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Realizing the Possibilities of Notetaking Software for Academic Support: An Intervention for Academic Coaches

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Realizing the Possibilities of Notetaking Software for Academic Support:

An Intervention for Academic Coaches

A Thesis

Presented to the Faculty of the

Department of Educational Foundations & Policy Studies

West Chester University

West Chester, Pennsylvania

In Partial Fulfillment of the Requirements for the

Degree of

M.S. in Higher Education Policy & Student Affairs

By

Paul B. Cortopassi

December 2020

Dedication

To the loves of my life, Marilisa Cristina and Caden Luca.

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Abstract

College students with attention deficit hyperactivity disorder (ADHD) are a sizeable group whose qualitative experience with use of digital tools or assistive technology is not yet fully understood. This cohort of students may not know of the potential applicability of digital tool use to extend and enhance their learning. Part of why students with ADHD may not know about digital tools or assistive technology and its relevance for their learning may be due to that fact that many campus disability services programs position themselves primarily toward compliance with applicable laws. Campus disability services programs can benefit from moving beyond both a "rehabilitative" conception of disability and limited consideration of commonplace assistive technologies. Conceptualizing "disability" through a lens of bodily lived experience coupled with a recognition for how digital tools can benefit college students with ADHD as extensions and enhancements to learning is warranted. This critical action research proposal calls for an intervention for academic coaches with the aim of realizing the possibilities of notetaking software as an academic support for college students with ADHD. To reach this end, collaborations among campus disability services programs, offices of information technology, faculty and student affairs practitioners will be necessary so college students with ADHD can gain awareness and exposure to the use of digital tools and assistive technology.

Keywords: academic coaching, digital tools, college students with ADHD

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Chapter 1

Introduction

College students with attention deficit hyperactivity disorder (ADHD) can best be served through an integration of digital tools as academic learning support. In this critical action thesis, I propose an intervention geared to academic coaches for the purpose of developing a keenness for introducing and demonstrating to college students with ADHD the usefulness of notetaking software in lecture-based classroom settings in higher education. In this chapter, I lay out the backdrop that situates my standpoint on this topic, introduce in broad stokes the general theme of inquiry, and indicate the philosophies that frame my thinking around this subject matter. In the following section, I sketch my personal experience as a student with ADHD to indicate how my background informs my sentiment and thinking on ADHD and academic learning support.

Positionality

Throughout my years of education, I have experienced difficulties with the processing of information and comprehension. In seventh grade, I was assessed and diagnosed with hyperlexia and attention deficit hyperactivity disorder (ADHD). Hyperlexia meant that while I read at grade-level, I comprehended what I read four to five grade-levels below. ADHD impacted my capacity to maintain focus on instruction, classroom discussions, and assignments. The difficultly lie in the fact that I was not able to filter out various stimuli in and around the classroom environment. While the teacher was instructing the class, during discussions, or while I worked independently or with groups, I was drawn to the noises and sounds of the fluorescent lights, the movement of chairs, the tapping of pencils, the whispers of conversations, the birds chirping outside the window, the voices in the hallway as well as emanating around campus. This condition, my way of being-in-the-world, posed real problems to my efforts to be

academically successful. They had profound affects upon the way I perceived myself as a student and on my relationship to education. My experience of the classroom environment made me feel as though I was not cut out for school, that I did not fit. To address my lack of fit, an Individualized Educational Plan (IEP) was designed for me that sought to mitigate my hyperlexia and ADHD and to support my learning.

IEPs are developed and implemented by a team of practitioners, which includes psychologists, teachers, parents and friends, and the student with a disability them self. The IEP intends to account and accommodate for the challenges presented by the classroom environment and its misfit for the student with a disability. In my case, it was determined that I be provided a quiet area in the classroom to work, a notetaker or use of recording device, and time and a half on tests as accommodations for my ADHD. In high school my parents enrolled me in a dyslexia center where I worked one-on-one with a reading specialist and was taught specific strategies for reading comprehension. Additionally, I attended counseling sessions and began taking medications as treatments for my inattention. Although I benefitted from these supports and services, I also began internalizing a sense of inadequacy with regard to learning. I felt as though I was not good enough and needed other people (professionals) to figure it out for me. I no longer wanted that for myself. I had to figure out a way to be successful academically of my own accord.

In college, I figured it out. Without realizing it on a conscious level, I developed a way to extend my capacity for learning and to enhance my understanding of academic material through the music I listened to. I had always been a student of music, not in the sense that I was a musician myself, although I did play the saxophone from fourth to eighth grade, but that the music I listened to taught me about life, about being in relation to the world and others, about

social justice. The musical backdrop to my early years in college facilitated my comprehension of subject matter. I was taking coursework in sociology, philosophy, black studies. I was listening to hip hop, reggae, and folk music. The music I listened to and the books that I read reflected one another and deepened my appreciation for each. This experience had such a profound impact on my education and sense of self that it became the focus of my first master's in sociology. For my master's project in that program, I interpreted hip hop music as a theoretical text and site of knowledge production.

I have always been drawn to the unconventional, probably because I do not readily fit with convention. This standpoint helps to shed light on my present effort to understand the relationship between college students with ADHD and the use of digital tools as an academic support. This critical action research proposal is an effort to understand that the relationship between college students with ADHD and their lecture-based classroom environment is one of misfit. This misfit is a problem and barrier to academic success for college students with ADHD; it is a problem that can and should be addressed through the use of notetaking software that has the potential to enhance and extend the bodily lived experience of college students with ADHD. Digital tool use will be spotlighted throughout this proposal and viewed as assistive technology for a college student with ADHD, but a difference resides, and a contribution is made by way of a phenomenological interpretation of the relationship between assistive technology and bodily lived experience of a lecture-based classroom environment.

