

# Conceptualization and Development of the Behavior Analysis Programs at the Florida Institute of Technology

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**Abstract** We describe the conceptualization and development of the Behavior Analysis programs at the Florida Institute of Technology (Florida Tech). From its beginnings as a small master's program in applied behavior analysis (ABA), the Behavior Analysis programs at Florida Tech have now grown to include three Master of Science programs across two campuses, a Ph.D. program in Behavior Analysis, an undergraduate degree (B.A.) in ABA, an online certificate program that has attracted students internationally, and a hybrid (live and online) Master of Arts in Professional Behavior Analysis program at several sites around the USA. These programs are now housed in the first ever *School of Behavior Analysis* at a Tier 1, nationally ranked private university.

**Keywords** Academic training programs · Behavior analysis · Florida Institute of Technology · Graduate education

In this article, we describe the conceptualization, growth, and current status of the Behavior Analysis programs at the Florida Institute of Technology (Florida Tech or FIT) in Melbourne, Florida. Florida Tech was recently named a top 200 world university by *Times Higher Education World University Rankings* (Times Higher Education 2015) and is ranked as a Tier 1 National University by *U.S. News & World Report* (U.S. News and World Report 2015). The University was founded in 1958 to serve as a training ground for professionals working at the nearby Kennedy Space

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Center and currently serves over 9000 students at its main campus, extended campus sites, and through online enrollment. Our purpose is to provide an overview of the process of starting and managing a graduate program in Behavior Analysis that might be useful to entrepreneurial academics who wish to start new programs.

### **Conceptualization and Background (Pre-1998)**

While working as a District Behavior Analyst for the state of Florida, the first author found a dearth of well-trained master's-level behavior analysts to work in agencies under his purview. He wrote a proposal for a behavior analysis practitioner graduate training program, arranged meetings with department heads and deans at several universities, and provided documentation of the need across the state. After several years, the first university to agree to his proposal was the Florida Institute of Technology, where he had developed two applied behavior analysis (ABA) undergraduate courses while serving as an adjunct faculty member. Thus, the first master's program in ABA in the state of Florida was founded in 1998 at Florida Tech within its School of Psychology. Some of the factors which persuaded the administration to agree to begin the program were (a) the fact that Florida had a certification program for behavior analysts, (b) the news that the Behavior Analyst Certification Board (BACB) was about to be founded, and (c) a business plan that showed an immediate return on investment.

At the time, Florida Tech's School of Psychology offered a Doctor of Psychology degree in Clinical Psychology and a Master of Science degree in Industrial Organizational Psychology, in addition to an undergraduate degree in Psychology. The Dean and upper administration agreed to start the ABA program, but only as long as a minimum number of students (10) were admitted into the first cohort. In addition, the first author had to teach most of the courses for adjunct pay and serve as program chair without remuneration. Florida Tech is a private university and receives no state funding. Therefore, it is largely dependent on tuition and the university endowment to meet its financial obligations.

### **Growth of On-Campus M.S. Programs (1998–2007)**

In 2003, the program chair (first author), who had been granted full-time employment in the 2002–2003 academic year, obtained permission to hire two additional full-time faculty members, one of which was the second author. One hire was contingent on starting an Organizational Behavior Management (OBM) track at the main campus and maintaining the number of student admissions at 10–15 per year. Later, a dual (ABA + OBM) track was also added in the master's program. The second hire was contingent on expanding the ABA program by offering the same degree at a Florida Tech satellite campus housed in an office building near downtown Orlando, 75 miles northwest of the main campus in Melbourne. The University Provost and Dean of the School of Psychology agreed to hire these additional faculty members if the first author recruited an additional 15 students for the Orlando campus annually. In contrast to the main campus, at which classes were (and still are) held during the day Monday through Thursday, classes in Orlando were held on Friday afternoon and Saturdays and

therefore attracted students who worked full-time. Given its central location in the state, many Orlando campus students drove from Southeast Florida, Tampa, and the Jacksonville areas on Friday mornings and spent Friday night in Orlando so that they could attend classes on Saturdays when the program started. In all other respects, the Orlando MS program was identical to the main campus program in Melbourne. Faculty members drove from the main campus to teach the Orlando courses, and two additional part-time faculty members were hired to teach exclusively in Orlando for the second year.

