

An Agile Approach to Doctoral Research and Dissertation Completion

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Abstract—Agile means to embrace change, and to continuously adapt. To adapt well, efficiency needs to be measured regularly, and often. In this study we focus on three research tracks: Track 1 evaluates the performance of the agile dissertation approach from a historic, 10 year, perspective. Track 2 examines the impact of this terminal degree on career prospects in both the academic and private sectors. Track 3 summarizes our interaction with other DPS programs in the US and abroad in order to define critical success factors for offering this degree. In conclusion, we strongly support the effort to convert the DPS degree to an applied research PhD.

Index Terms—Agile, Continuing education, DPS, Education, PhD

I. INTRODUCTION

THE Doctor of Professional Studies (DPS) is an applied research doctorate available to working professionals as an alternative to attending a traditional Doctor of Philosophy (PhD) program; the DPS allows a candidate to attain the designation of Scholarly Practitioner (AACSB Standard 15) based upon initial academic preparation and lengthy professional experience. A traditional PhD program requires a 5-6 years of full time commitment, whereas DPS students are able to complete their dissertations, of similar rigor as those from PhD students [1], in about 3 years of part-time study, using an agile approach. Previous studies have described several reasons why an agile DPS program can be completed faster than a traditional doctoral program. The traditional program can be likened to a water fall process where a substantial amount of work is singularly completed by the student before it is reviewed. If the outcome of such review proves that the topic is unsuitable for a dissertation, there is a substantial amount of work that must be redone. An agile process is reviewed more often, and adjustments can be made earlier if it is going in the wrong direction [2]. Students in a DPS program have several years of professional experience that may count towards coursework that is required by traditional doctoral programs [3]. From an academic standpoint, DPS and PhD are terminal

degrees with equal status, but serving different purposes (Grossman et al [4]). Because the prerequisites for DPS seem lower, many students perceive it inferior to PhD. One suggested solution to this problem is to allow students to select which title they would prefer after completing dissertation, DPS or PhD [5]. Evans et al [6] proposed that the agile process should be introduced into traditional PhD programs, and that the programs should be merged to remove the differences between DPS and PhD. An integration of the programs are also suggested by Grandon Gill and Uwe Hoppe [7], but using a slightly different approach where students from both programs interact to share knowledge between industry and academia. The idea of sharing knowledge between industry and academia is also described by Grossman et al [4].

II. TRACK 1: HISTORICAL PERSPECTIVE & CURRENT STATE

The DPS program at Pace University's CSIS was launched in 2000. However, Pace University was a pioneer in this field, having developed and offered the first DPS program in the world at the Lubin Business School in 1972. As noted previously, a DPS degree leverages the current industry exposure of its cohort as well as their combined experience and uses such backgrounds as the cornerstone for conducting applied research towards the completion of the dissertation.

A. DPS Approach

The Pace DPS program follows a project management approach to completing the dissertation. This methodology reflects a step-by-step series, providing incremental progression and iterative adjustments, in which progress is made as follows:

1. *Idea Paper Conception and Initiation*: defining the concept, dissertation topic and its outline.
2. *Dissertation Research Planning & Inception*: the idea paper is expanded to include more detailed research, reference collection and literature review items or industry review items. Writing commences and

interaction with an advisor is constant.

3. *Dissertation at Completion*: after several revisions and recommendations, as well as after numerous edits and formatting changes, the dissertation paper is ready for defense.
4. *Dissertation Delivery & Closeout*: the dissertation is presented and defended. The dissertation is approved published in Pace’s library system.

B. Key Differences

The aforementioned approach differs significantly from a traditional PhD program in a variety of ways, including but not limited to the student candidate, the research beyond the dissertation and the amount of time required to completing the dissertation. In Table 1 below, we summarize those key differences.

Commitment	Flexible: can complete the research leading to the dissertation while employed, and can pause studies and resume at a later date.	Less Flexible: need to complete the research leading to the dissertation without interruption.
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Table 1