Broad Introduction to the Concern

College students with ADHD face challenges to academic success. On one hand, they are tasked with navigating a new academic environment while simultaneously acquiring an understanding of how best to learn in order to be successful. On another hand, this new academic

environment (higher education) is governed by rules and regulations that are markedly different from a prior academic environment (high school). In college, civil rights law, the Americans with Disabilities Act of 1990 (2008) and Section 504 of the Rehabilitation Act (1973) take the place of educational guarantees that had been provided throughout elementary, middle, and high school by the Individuals with Disabilities Education Act (2004). A significant difference is the absence of a team of practitioners and advocates (teachers, case managers, parents, friends, etc.) that help design and implement an Individualized Education Plan (IEP), which often would include a consideration of assistive technologies. To address this gap, this critical action research proposal calls for a professional development workshop geared toward academic coaches. The expressed intent of the workshop will be to equip a group of academic coaches with an understanding of the bodily lived experience of college students with ADHD. Additionally, the workshop will develop in academic coaches a competency to demonstrate for and empower college students with ADHD through the use of notetaking software. By realizing the possibilities of notetaking software as an academic learning support and equipping academic coaches in this capacity, they will be positioned, to an extent, to fill the void left in the wake of an absence of an IEP team in higher education.

To be sure, colleges and universities offer accommodations, services, and assistive technologies to college students with ADHD through campus disability services programs but tend to do so by way of a deficit model. A model of disability that is premised on the idea of bodily deficiency, the deficit approach conceptualizes a person who experiences disability as insufficient and someone who can and should seek to recover from their inadequacy, which is the foundation that animates the idea of rehabilitation related to disability (Stiker, 1997/1999). According to Henri-Jacque Stiker (1997/1999), a French historian of disability, disability is

viewed by western, modern societies as a loss, *lack*, or limitation of body/bodily function(ing)

that needs to be repaired or returned to a normal condition (i.e., rehabilitated). A "rehabilitative"

model grounds the legal framework in the United States and its key elements are Section 504 of

the Rehabilitation Act and the Americans with Disabilities Act, as noted above. For a student

with a disability to be in a position to receive protection and accommodation under these acts,

they must demonstrate that their disability meets statute requirements. According to the ADA

(1990; amended 2008) and the Section 504 of the Rehabilitation Act (1973), a disability is "a

physical or mental impairment that substantially limits one or more of the major life activities"

of an individual, or "a record of such an impairment," or "being regarded as having such an

impairment" (42 U.S.C §104.3(j)). Although it is sensible for colleges and universities to be

guided by a legal frame as a way to determine who warrants protection, accommodation, and

resources, the system is not a perfect one. There are unintended consequences to requiring

students with a disability to prove their disability by way of "a record of such an impairment" in

order to receive academic learning supports. It tends to privilege those students who have the

means to obtain professional support or who have attended well-resourced primary and

secondary schools. Given the state of contemporary education, it is not inconceivable that there

are students with a disability that are attending community college or university who do not have

the financial means to receive professional support or who have attended an elementary, middle,

or high schools that lack resources and proper investment. Research shows that disparities in

primary and secondary education persist and are widespread across the United States (DiPrete &

Eirich, 2006).

More can and should be done to go beyond simple compliance with the law. A proactive

position can be taken up by colleges and universities, one that aims to prepare academic coaches,

both those who serve disability specific populations through disability services as well as those who serve a more general student body through learning resource centers. Academic coaches, regardless of which constituency they serve, can benefit from an understanding and know-how related to digital tool use in classroom settings and its relationship to bodily lived experience of disability. In a sense, this kind of professional development can not only sensitize academic coaches to the needs of college students with ADHD, but perhaps also double as a way to support those college students with ADHD who have yet to connect with or do not have the requisite documentation to formally connect with a campus' disability services. There are a number of campus resources across university settings that provide material support and know-how without requiring documentary evidence other than a student ID (e.g., library, computer labs, tutoring, counseling, health and wellness, etc.).

Assistive technology, higher education, and ADHD

College students with ADHD can be aided in their learning and benefit from assistive technologies. Assistive technologies can be defined as equipment, devices, or products that help a person with a disability function in their everyday life (Technology Related Assistance for Individuals with Disabilities Act, 1988). Some examples of assistive technologies are smart pens that can record lectures for students prone to distraction, books on tape for students with reading difficulties, and dictation software for students that struggle with written expression. Assistive technologies include almost any device that helps a person with a disability function within their given situation. Research has indicated that students with disabilities tend to arrive to college with little to no experience with and/or knowledge of assistive technology, yet assistive technology can make learning possible for students with disabilities (Asselin, 2014). Awareness

of and experience with assistive technology has the potential to transform the experience of learning for students with ADHD in higher education in profound ways.

There are new and emerging applications, marketed as productivity tools, such as note taking applications that have features built into them that can benefit a college student with ADHD. For example, one such application, Notability (2017), has features that can extend and enhance learning for college students with ADHD. The Notability software application allows its operator to simultaneously record audio and take notes. In addition, each note taken while the audio recording feature is engaged gets synced with its place in the recording. For college students with ADHD or others with concentration difficulties, taking notes can be quite challenging because distractibility can compromise their efforts. For example, while in class, a student may recognize a key point and begin to write down note. While doing so, however, they may either become distracted by what the key point makes them think about or continue to hear the professor move on to their next point in the lecture and lose track altogether what they had been attempting to write a down. In this scenario, the value of the recording feature and its capacity to synch with notation is revealed in light of the lived experience of the college student with ADHD. Although the student may have missed some information, after class they can go to retrieve the missed information and complete their notes because what had been written down and where it is located in the recording are linked.

Although technology is a common facet of both the higher education professional and educational environment, the value of these technical devices for the prospects of supporting learning are either unseen or underappreciated. In general, the model of academic coaching, development of cognitive strategy for problem solving and coping skills (Swartz, et al., 2005), practiced in offices of disability services tends to focus on the teaching of strategies that attempt

to mitigate challenges associated with executive functioning. While this effort may be entirely appropriate, it overlooks the development of academic skills, such as notetaking. To be clear, I am not suggesting that academic coaches should not work with college students with ADHD on strategies related to executive functioning. Rather, I am arguing that more should be done to engage college students with ADHD through academic coaching efforts that aim to develop specific academic skills, such as notetaking. Specifically, I am advocating for academic coaches to develop an acuity for how digital tools, such as notetaking software, can be leveraged as an academic learning support for college students with ADHD that suits their bodily lived experience of the lecture-based classroom.