The BACB increased coursework requirements in 2005 and announced major changes in supervision requirements effective in 2006. In addition, the Association for Behavior Analysis International (ABAI) approached us about applying for accreditation. These changes, along with increased supervision requirements set by the BACB, led to a proposal, submitted to the university administration, to change our program requirements to meet all of these standards but which would require two new faculty positions. The changes and the positions were approved in 2005 to be effective in fall 2006. At this time, we converted the three ABA tracks (applied behavior analysis, organizational behavior management, and applied behavior analysis plus organizational behavior management) into three degree programs. These degrees offered students additional training in OBM as it applies to both for-profit and not-for-profit settings and attracted a number of applicants who had interest areas outside of the traditional populations served by applied behavior analysts. We not only met the new BCBA standards but also began the work required for ABAI accreditation; the latter was one of the goals in the university's 5-year strategic plan (2005–2010). Our program was accredited on both campuses by ABAI in 2008. Note that in 2016, ABAI established a new self-governed body known as the Behavior Analysis Accreditation Board (BAAB) of ABAI; all ABAI-accredited programs are now BAAB-accredited programs.

The ABA program has a strict practicum approval process; only a handful of sites in the Melbourne and Orlando areas are approved to serve as practicum sites for students. Faculty members provide individual and group supervision to students working at these sites. Faculty members drive to these sites each week, observe students working with clients, and meet individually with students to provide supervision. Each semester, a faculty member supervises 3–4 students, which takes about 6–8 h, excluding transportation time. The intensive practicum supervision (Florida Tech has a BACB-approved practicum) and the increasing number of students in the program necessitated hiring additional faculty members. We were able to convince the administration of the need for additional faculty by the relatively large number of students in the program (30+ per campus) and the practicum and courses required for BACB certification.

### **Beginning of the Online Certificate Program (2007)**

Prior to his involvement with Florida Tech, the first author had developed a series of non-university courses that met instructional requirements for certification which he taught in Florida (1992–2006) and which the BACB phased out as per their contract with the state of Florida. As this was a major part of his private business (ABA Technologies, Inc.), he worked with the Florida Tech administration on a contract to develop an online program to deliver those courses. It took him more than 2 years on his own time to develop the format, modify the curriculum and instruction for online

delivery, develop a business plan, and write a contract between his company and the university. The university administration agreed to the contract, provided all the resources requested, and gave him complete control over the product and delivery. In addition, specific percentages of the revenue were designated for support of master's students, the operational expenses of the ABA program's emerging service agency, and funding of a proposed Doctor of Philosophy (Ph.D.) program in Behavior Analysis. Thus, ABA Online was launched through a partnership with ABA Technologies and Florida Tech in 2007. This has been a successful endeavor both in terms of growth (currently more than 2000 students enrolled), satisfaction with the program by students and their employers, and certification exam pass rates (see Table 1). Proceeds have furthered the growth of our degree programs, past and current, including the addition of new faculty lines. ABA Online, which includes both for-credit and non-credit offerings, currently has more than 40 full-time employees and more than 30 part-time staff.

### Scott Center and Ph.D. Program Development (2008–2014)

In 2008, an additional faculty position was added to serve as clinical director and cover cases at our fast-growing service agency, which later became the Scott Center for Autism Treatment (hereafter referred to as “the Center”), an on-campus center-based program serving children and adults with autism and related disabilities. The Center was developed in part due to the need for a high-quality training site for ABA students. The university has used the Center as a central piece of its development initiative, and the Center attracts a number of financial donations to the university annually. The Center was initially financed from a generous gift from a member of the Florida Tech Board of Trustees who had an interest in improving services for individuals with autism in the region. This gift was matched by a federal appropriation that was secured with the help of a state representative. In 2009, an executive director was hired and the Center moved into a new, state-of-the-art building. The Center provides a wide array of behavior-analytic services, including early intervention, the assessment and treatment of severe behavior, the assessment and treatment of feeding problems, parent and teacher training, and social skills training. Operating costs for the Center are funded by third-party payers such as insurance companies and state Medicaid and Medicaid-