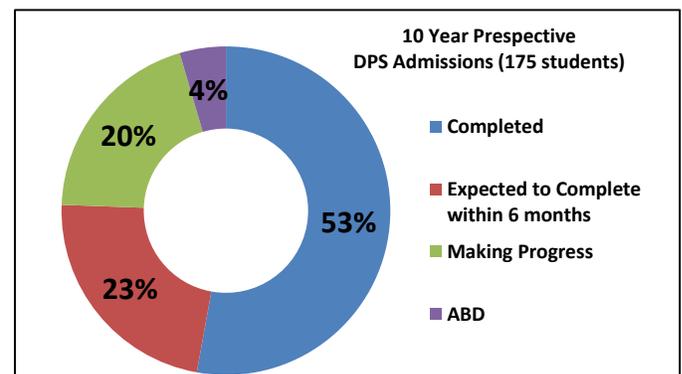
C. The Past 11 Years

The Pace DPS students and faculty work together to ensure that students are engaged and working towards a successful completion of their dissertations. Table 2 provides a 10 year perspective (2002-2012, with the first class admitted in 1999 [3]) of each admitted cohort and the completion rate for each of the classes:

Research Approach Differences	Agile Approach (DPS)	Traditional Approach (PhD)
Style	Collaborative: a student cohort works on mini-dissertations and research papers in order to hone their skills and develop the rigor needed to create high-quality dissertation.	Individual: students work individually and seek to continue in that methodology throughout the dissertation process.
Resources	Industry / Private Sector: the cohort leverages their industry backgrounds and exposure to current business trends which influence and shape the direction of their research.	Academic / Conceptual: students rely heavily on existing literature and published research in order to assist with their own research and dissertation work.
Background	Connected to Industry: the cohort’s background includes advanced positions in leading economic sectors such as financial and brokerage, health sciences, supply chain and logistics, banking and insurance, manufacturing and information technology.	Connected to Research: students are typically insulated in their exposure and progress directly from a master’s degree without the extensive industry exposure seen with the DPS candidates.
Timing	Short term: 3-4 years	Long term: 5-7 years

Class of	Number Admitted	Completed	Expected to Complete within 6 months	Making Progress	ABD
2002	20	15	2	1	2
2003	17	8	4	5	1
2004	16	12	1	2	1
2005	18	14	0	2	2
2006	16	8	2	6	0
2007	16	10	2	3	1
2008	15	7	3	5	0
2009	15	6	8	1	0
2010	14	5	7	2	0
2011	14	5	3	5	1
2012	14	3	8	3	0
Totals	175	93 (53%)	40	35	8

Table 2



III. TRACK 2: DPS COMMUNITY SURVEY

Since its inception the DPS program at Pace University's

CSIS has admitted 175 students (as of 2012) with more than 75% of them graduating within the allotted time. We decided to contact previous graduates to inquire about the impact of the DPS degree on their career path, from an academic or corporate standpoint. We also included current cohorts in our survey in order to establish a wider response metric. The goal of the survey was to bolster our belief that the agile approach is not only effective in achieving career success, but is in fact largely responsible for such success. In this section we will discuss the results of our survey.

A. Survey Population and Questions

We received responses from 150 participants who completed 10 questions each. The questions were:

1. Which year did you enter the DPS program?
2. What is your student status?
3. Please let us know your current work affiliation and job title
4. Did the DPS degree help you get a promotion in your current job?
5. To which level?
6. Did participation in the DPS program help change your career, such as starting your own company, or moving from industry into academia or vice versa?
7. My career change was
8. As a university designated "terminal" degree, did the DPS degree help you get tenure at a university or college?
9. Which university or college?
10. Have you published any refereed conference or journal papers?

B. Survey Results

Question	Results & Findings
Which year did you enter the DPS program?	160 responses. A sampling of those who responded indicates that 35% of students entered the program between 1999 (year of inception) and 2007; whereas, 65% of students entered the program between 2008 and 2015.
What is your student status?	158 responses. 47% of the respondents indicated that they have completed their coursework and have earned their DPS degree. By contrast 34% are currently working on their dissertations. 16% are working on their idea paper and coursework. Only 3% have only completed the coursework but not the dissertation.
Please let us know your current work affiliation and job title	146 responses. While participants indicated a variety of corporate or academic titles, most were in leadership and executive areas in organizations such as IBM, Microsoft, Wells Fargo, AXA Advisors, Verizon, MetLife and several universities. 22% are