While technology makes things *easier* for people without disabilities, assistive or new technologies can make things *possible* for people with disabilities (Asselin, 2011). Awareness of and experience with digital technology carries a potential to transform educational experience of college students with ADHD in higher education. Yet the prospects of digital technologies potential for such transformation require that they be introduced and demonstrated to college students with ADHD. The potential of digital technology as a learning support in higher education for college students with ADHD is missed when academic coaches focus more on development of cognitive strategies and less on academic skills, which can be extended and enhanced through the use of digital tools. According to Paulo Freire (1998), a Brazilian educator and philosopher of education, as educators we have an ethical responsibility to not simply "transfer knowledge," but to contribute to a depth of understanding while maintaining a willingness to listen to the students we educate. A capacity to listen, I contend, includes an ability to recognize students' needs as they disclose themselves in the process of education. The experience of learning through assistive technology can be transformative and empowering when

academic learning support suit a college student with ADHD's bodily lived experience of

education. If academic coaching practice for college students with ADHD becomes geared to the

experience of learning for college students with ADHD, then academic coaches may be led

toward the possibilities of academic learning supports through digital tool use.

Overview of Philosophical Frame

In this critical action research proposal, I attempt to uncover the role academic coaches

can have in supporting the learning and development of college students with ADHD.

Specifically, academic coaches are uniquely positioned to realize the possibilities of digital tools

as an academic learning support for college students with ADHD. A digital tool, such as

notetaking software, is a mediator of the relationship between a college student with ADHD and

their bodily lived experience of a lecture-based classroom. The impact that an academic coach

can make on the bodily lived experience of classroom space for a college student with ADHD

through the introduction of digital tool use as an academic learning support is nothing shy of

supporting their establishment and orientation into an educational environment. The use of

notetaking software by a college student with ADHD is a means to establish a suitable fit, i.e.,

orientation.

The philosophical frame that grounds this consideration of digital tools as an extension

and enhancement to the bodily lived experience of learning for college students with ADHD in a

lecture-based classroom setting is rooted in materialist-feminist disability, phenomenology,

philosophy of technology and sciences studies, and a philosophy of experience and education.

Materialist-feminist disability conceives of disability not as an individual deficit but rather as an

incompatibility between a person and an environment, a misfit, to be overcome (Garland-

Thomson, 2011). Phenomenology articulates that bodies are shaped in the way they inhabit space

as well as through the objects they utilize to engage that space; in other words, when a person picks up an object and turns towards their environment it supports one's orientation in that space (Ahmed, 2006). Philosophy of technology and science studies explains that technology is not merely a means to an end; it mediates the relationship between a person and their environment (Brey, 2000; Heidegger, 1927/1996; Simondon, 1958/2017). A philosophy of education based in experience emphasizes a relationship between a person or student and their environment whereby an educative experience supports growth and development of the person or student to further meaningful involvement within an environment (Dewey, 1938). Taken together, the philosophical frame guides the intentionality of the critical action research proposed, which is to develop academic coaches who can foster skill development in college students with ADHD through the use of digital tools as they relate to lecture-based academic setting. In the end, this intervention aims to empower students to be in a position to respond to and overcome the practical challenges they face in higher education.

Conclusion

In this chapter, I explained my personal experience with ADHD and how it has shaped my relationship to education as a means to indicate how this backdrop informs the concern of this thesis. I also presented a general overview of the challenges college students with ADHD faced within the higher education setting, identified the lens through which these students tend to be interpreted, and pointed out that assistive technology can benefit college students with ADHD and enhance their experience of learning. In a final section, I introduced the philosophies that guide my interpretation of this problematic and announced that academic coaches have a critical part to play in orienting college students with ADHD to learning in a lecture-based classroom

environment. In the chapter that follows, I will make specific my concern and thematic of this

thesis as well as give definition to a number of key terms that will be used through this proposal.

Chapter 2

Academic Coaching, Digital Tools, and ADHD

College students with attention deficit hyperactivity disorder (ADHD) are a population of higher education students who can benefit from academic coaching during their transition to college. Although academic coaching is available and provided to college students with ADHD, the approach of the academic coaching given to this cohort of students aims at overcoming challenges and barriers to academic success that stem from deficits and limitations to learning related to the executive functioning of college students with ADHD. While this effort of academic coaching for college students with ADHD is appropriate and warranted, it overlooks the relationship between academic skill development and academic success. Digital tools, such as notetaking software, carry in them a potential to extend academic skill development and enhance the bodily lived experience of learning for college students with ADHD.

Realization of the possibilities embedded in new and emerging technology, such as notetaking software, by academic coaches can extend professional practice and subsequently benefit college students with ADHD through enhancements to their bodily lived experience in a lecture-based classroom environment. Cognitive artifacts, such as note-taking software, should be looked to as academic learning supports that extend the skillful involvement of college students with ADHD in higher education and promote academic success. Incorporation of digital tool use as part of an academic coaching intervention toward the academic skill development of college students with ADHD presents an opportunity to advance the professional technological competency of academic coaches and, subsequently, promote the student learning and development of college students with ADHD. The value of digital tool use toward this end has

yet to be fully explored, satisfactorily appreciated, and applied as a resource for academic learning support for college students with ADHD.

Conceptual Framework

This critical action research proposal and accompanying intervention presents an approach to academic skill development for college students with ADHD by way of the use of digital tools, such as Notability (2017). A cornerstone principle animating this work is a notion that disability does not represent an individual's lack or deficit, but rather a difference in bodily lived experience. The difference of bodily lived experience (i.e., the condition of living with ADHD) presents itself as a "misfit" between a college student with ADHD and their classroom environment. This particular misfit must be accounted for and remedied in order to further ensure the access and inclusion of college students with ADHD and to promote their prospects of academic success. One way to address this concern is to look to new and emerging digital tools as academic learning supports that can enhance and extend the bodily lived experience of college students with ADHD in a lecture-based classroom. New and emerging digital tools provide opportunities to accommodate for the negative effects of the classroom environment, such as the effort on the part of the college student with ADHD to take notes from a lecture while experiencing concentration difficulties. In this circumstance, the bodily lived experience of the college student with ADHD is not taken into account. It is not that the college student with ADHD that should be read as deficient, but rather the relationship between the environment and bodily lived experience of ADHD must be taken into account. This particular type of misfit poses real challenges and problems for the achievement of academic success of college students with ADHD. The adept use of notetaking software on the part of college students with ADHD in a lecture-based classroom can establish a fit and orientation to the situation and tasks at hand.