**Table 1** Comparison of FIT's ABA Online certificate programs with BACB summary statistics

Credential/year	No. of first-time candidates (FIT/Total = % of N)	Percentage passing	
		FIT (%)	Overall (%)
BCaBA/2013	304/699 = 43.5 %	67	57
BCaBA/2014	318/849 = 37.5 %	71	62
BCaBA/2015	194/550 = 35.3 %	79	70
BCBA/2013	566/3006 = 18.8 %	66	58
BCBA/2014	932/4183 = 22.3 %	68	60
BCBA/2015	505/3397 = 14.9 %	79	65

waiver programs. In addition, some families pay for services out-of-pocket. The Center also receives a number of donations, some of which come from the FIT ABA Online and ABA Technologies partnership, annually.

The Ph.D. program in Behavior Analysis at Florida Tech began in 2009. It is a 2–3-year post-masters program that requires 87 credits. The curriculum includes all of the courses required for the M.S. degree in ABA+OBM (50 credits) plus a number of doctoral-level courses such as Verbal Behavior, Complex Human Behavior, and Applications of Behavior Analysis to College Instruction. The emphasis of the doctoral program is on training future scientist-practitioners to (1) conduct research, (2) teach Behavior Analysis, and (3) serve in managerial and administrative positions in applied settings. The program admits 3–6 students per year, and most students receive funding in the form of tuition remission for 36 credits and a stipend of about \$15,000–\$20,000 per year. In exchange, students work for 10 h per week at the Scott Center or as mentors of prospective M.A. students and spend 10 h per week conducting research with a faculty member. The program adheres to a mentorship model, in which a student is admitted to work with a specific faculty member. In addition to the courses described above, all students take a two-course sequence in group research methods and statistical analysis, supervised research, and dissertation credits under their faculty mentor. Two additional full-time faculty lines were added between 2010 and 2012 to support the growth of our doctoral program and to make it possible for two faculty to spend a portion of their time at the Center. In exchange, both the executive and clinical directors of the Center, who have faculty appointments, spend a portion of their working with students on their line of research and teaching.

In 2013, we hired an additional faculty member who specialized exclusively in OBM. By that time, many students in the program had either a primary or secondary interest in OBM and the existing faculty could not adequately cover the required OBM-related practicum and research responsibilities. This faculty member is responsible for teaching one section of the introduction to OBM course (we have one on each campus) as well as our Advanced OBM course and some OBM-related electives. In addition, this faculty member supervises OBM practicum and capstone projects, theses, and dissertations.

In 2013–2014, we modified graduation requirements for all our degree programs to comply with changes in BCBA certification and ABAI accreditation standards effective in 2015. The on-campus M.S. programs (ABA, OBM, ABA+OBM) were re-accredited by the ABAI in 2014; the Orlando ABA program was also re-accredited at this time. The Behavior Analysis Ph.D. program became accredited for the first time in 2014.

When ABAI conducted its accreditation site visit in 2014, the site visitors recommended the addition of a full-time faculty member who focused on the Experimental Analysis of Behavior (EAB). The university administration approved an EAB faculty line that we filled in 2014. At the time of hire, we did not have any basic research laboratories, so our EAB faculty member has developed a line of human operant work, emphasizing translational research. Despite the difficulties involved in establishing an animal laboratory, the faculty agree that this is an important part of training ABA students. We are in the process of trying to secure the necessary facilities and funding to maintain an animal lab.

## **Hybrid Program Development (2011–2013) and Implementation (2013–2015)**

The first author took 2 years away from his position in the campus-based degree programs and transitioned the department chair position to the second author. During the first academic year (2011–2012), the goal was to make changes in the ABA Online program to meet the 2015 BACB's instructional requirements and to plan for incorporating these courses into a hybrid degree program. As these changes were conducted through ABA Technologies, the leave was unpaid. In 2012–2013, the Academic Vice President granted the first author a 1-year appointment as Special Assistant for Program Development to develop the on-site component of a new hybrid Master of Arts program in Professional Behavior Analysis, including academic components and the evaluation of prospective host agencies at which to house the program.