	currently employed as full time professors or adjunct professors, whereas 78% are employed in the private sector.
Did the DPS degree help you get a promotion in your current job?	157 responses. 59% indicated that the DPS degree was not a determining factor in obtaining a promotion. 41% responded that the DPS degree was instrumental in obtaining a promotion.
To which level?	54 responses. Promotion into executive position was most common.
Did participation in the DPS program help change your career, such as starting your own company, or moving from industry into academia or vice versa?	154 responses. 57% indicated that the DPS was not a determining factor in launching a new business or moving from industry into academia. 43% responded that the DPS degree helped change their careers (please see next question for further details).
My career change was	61 responses. Of those who responded positively to the previous questions, 62% indicated that the DPS was instrumental in their shift from industry to academia. 28% indicated that the degree helped in launching their own company and 10% said that the degree helped in moving from academia to industry.
As a university designated "terminal" degree, did the DPS degree help you get tenure at a university or college?	152 responses. 11% of participants indicated that the DPS did indeed help them become tenured. 31% responded that the degree did not aid in tenure-ship and 58% responded as "not applicable". The background of the respondents (i.e. working in academia or in the private sector) was not provided.
Which university or college?	12 responses. Those who achieved a tenured position were affiliated with educational institutions in the tri-state area. Examples include: Farmingdale State College, Pace University, State University of New York, Washington & Jefferson College, Western CT State, and St. John's University. Due to the low number of responses, a breakdown by institution is not available.
Have you published any refereed conference or journal papers?	148 responses. 39% of participants indicated that their work has been published in peer-reviewed journals. 61% were not published.

C. Additional Findings

Participants were given the opportunity to provide some comments at the conclusion of the survey. One of the

common themes observed in their comments is the desire to convert or designate the DPS degree as a PhD. Some have indicated that the DPS designation is often confusing and in extreme cases implied an inferior degree to the PhD designation.

"Often, in conferences or academic settings, people introduce me or congratulate me on completing my PhD. I have given up correcting them. Although the DPS is a truer sense of a doctorate with an "applied focus", the PhD is the "trademark" everybody knows like Kleenex, Post-It, or Xerox. Also, for some colleges like ours, unless the job description is written with the more inclusive "research doctoral degree", they require the PhD and will not/cannot accept the DPS as an equivalent doctorate. I truly appreciate the skills and experience the DPS program gave me. Change from DPS to PhD would make it easier to get jobs and remove the need to explain the difference."

IV. TRACK 3: INTERACTIONS WITH OTHER DPS PROGRAMS

- A. Albany Medical College offers two DPS programs - a Doctorate of Professional Studies in Bioethics, Concentration in Health Ethics and Policy and a Doctorate of Professional Studies in Bioethics, Concentration in Clinical Ethics Consultation. Both programs have been designed health care professionals such as chaplains, nurses, social workers and physicians and who have a master's degree in bioethics or similar discipline although others can be admitted. Prerequisites include the ambiguous "being ready for doctoral level studies" and students are also required to have access to a clinical setting to see patients. The programs consist of 30 total credit hours each with a research component that may be a traditional doctoral dissertation. AMC charges \$2,575 USD for each 3 credit course for a total cost of each program ending up at \$25,475 USD [8]. Repeated attempts to gather additional information from AMC were unsuccessful; Albany Medical College would not release any additional information to us, neither to the authors of this research paper or to the Pace DPS Program administrators.
- B. The admission requirements for the New York University Steinhardt (NYU) Doctor of Professional Studies (DPS) in Occupation Therapy program requires that you have graduated from an approved professional occupational therapy professional master's degree in occupational therapy and be state certified as an occupational therapist or be eligible for certification. We inquired about the number of students admitted into the program, but were unable to gain this information. According to the NYU Steinhardt website [9], currently there are 137 professional doctoral students (EdD, DPT, DPS) enrolled in all of their programs. This does not include the PhD program. When we inquired about the graduation rate, no clear answer was provided. In order to graduate, students are expected to complete a
- professional e-portfolio and successfully defend the evidence-based professional portfolio. The portfolio must be completed within seven years. As noted by NYU Steinhardt (2016), the portfolio consists of three parts. First, students complete an analysis of their current practices to determine career goals consistent with their area of specialization. Second, students use their academic coursework and clinical experience to collect artifacts that demonstrate advancement of knowledge, skills, and abilities gained through the integrated academic and clinical work within the program. Third, students organize and catalog their artifacts. In the final course, students present their e-portfolio to a panel of three faculty members. Faculty reviews the e-portfolio based on the original, professional development plan and its consistency with the evidence-based knowledge in the field of inquiry. Most individuals are already working in the Occupational Therapy field, so many success stories exist. We were able to find that many who come for the DPS degree are either trying to gain administrative positions or currently working in some administrative capacity. The DPS also helps those who want to teach in the field secure higher education positions. NYU Steinhardt (2016) emphasizes the quality of the DPS degree and note that "you will study in a top-ranked occupational therapy department at a world-class university." NYU places significant emphasis on career path advancement and professional growth as a combined result of attaining this degree.
- C. Pace University offers two DPS Programs; the aforementioned DPS in Computing, and the DPS in Business within the Lubin School of Business (established in 1972). The DPS in Business program provides advanced education to enhance the careers of already successful business managers and professionals. This program focuses on educational preparation geared more towards managerial and consulting careers than academic careers. This doctoral program, like most others, requires students to complete an approved set of courses, to pass written and oral examinations, and to prepare and defend a dissertation. Unlike most doctoral programs that require students to concentrate all of their coursework on one or two areas, the DPS degree requires students to complete fewer courses in two concentrations and also to take several courses that integrate the disciplines of business. DPS students develop research skills that are appropriate for conducting applied, rather than academic, research and develop dissertation topics that utilize their extensive managerial experience [10]. The DPS program provides advanced education to enhance the careers of already successful business managers and professionals. This program focuses on educational preparation geared more towards managerial and consulting careers than academic careers. This doctoral program, like most others, requires students to complete an approved set of courses, to pass written and oral examinations, and to prepare and defend a dissertation. Unlike most doctoral programs that require students to concentrate all of their coursework on one or two areas, the DPS degree requires