College students with ADHD may attribute a "deficit" in their executive functioning as a barrier and challenge to their academic success when the issue may be that the classroom environment has not accounted for the difference of their bodily lived experience. When circumstances exist that do not support differences in bodily lived experience, and motivation is left wanting for structural change to redress inequities, then people might look for tools or technology to extend their capacities and surpass obstacles. A clear example of struggle to overcome obstacles was the fight for curb-cutouts for wheelchair riders in in Berkeley, CA in the 1970s. At that time, curb-cuts were few or non-existent, so a group of wheelchair users and activists in Berkeley took it upon themselves to lay down concrete as a makeshift ramp to be able to access the sidewalks rather than having to drive their wheelchairs in the street (Glover Blackwell, 2017). A critical distinction being expressed by the above example, and one that must be kept in mind throughout the entirety of this work, is a distinction between a medical and materialist feminist model of disability. A medical model of disability posits that bodily impairment (physical, cognitive, etc.) is a medical problem and one that resides in the individual. A materialist feminist conception of disability perceives and foregrounds the particularities of bodily lived experience in relation to one's lived environment (Garland-Thomson, 2011). Accordingly, and the way disability is interpreted and presented in this critical action research proposal is a perspective that the bodily lived experience of ADHD is a "misfit" with one's lived environment, (e.g., the lived experience of a lecture-based classroom environment).

Statement of the Problem

The motivation behind this critical action research proposal is an effort to recognize the significant role that academic coaches can play in promoting an understanding for how new and emerging digital tools can be put to use in a classroom space as a means to extend and enhance

the bodily lived experience of college students with ADHD in lecture-based classrooms. In this proposal, I will address the following questions:

- How can academic coaches help to realize the possibilities of digital tools as an academic learning support for college students with ADHD?

- How can digital tool use by college students with ADHD in a lecture-based classroom extend the bodily lived experience of college students with ADHD and, in so doing, help create fit and orientation to the circumstance for them?

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Definition of Terms

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There are a number of terms that have a specific use for understanding how this proposal and accompanying intervention has been developed. What follows is a brief listing of terms with associated definitions based in scholarship.

Learning assistance

The term describes an array of services, supports, and activities that promote access and student success in institutions of higher learning.

Academic coaching

Refers to a form of mentorship for college students, typically students that are engaging their first year of study. An academic coach provides support to students on a regular basis to help them develop academic skills, set goals and establish plans, and overcome barriers to academic success (Bettinger & Baker, 2014).

Disability

"A physical or mental impairment that substantially limits one or more of the major life activities" of an individual, or "a record of such an impairment," or "being regarded as having such an impairment" (42 U.S.C §104.3(j)).

Rehabilitation

When a person who has either been born with or has acquired a bodily difference, the result of which is limitation or loss of bodily function(s) or skills, restores their lost capacity and regains maximum self-sufficiency, i.e., a return to a normal functioning, condition, or state. A prosthesis can be viewed as a rehabilitative device, e.g., a prosthetic limb. A person who experiences a car accident that results in an amputation of their leg and compromises their ability to walk can restore the capacity to walk through the use of a prosthetic leg.

Accommodation(s)

Modification(s) or adjustment(s) of a normative situation, circumstance, or environment to enable access or inclusion to a person with a disability into an otherwise inaccessible space, place, or context.

Misfit

The term misfit connotes that disability is not an individual deficit, but rather the mismatch or incompatibility between a body in space and time and an environment, which places emphasis on the specificity of a lived embodiment over the idea of a generalized disabled body (Garland-Thomson, 2011).

Attention Deficit Hyperactivity Disorder (ADHD)

An individual's inability to sustain or control their attention, impulse, and/or hyper-action.

Phenomenology

A method, analytic, approach, or pathway toward discovery of the foundational structures of human existence or lived experience.

Lived experience

A living being's manner of existence. Lived experience stands for an individual's way of being-in-the-world, which runs counter to a more traditionally quantitative analysis of human behavior.

Being-in-the-world

A foundational structure of human existence that indicates a totality to an individual's lived experience, e.g., *that* a person exists means that they are always in relation to a world. The term world can be interpreted as a circumstance, situation, environment, etc. A depiction of human existence in isolation or devoid of a relation to a world is always inaccurate.

World

The primary (ontological) locality and stage in and through which all human action occurs. The use of the term "world" in the context of this proposal is not being used to express a physical space, but rather to draw out a phenomenological distinction. Human existence presupposes the presence and involvement in the world. World, although not always indicated, is always implied in terms, such as context, situation, setting, place, environment, etc. (Heidegger, 1927/1996).

Body/Bodily

The physical presence of an individual's existence. "[M]y body, ... the system of all my holds on the world, founds the unity of the objects which I perceive" (Merleau-Ponty, 1964, p.18). That an individual exists always already implicates that one has a given body, and not just any body but *the* body that they uniquely experience and move about in as always related in the world (Merleau-Ponty, 1945/2002).

Orientation

A body takes shape through the space it inhabits; directions are uncovered by the objects one turns toward; objects we do things with disclose an orientation; bodies acquire orientation through repetition (Ahmed, 2006).

Technology

For the purpose of this thesis, the term technology has to be thought of and considered as more than an object or device's functionality or intended purpose. Technology displays both a manner of discovery and the nature of its mediating relationship between an individual and their environment. To this day, technology remains a contentious term. For discussion of the term within philosophy of technology see, e.g., Brey (2000), Heidegger (1927/1996), and Simondon (1958/2017). I am highlighting these three philosophers because with them I find the most resonance to my work.

Assistive technology

A piece of equipment or apparatus, device(s), or product(s) that assists a person with a disability to function in their day-to-day activities (Technology Related Assistance for Individuals with Disabilities Act, 1988).

Technical object

An object or device that relates to an environment or associated setting. This kind of object or device constitutes the meaning of its functioning through its involvement with an environment as it is put to task by an individual (Simondon, 1958/2017). In other words, the technical object becomes what it is and understood through its application. A technical object plays a mediating role in between lived experience and the world. For example, a hammer is a technical object for a carpenter who uses it to drive nails as they frame a wall for a house. In the

same way, Notability is a technical object for a college student with ADHD who uses it to record a lecture as they take notes in class.