The hybrid program was created to provide high-quality ABA practitioner training, that fulfills all the BCBA certification requirements and ABAI accreditation standards, to students anywhere in the world who can do their practicum at an agency meeting stringent standards. It is unique in several ways. First, students who have completed the FIT ABA Online BCaBA course sequence, which is offered for graduate credit, can use their 12 credits towards their M.A. degree. Second, even though students continue taking courses through FIT ABA Online, they spend 12–15 months working with one full-time FIT School of Behavior Analysis faculty member who is housed at one of several agencies that serve as Hybrid Program Host Sites; thus, students have a consistent mentor who supervises a year-long capstone project, who does a portion of their supervised experience, and who teaches classes on site that are also broadcasted to students in the region who are at FIT-approved remote practicum sites.

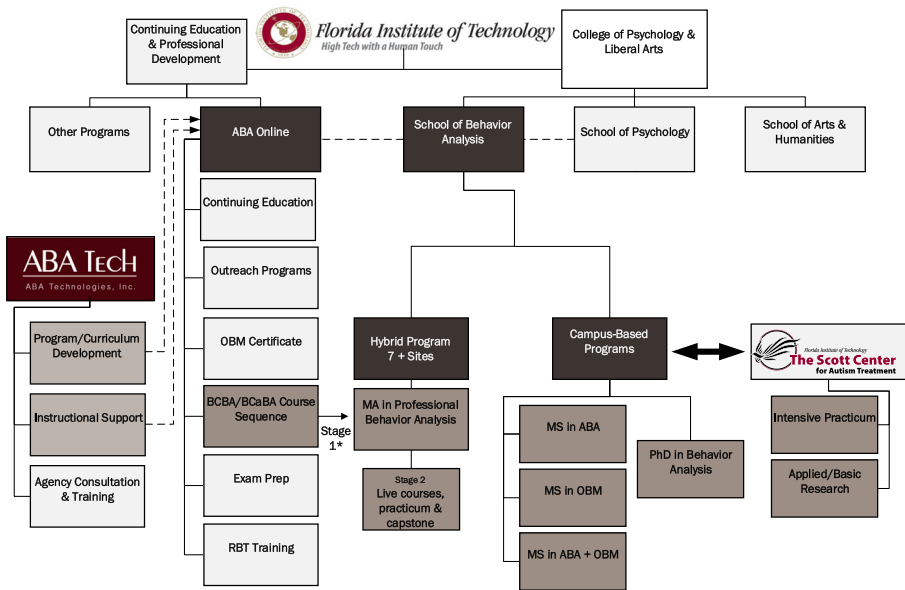
The hybrid program consists of two stages that partially overlap. The first stage requires 24 credits of courses through ABA Online, and the second stage requires 21 credits at an FIT-affiliated host agency or an FIT-approved remote practicum site. The agency must provide behavior-analytic services, have full-time BCBAs employees, and meet specific criteria. We house full-time faculty and administrative assistants at the host agencies, and we link remote practicum sites to one of these host agencies. During the 1-year on-site stage of the program, students complete nine credits of courses designed to meet BAAB accreditation standards, nine credits of BACB-approved intensive practicum, and a capstone project. The first seven cohorts of students began their ABA Online coursework in 2013–2014, and 103 students began their on-site component during 2014–2015. We opened seven host sites (three in California, and one each in South Carolina, Virginia, Indiana, and South Florida). We hired one full-time faculty member for each. In addition, we hired a full-time program manager (now full-time chair) and a half-time operations manager, both with faculty rank, and support staff in summer 2013. We graduated the first cohort in May 2015 and additional cohorts in September and December 2015. In the fall of 2015 we expanded the program to include more remote practicum sites. In addition, we began to increase the number of funded Ph.D. positions at our main campus by having Ph.D. students serve as mentors for our degree-seeking ABA Online students. These Ph.D. students may also become future faculty members for the many sites planned in coming years. Eventually, we may develop a small hybrid Ph.D. program for one to two students at host sites that have demonstrated the ability to produce published research in behavior analysis.