students to complete fewer courses in two concentrations and also to take several courses that integrate the disciplines of business. DPS students develop research skills that are appropriate for conducting applied, rather than academic, research and develop dissertation topics that utilize their extensive managerial experience [10]. Additional details on Pace DPS in Business (Pace University, 2016 [11]):

- 10-14 Students admitted per semester
- Dissertation defense consists of Dissertation committees, plus oral and written exam.
- Total tuition is: \$72,845 (roughly \$1,275/credit) 57 Credits in total
- Idea papers are developed in a cohort.
- Not an exact equivalent to the Agile DPS in Computing; however, the program is usually completed in 5 years.

D. The University of Southern Queensland [12], Australia offers Doctor of Professional Studies program (DPRS), with the aim of providing experienced professionals with doctoral level research opportunities along with relevant required coursework. Queensland DPRS admission consideration requires a candidate to possess a bachelor's degree with honors or a master's degree, in addition to at least five years of professional experience. The DPRS has tri-Semester admission intake each year, in the month of March, July and November. The DPRS Program, which requires the completion of 24 units, is structured into three sections. First is the compulsory completion of two professional fundamental courses, culminates into the research proposal for assessment and confirmation of candidature. This is analogous to the require qualifying examinations in most traditional PhD program, for advancement to candidacy. Second, are the optional elective advanced postgraduate-level coursework related to the candidate's work-based research projects. Third is the required completion of an independent supervised work-based research projects with a dissertation (having minimum of 60,000 words) work prepared for external examination. The DPRS candidate's required time limits to complete the DPRS program is a minimum of 3 years and a maximum of 8 years. Hence, there is an exit point, in which students who do not pass these courses exit the program without the doctorate award. Such student may be awarded Master of Professional Studies, based on the recommendation of the doctoral program examiners and upon meeting certain additional requirements.

E. Nova Southeastern University's College of Engineering and Computing offers The Doctor of Philosophy (Ph.D.) in Information Systems (DISS) degree. Although not a DPS, this degree shares many of the DPS characteristics: its format combines traditional and online instruction and the admitted "cluster" is comprised of working professionals in areas such as information system planning, information security, systems analysis and design, project management, information system administration, information science, or

software engineering. This degree requires 64 credits to complete: each student must complete eight courses, two research courses, and a dissertation. The information security concentration is recognized by the U.S. National Security Agency (NSA) and the Department of Homeland Security (DHS) making it easier to obtain grants or federal funding.

V. CONCLUSION

The Agile DPS approach is robust, proven and scalable. At a time when more emphasis is placed on applied research, the Agile DPS offers the best of both worlds: the ability to pursue a terminal degree for working professionals and the alignment of research topics with new and recent advances in information technology and computing. Nevertheless, change is inevitable. The Agile DPS cannot remain sustainable and responsive unless it fully understands and embraces the feedback of the marketplace as well as that of previous cohorts. The survey we conducted offered us an opportunity to acknowledge successes and identify improvement avenues. While 16 years of Agile DPS classes are a remarkable milestone, confusion remains as to the DPS designation and its acceptance as equivalent to a traditional PhD. In conclusion, we strongly support the effort to convert the DPS degree to a PhD degree, with conversion consideration given to previous as well as current cohorts.

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