Cognitive artifact

A technical object that facilitates cognitive functioning. This type of technical object supports an individual in their thinking, planning, solving, calculating, measuring, knowing, categorizing, identifying, and/or remembering. They expand or enhance a person's given capacities. For example, a calculator is a cognitive artifact in that it helps people solve arithmetic problems. In a similar way, Notability fits into the category of cognitive artifact because its ability to record can aid an individual's recollection.

Digital tool

The use of the term digital tool(s) refers to and is inclusive of new and emerging technology, notetaking software, technical object(s), cognitive artefact(s), and assistive technology.

Transformative learning theory

Refers to a theory of adult learning that posits that each person carries with them a set of beliefs and expectations that are deployed by an individual in the process of interpreting new information, circumstances, and environments. These beliefs and expectations become foundational and establish a backdrop for how individuals make sense of their lived experiences (Mezirow, 1991). Transformative learning frames "learning" in that it establishes the ground upon which further and/or future information and know-how is assimilated to one's body of understanding.

Perspective transformation

Adult development can occur when taken-for-granted assumptions are challenged through experience or self-reflection. A critical examination of assumptions has the potential to lead toward a new frame of reference. Furthermore, the new frame of reference establishes the possibility of forging a new manner of lived experience. "Transformation can lead developmentally toward a more inclusive, differentiated, permeable, and integrated perspective and that, insofar as it is possible, we all naturally move toward such an orientation" (Mezirow, 1991, p. 155).

ACPA/NASPA Professional Competencies

Three professional competencies intersect in this proposed action research project and its accompanying intervention: technology, advising and supporting, and social justice and inclusion. The ACPA/NASPA standards describe a set of principles and outcomes that guide professional practice in the field of student affairs in higher education settings.

Technology emphasizes and encourages the integration of digital tool use both as a component of student affairs practice and as a resource for the promotion of academic success, student learning, and development (ACPA/NASPA, 2015). Advising and supporting details how a student affairs practitioner's base of understanding, personality and experience, and aptitude relates to and benefits one's capacity to provide assistance and guidance to students (ACPA/NASPA, 2015). Social justice and inclusion indicate both a premise or standpoint as well as a direction and purpose. Its core tenet and intent of action is the establishment of equitable learning spaces that provide the greatest access to individuals regardless of differences (e.g., disability, race, sexuality, gender, class, religion, etc.). This can take shape through the confrontation against established forms of injustice and inequities or through creation of new structure or procedures to address or redress inequalities (ACPA/NASPA, 2015).

This critical action research proposal is a call to realize the possibilities of notetaking software as an academic learning support. Academic coaches can introduce and demonstrate to college students with ADHD the use of digital tools as a strategy for extending academic skill development. This approach can enhance the bodily lived experience of learning for this cohort of students. Therefore, this proposed intervention fulfills the key qualities outlined in each of the competencies outlined above. For example, by academic coaches looking to digital tools as a learning support they extend professional practice and exemplify their role as supportive advisors.

Conclusion

In this chapter, I described my conceptual framework related to my proposed intervention, named my research questions, and listed and defined key terms relevant for this critical action research proposal. I concluded by connecting my proposed intervention to the ACPA/NASPA competencies. In the following chapter, I will review key areas of the literature that help to situate my concern.

Chapter 3

Introduction

While technology is a common feature of both professional and educational environments, the value of digital tools to support student learning and development remain either underappreciated or even unseen. I argue that the contemporary model of academic coaching can benefit from the integration of digital technology as an extension of learning strategies. For this to occur, however, academic coaches and their students need to develop both an awareness of the possibility of digital technologies and technological competency so they can harness the power of technologies for the enhancement of student learning and development. In this chapter, I review key sources within the research literature and discuss their relationship and meaning for my thematic concern. In short, my research makes the case for the introduction of digital tool use as a way to extend academic skill development and enhance the bodily lived experience of learning for students with ADHD within the academic coaching relationship.

The chapter is organized according to the following components. First, I describe how materialist-feminist disability and phenomenology can be blended together to situate the problem of disability as a mismatch between a college student with ADHD and the lecture-based classroom context. A discussion of key notions from the fields of education, technology and science studies, and assistive technology further grounds an understanding of how college students with ADHD relate to the lecture-based classroom environment through the use of technology as an extension of their cognitive capacities. Next, the critical role and prospect of academic coaching as a facilitator for the integration of technology to address the person-environment misfit is considered. Specifically, I will present an intervention that can be applied to college students with ADHD to resolve the person-environment misalignment. The

intervention is necessary because the literature on academic coaching, in general, and academic coaching for college students with ADHD, in particular, tends not to consider the incorporation of technology as a learning support and avenue for skill development in academic coaching models for college students with ADHD. Deliberation on digital tools as learning support that can be drawn into the practice of academic coaching will be advanced through a discussion of assistive technology, what it can do, and how it promotes universal instructional design. In the next section I turn first to materialist-feminist disability and phenomenology as fundamental references for my research.

Literature Review

The following subsections present and summarize the areas of literature that bolster this critical action research proposal and call for intervention in present research study. These include:

- Orienting the ADHD student

- Assistive technology

- Educative and mis-educative experience and ADHD

- Insights from philosophy of technology

- Problem of disability

Orienting the ADHD student: Misfits in the classroom

The work of two significant scholars grounds my work: Rosemarie Garland-Thomson and Sara Ahmed. Rosemarie Garland-Thomson provides the notion of "misfit," (2011) a materialist-feminist disability concept that postulates disability as an incompatibility between an environment and a person that needs to be overcome, which is instructive for my own thinking and work. Ahmed (2006) forefronts the significance of orientation, which she describes as

starting points. More precisely, she articulates that "[t]he starting point for orientation is the point from which the world unfolds: the here of the body and the where of its dwelling" (Ahmed, 2006, p. 545). Ahmed's work examines how bodies take shape by way of the spaces they inhabit and how the objects one uses to be involved with and engaged in a particular space support an orientation in a space.