## The Florida Tech School of Behavior Analysis

In July 2013, at the start of the hybrid M.A. program, Florida Tech’s Executive Vice President decided that our ABA programs were too large to constitute a “program”; we were at least as large as the School of Psychology in which we were housed. He decreed a new School of Behavior Analysis (SoBA) to house all of the programs and appointed the first author as its head and as Associate Dean for the College of Psychology and Liberal Arts, which houses SoBA.

Currently, SoBA includes nine full-time faculty who teach on our main campus in Melbourne. Some of these faculty also teach in Orlando. In addition, we have two part-time faculty exclusively in Orlando and seven hybrid-programs faculty, who teach at sites all across the country. All of our faculty have doctoral degrees in behavior analysis or in related fields with an emphasis in behavior analysis. Our ABA Online program also has doctoral-level instructors and uses master’s-level BCBA’s as co-instructors to deliver 20 % of the content for each course.

SoBA now includes on-campus M.S. degrees in ABA, OBM, and ABA + OBM and a doctoral degree in Behavior Analysis. In addition, a Professional M.A. degree in ABA and online certificate programs are offered. An undergraduate degree in ABA is offered by the School of Psychology (it may eventually move to SoBA, but because the degree requires some non-behavior analytic psychology courses, it is still housed in Psychology) at Florida Tech. It employs one full-time ABA faculty member and uses the SoBA faculty as instructors for the courses. Figure 1 depicts the organization of the SoBA at Florida Tech.



**Fig. 1** The two major divisions at FIT that house behavior analysis (*top*) and the private company that develops programs for FIT (*bottom left*). The *dark boxes* display entities that have heads (e.g., chair, director, or head). The *shaded boxes* are entities that are directly related to behavior analysis degree programs. *Arrows* indicate that an entity feeds an entity to the right of it. *Stage 1\** consists of the BCaBA/BCBA course sequences and additional ABA Online courses for the M.A. degree



## Comments on Building a Successful Behavior Analysis Program

Our advice to others who are considering starting a Behavior Analysis program is to emphasize the financial viability of the program to university administrators. Behavior Analysis is a fast-growing field with excellent income potential for master's and doctoral-level graduates. Convincing administrators that a graduate program is worth starting should not be difficult, particularly in geographical regions that have zero or few existing ABA programs. Partnering with community agencies serving individuals with disabilities, perhaps by establishing a practicum site for students, is also important, as university administrators may strive to fill training gaps in the local community. At each step in the development of SoBA, the first author was able to project a specific monetary amount that the University administration could expect to receive in return if they agreed to a new hire or the development of new program. When this amount was realized during early steps, administrators were more receptive to additional steps. The business plans included the resources required, which were always tied to BACB standards and accreditation standards (ABAI/BAAB and Southern Association for Colleges and Schools). In addition, the development of ABA Online courses, continuing education offerings, and other professional development product lines were undertaken by the first author through his private company at his own risk. FIT only reaped the rewards of its success, so the administration has been generous in allocating a significant percent of its net income to financially support programs in SoBA. Emphasizing enrollment growth and achievement of accreditation, which was part of the university's strategic plans, was also critical. Entrepreneurs should also maintain resilience, as setbacks are to be expected. With a long-term perspective, additional ABA programs similar to Florida Tech's are possible.

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**Compliance with Ethical Standards** Human or animal participants were not employed for this manuscript; thus, informed consent was not necessary.

**Conflict of Interest** The authors declare that they have no conflict of interest.

## References

- Times Higher Education. (2015). *World university rankings*. Retrieved from <https://www.timeshighereducation.com/world-university-rankings/2015>.
- U.S. News & World Report. (2015). *National universities rankings*. Retrieved from <http://colleges.usnews.rankingsandreviews.com/best-colleges/rankings/national-universities>.