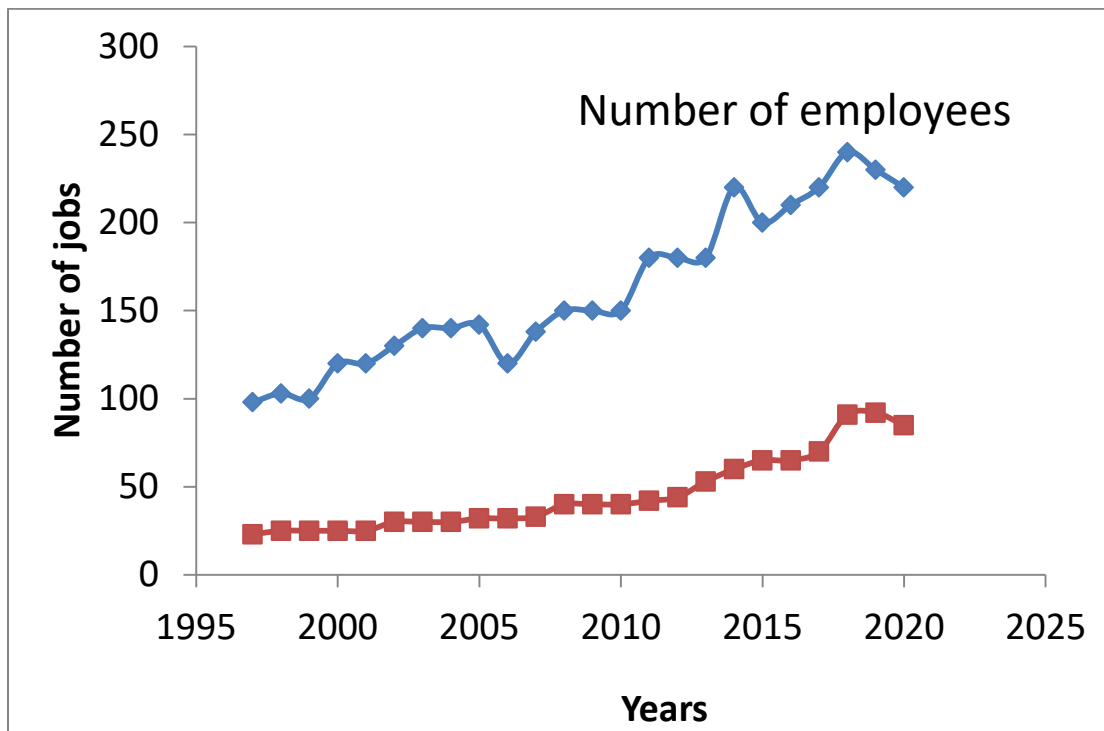


Fig. 5. Examples of MIGAL researchers and their fields of activity; these researchers were, and still are part of the basis for the establishment of the Faculty of Sciences and the master's degree program in Biotechnology at Tel-Hai Academic College.

II. DISCUSSION

This article presents a local initiative of MIGAL researchers in the field of agriculture, biotechnology and others who, for various reasons, undertook academic development in a peripheral area for the benefit of education and quality of life (Degani et al., 2021). This combination contributed to the two applied institutes—MIGAL, which is a regional applied research center, and Tel-Hai Academic College for higher education. The two institutions developed in parallel, showing an inherent tenacity for cooperation and joint academic business development. This mainly allowed the absorption of high-level academics through the creation of positions that consist of both teaching and research, as is customary in higher education institutions, through practice rather than a declaration at the outset of the development of an academic university (Degani et al., 2021).

MIGAL's contribution to the development of the Galilee has been described and is clear in many aspects of the industry, agriculture and education (Degani et al., 2021). This article shows that academic freedom, with the aim of contributing to the Galilee, allowed researchers to develop academic fields and combine them with applied research, resulting in the creation of a high-level science proletariat, which is the basis for establishing a university. MIGAL's contribution to the establishment of the Faculty of Science and Technology at Tel-Hai Academic College, which is actually the infrastructure for a future university, was in the building up of personnel and a general contribution to this remote area (Yom Din and Degani, 2020). A clear increase in the number of people employed at MIGAL in the various academic ranks, a large number of whom are involved with Tel-Hai Academic College (Fig. 6), has resulted in the creation of an academic university infrastructure.



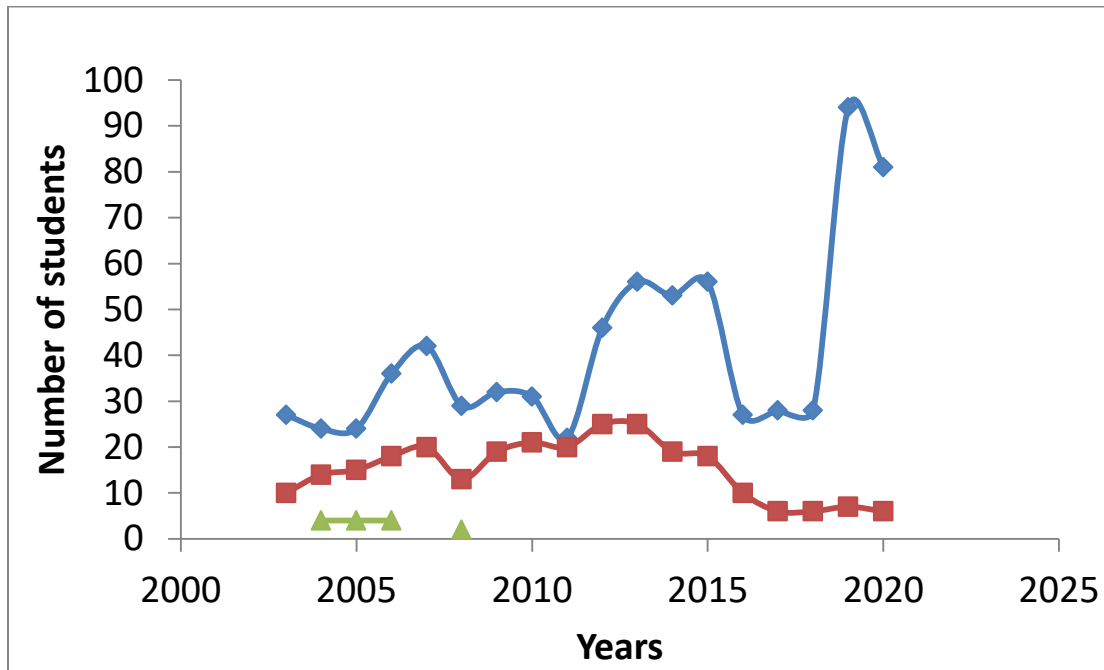


Fig. 6. Changes in employee numbers at MIGAL resulting in the creation of an academic core in northern Israel.

III. CONCLUSION

This article describes how an initiative of researchers from the applied research institute MIGAL, working together with the institute's management, initiated the establishment of a science faculty at a local college and turned it into an academic college that forms the basis for a university in a peripheral region in Israel.

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