As an example, imagine yourself travelling to a friend's home for the first time. Because this is your first trip to visit their place, you do not know or have a sense for how to get there. Now, your friend may have provided you with directions for how to get there, but these directions have not quelled your concerns and continue to leave you uneasy and anxious about finding your way there. This uneasiness or anxiety with not knowing the way or having a sense of how to get to your friend's home is the experience of misfit and disorientation. When a person is not suited to an experience or has yet to establish direction for their approach to an experience, they have not arrived at an orientation and remain misfit to the circumstance. However, to better situate yourself to this circumstance you may choose to use technology, a map or global positioning system (GPS), e.g., Google Maps, to assist you along the way and help you find your way.

In following Garland-Thomson and Ahmed with regards to the classroom environment and its space, any classroom is set up in such a manner and readily accessible for certain bodies and not others. In other words, it is set up and suited for students without disabilities to fit into. The classroom was designed around an imagined 'normal' body. The typical or standard higher education classroom is organized around a lectern, a chalk or dry erase board or projection screen to one side and accompanied by a series of desks, each the same size and height and spaced accordingly, facing to the lectern and board. The instructor uses this equipment to deliver

their information on a variety of subject matter. This organization of the classroom space and approach to the delivery of instruction using the classroom space presumes that it is suitable to each and every student that comes into the classroom. Yet this is not the case for college students with ADHD. Drawing on the key ideas of misfit and orientation together provides a way to think through the possibilities of digital tool use for college students with ADHD and how its implementation might provide a way for them to establish an orientation in the classroom space and overcome barriers to learning presented by an incompatible educational environment.

Academic coaches can play a critical role in helping college students with ADHD develop academic skills that support their academic success (Reaser et al., 2007). In doing so, I contend, they can support college students with ADHD to establish an orientation in classroom space (Ahmed, 2006). Academic coaches are, in part, tasked with identifying challenges and barriers to academic success, and then based on the identified challenge, they can intervene with the provision of an additional support. However, in order for academic coaches to intervene successfully they need to know how to read the situation, how to understand the student and what is possible in terms of introducing technology or integrating something of that sort. In short, academic coaches must be able to recognize the relationship between students and classroom activities as a misfit and, what is more, must serve as a guide to helping students reorient themselves to be successful.

This clearly names the way that the academic coach is drawn into this question around how to integrate digital tool use in the classroom for a student with a disability as a means to overcome a misfit with the environment and to aid in their orientation to the space. In effect, the academic coach operates as a facilitator of orientation to the classroom by way of the introduction of digital tool use. Therefore, by presenting digital tool use as an opportunity for the

student with ADHD and demonstrating its skillful use, the academic coach fosters the

establishment of the student-classroom fit. In the following section, I consult the literature

surrounding assistive technology and its use in supporting students with ADHD.

Universal Design and assistive technology

      A key characteristic of each and every technology is that it extends a person's capacity to

complete a given task (Lawson, 2010). In other words, technology is useful to people because it

carries with it an assistive quality, it assists in achieving a desired outcome. Diane Campbell's

(2004) scholarship on universal instructional design is valuable as she examined directly at some

of the different technologies that can be used in classrooms. Campbell (2004) defines universal

instructional design as "the design of instructional materials and activities that make learning

goals achievable by individuals with wide differences in their abilities to see, hear, speak, move,

read, write, understand English, attend, organize, engage, and remember" (p. 167). Campbell's

approach was to view some of the ways in which spaces are made more accessible and

universally designed through the implementation of technology. She specifically discusses note

taking and describes a particular approach to notetaking for students with disabilities that utilizes

audio-recording technology. Campbell (2004) explains how a student can take written notes from

a lecture on paper and simultaneously produce an audio-recording of the lecture through the use

of a recording device. As they start a new page of notes the student places a time stamp at the top

of the page to indicate where on the audio-recording that page of notes begins. Campbell's

depiction of a process for taking notes of a student with a disability is relative here because it

reflects a key feature of Notability that I highlight in my own intervention below. Notability's

capacity to sync notation and audio recording does in effect what Campbell describes in her

approach but in an even more direct and effective way.

Campbell's (2004) perspective on technology and universal design relate to two works by Susan Asselin (2011; 2014). Asselin addresses the relationship between assistive technology in higher education and also the ways in which assistive technologies can support the transition to college for students with disabilities. She places emphasis on how assistive technologies benefit a student with disabilities. Asselin identifies that assistive technologies help to grasp information, mitigate some of the challenges posed by the classroom environment, and highlights how in the transition from high school to college consideration of assistive technology tends to be overlooked. In the next section I connect the themes presented above to philosophy of education and the work of John Dewey.

Educative and mis-educative experience and the misfit of ADHD

In *Experience and Education* (1938), John Dewey distinguishes between educative and mis-educative experiences. According to Dewey (1938), an educative experience is one that establishes a continuity between past, current, and future activities as well as one that combines personal experience to the experience of education. A mis-educative experience is one that has a tendency to restrict or curtail an individual's development and growth as well as the allowance of prospective experience (Dewey, 1938).

Considering the relationship between a college student with ADHD and a typical lecture-based classroom, the context of that particular environment is mis-educative for the bodily lived experience of ADHD. It is mis-educative because the instructional method of a lecture, that calls for students to focus attentively on an individual speaker, does not take into account the bodily lived experience of ADHD and manner of being-in-the-world, which is a tendency to be drawn toward and attracted to a wide range of environmental stimuli. Therefore, the lecture-based classroom with its singular emphasis on verbalized instruction is not suitable for the college

student with ADHD. As a result, the student with ADHD is not readily receptive to the information being delivered and can struggle with comprehension.

Absent an overhaul of the instructional design of the lecture-based classroom that would render it universal, the environmental misfit between the college student with ADHD and the classroom space can be overcome through the incorporation of a digital tool. By integrating notetaking software that extends the college student with ADHD's capacity for receptivity of a lecture, they can establish an orientation and begin to fit with the expectations and setup of the classroom environment. Moreover, the establishment of an orientation through notetaking software provides an enhancement to the bodily lived experience of ADHD in a lecture-based classroom setting. The perspective from which this interpretation is made clearer is based upon an analysis of technology that perceives the relationship between a person and their environment as one mediated through tools.

Insights from Philosophy of Technology

The background of this research study is drawn from philosophy of technology and science studies and can be understood as a lens through which to interpret assistive technology. Both philosophy of technology and science studies provide a framework for how to perceive a student's relation to their environment, the traditional lecture-based classroom. Philosophy of technology and science studies posit that technology serves as a mediator of the relationship between person and environment. This frame of reference aligns with a materialist-feminist disability conception that views the body-space relation as misfit or mismatch (Garland-Thomson, 2011), rather than an innate individual deficit. Philosophy of technology and sciences studies, and materialist-feminist disability and phenomenology, agree that the person and their

environment are fundamentally connected. To be sure, there is no clear distinction between a person and an environment, rather the situation is person-environment.

The key theorists that inform this study are Philip Brey, Gilbert Simondon, and Martin Heidegger. Brey (2000) explains a vision of technology that clarifies the role that technology plays in people's lives. Simondon (1958/2017) demonstrates that an individual, their environment, and the tools they use are component parts of a general network. Heidegger (1927/1996) articulates the fundamental relation that grounds the experience of tool use as one of equipmentality.

Brey (2000) describes the ways in which human beings relate specifically through technology to their environment and how technological artifacts can be read as cognitive artifacts that allow for extension. As an example, consider the use of a day planner to keep track of a to-do list. The day planner allows its user a way to externalize the happenings of their day-to-day activities and the steps they need to take to accomplish them, rather than expending mental energy to track them. Understanding technologies as cognitive artifacts, for Brey, situates technologies as extensions of the ways we think, the way that we might solve problems, plan, and organize ourselves. Another example would be a smartphone that is used to store and retrieve information, such as phone numbers or appointments. Brey's scholarship is important for the present study as I will offer Notability as cognitive artifact in the description of my intervention in Chapter 4.

Simondon's (1958/2017) philosophy is also instructive for the present study with regards to how technology is understood. His view is that technology is a mediator of our relationship to the world around us. According to Simondon, human beings are linked or 'networked' to the world by way of technical objects. A technical object functions as a vector through which an

experience in an environment is mediated. He describes this condition as person-technical object-environment. A classic example would be that of a bicycle. The bicycle functions as a technical object that intercedes between our experience of the world in terms of distance and time. When we hop on a bike to ride to a new destination, our relationship to the experience of distance (e.g., 5 miles) and the time it would take ourselves to walk there becomes altered. Rather than taking an hour of time to close the distance by the pace of our walk, we can propel ourselves by bike to cover the distance in less time. Therefore, through the introduction of a technical object (e.g., bicycle), the sense of distance and how long it would take to close that distance is mediated. Following Simondon, I look at how the classroom environment can be mediated though an integration of digital tool use. In many ways, the classroom space has been integrating with technology. As examples, consider chalkboards and chalk for instruction, desks and writing surfaces for students to take notes, projectors to present visual aids, etc. Each of these items given as examples are just some of the equipment that give meaning to and mediate the experience of the classroom space.

Heidegger (1949/2012) articulates a broad understanding and analysis of how society views technology that is worthy of briefly summarizing. Heidegger diagnoses the problem of the modern stance toward technology as one of "positionality." For Heidegger (1949/2012), positionality is the *essence* of modern technology, and means "to place, position, [or] set" (p. 26) in a ready-made or ordered fashion. According to Heidegger, positionality as the essence of modern technology draws us into a particular style of relating to one another and the world around us, which he calls our mode of being. The mode of being through which we relate to one another and the world around us via the positionality of modern technology is instrumentality, which refers to a kind of mindset through which we interpret objects for a particular or intended

use. The problem, as Heidegger explains, is that we do not perceive this to be the case. For example, consider a light switch. Taken by itself it appears as nothing more than a device for turning on or off a light source (e.g., an overhead light, lamp, etc.). So long as the light switch functions as it is intended, we can take it for granted and tend not to discover how it is a part of entire apparatus. It is not until the light switch fails to turn on or off an energy source that we begin to sense the bigger picture of how the light switch itself is positioned within a vast circuitry.

When it comes to thinking about technology, our tendency is to conceive of a tool or device (e.g., a light switch) as a means to an end (e.g., opening or closing a light source). However, when we arrive at an understanding of an intended purpose of a particular tool or device as solely "productive and efficient," we obscure other possibilities or unintended consequences that arise from the setup of the instrument or technology. The same has to be said of the functionality of the lecture-based classroom space. Without the presence of a student with ADHD, the lecture-based classroom functions as it is intended, which is to present instruction for learning to students who are suited to that mode of education. The following section turns to exploring the problem of disability as it connects to the present study.

The problem of disability

Equally as important to how students with ADHD experience learning is the need to interpret how western cultures, such as ours, perceive of disability (see Chapter 1). Disability is situated at the intersection of social meaning and bodily lived experience (Stiker, 1997/1999; Merleau-Ponty, 1945/2002). To move beyond a deficit approach to disability, it is imperative to interpret disability supports not as corrective mechanisms, but as extensions and enhancements.

In this alternative approach or paradigm to understanding disability, for example, digital tool use can be grasped as *extending* capacity and by doing so can *enhance* bodily lived experience.

French phenomenologist Maurice Merleau-Ponty offers useful guidance in making this shift in thinking. In *Phenomenology of Perception*, Merleau-Ponty (1945/2002) explains how worldly experience is rooted in the body. According to Merleau-Ponty (1945/2002), "our body is not merely one expressive space among the rest. … It is the origin of the rest. …The body is our general medium for having a world" (169). In this way, it is through our bodies that we experience and come to understand the world we live in. *Because* we have a body, we do not lack a way of relating to the world around us. However, when we experience a limitation of the body, e.g., a "disability," we can design a technology or device to extend and enhance our experience and relate to our world anew. Therefore, we can use this paradigm to guide our thinking related to the problem of disability.

Merleau-Ponty provides an illustrative example in *Phenomenology of Perception* that is helpful in understanding his conceptualizing around the human body: that of a blind person and their use of a walking stick. According to Merleau-Ponty (1945/2002), in the blind person's use the walking stick "has ceased to be an object ... and is no longer perceived for itself; its point has become an area of sensitivity, extending the scope and active radius of touch, and providing a parallel to sight" (165). In this quotation, Merleau-Ponty argues that the walking stick or cane becomes an extension of the body for the person who is blind. Similarly, and analogously, we can conceptualize notetaking software used by students with ADHD in the educational setting as "extending the scope and active radius of" receptivity "and providing a parallel to" attentiveness. This is a *fundamentally different* conception than Stiker's critique of "rehabilitation" or a deficit model. Here we are thinking of technology as enhancement to or an extension of bodily

engagement in the world which furthers bodily experience of the world, rather than a loss or limitation of body functioning in need of a return to a "normal condition."

In this section, I have reviewed relevant literature to orienting the ADHD student, assistive technology, and educative and mis-educative experience and ADHD. Additionally, I have drawn upon and included significant insights from philosophy of technology and resituated the problem of disability from one of rehabilitation or deficit to one that is more phenomenological attuned to the bodily lived experience of being-in-the-world-with-disability. In the following section, I pivot to a discussion of learning assistance, academic coaching, and college students with ADHD.

Looking Back: Learning assistance and academic coaching

Learning assistance in higher education

Learning assistance in higher education as a resource to students has a presence that spans the history of higher education in the United States. The earliest offerings of learning assistance in higher education date back to colonial colleges and universities in the 1600s (Arendale, 2010). In the earliest iterations, learning assistance was primarily presented in the forms of tutoring and collegiate preparation that was offered for upper-class, white male students. Over time, learning assistance broadened and came to include provisions of remedial and compensatory education. Remedial education refers to a form of learning assistance that aimed to develop specific skill deficits of individual students while compensatory education sought to address deficits in learning that stemmed from systemic discriminations and effect particular populations of students (Arendale, 2010).

Significantly, for nearly 260 years learning assistance was a resource that supported the needs of white male students with the means to access the service and to attend college

(Arendale, 2010). It was not until the 1950s and 60s and the Civil Rights Era that learning support became more broadly available to marginalized and economically disadvantaged groups, such as veterans, people of color, women, and persons with disabilities (Arendale, 2010). In the more recent past, the 1960s to the present, is most relevant to this present study as it relates to college students with disabilities and academic coaching, a form of learning assistance.

Learning assistance is a broad umbrella term used to name academic support in higher education. In general, it refers to academic services and supports that assist in the development of student learning. Arendale's (2010) report makes clear that learning assistance has a long history in higher education in the United States. Additionally, he explains that what constitutes learning assistance has evolved over time and the specific services and supports that are provided by an institution are related to the historical context and culture of the school (Arendale, 2010). Over the years of higher education in the United States, learning assistance has taken the form of tutoring programs (both individualized and peer-based), remedial and compensatory education (e.g., TRIO programs), study skills workshops, learning centers, etc. (Arendale 2010). Therefore, an intervention aimed at the development of academic coaches to support student learning and development of college students with ADHD is situated within the context of learning assistance.

Academic coaching interventions

Academic coaching is a type of mentorship provided to college students that consists of direct support given by an academic coach. Academic coaching supports for college students as a form of learning assistance dates back to the turn of the century. At this point in time, academic coaching services begin to be delivered to students in higher education. The impetus behind the effort to provide academic coaching stemmed from a recognition that rates of attrition of college students has been steadily rising since the 1970s and a desire to support efforts of college

retention. Academic coaching support emphasized the development of academic goal setting, time-management, work/school balance, financial obligations, and learning strategies of college students. The first major study of academic coaching was Bettinger and Baker (2014), which investigated the effectiveness of academic coaching for college students. Their study found that academic coaching supports college students' rates of persistence to their degree (Bettinger & Baker, 2014). In other words, academic coaching is a learning support that positively effects college student retention. The effectiveness of academic coaching services has led to the provision of academic coaching services more broadly.

Academic coaching and ADHD

College students with ADHD face significant challenges and barriers to academic success. DuPaul et al.'s (2009) meta-analysis of the literature on college students with ADHD detailed a number academic challenges faced by college students with ADHD. College students with ADHD tend to earn lower GPAs and experience greater academic problems, which lead to reduced rates of retention and graduation as compared to their non-ADHD peers (DuPaul et al., 2009). Additionally, their review covered the literature on educational interventions and their effectiveness. Their contribution to the field is significant because their research was one of the first studies to assess the effectiveness of academic coaching for college students with ADHD. DuPaul et al.'s (2009) finding of the usefulness of the academic coaching intervention for college students with ADHD brings together the need to consider academic coaching for students with ADHD, in light of Bettinger and Baker's (2014) conclusion that academic coaching can improve retention and graduation rates of college students.

Additional research further establishes the appropriateness of academic coaching interventions for college students with ADHD. A variety of studies have aimed to clarify the

relationship between academic coaching and college students with ADHD. Swartz et al. (2005) articulated that academic coaching empowers college students with ADHD helping them to organize and execute their responsibilities, both in academia and in everyday life. Reaser et al. (2007) found that learning and study strategies differ between students with ADHD and non-ADHD. In addition, they suggested that typical measures, such as the LASSI, are not useful tools to predict the academic achievement of college students with ADHD. Rabiner et al. (2008) concluded that the transition to college is a difficult point for college students with ADHD and as a result they can experience academic performance difficulties. Weyandt et al. (2013) determined that differences exist with regard to executive functioning, attention, internalizing and externalizing disorders, emotional expression, academic performance, study/orgranizational skills, and social adjustment of college students with ADHD. Richman et al. (2014) found academic coaching to be an appropriate intervention for college students with ADHD because is aids in their development of self-awareness, self-management skills, and well-being. Taken together this body of research evidences that academic coaching for college students with ADHD is a useful and appropriate intervention.

In sum, DuPaul et al. (2009), Swartz et al. (2005), Reaser et al. (2007), Rabiner et al. (2008), Weyandt et al. (2013), and Richmond et al. (2014) support the idea that academic coaching can improve retention and graduation rates for college students with ADHD. The scholarship specifically addresses the relationship of academic coaching and college students with ADHD to show how self-regulation and self-determination can be developed with the direct of an academic coach. The academic coach, in effect, teaches the college student with ADHD how to mitigate the academic challenges they face that are related to their disability. The

literature above demonstrates that there is a beneficial relationship between academic coaching and student success of college students with ADHD.

While this research provides credibility to academic coaching as an effective intervention for college students with ADHD, they emphasize cognitive learning strategies that support executive functioning at the expense of specific skill development. Perhaps the practice of academic coaching for college students with ADHD can be enhanced with a view toward skill development. In particular, the development of college students with ADHD's notetaking skills and how this skill can be supported through the use of digital tools, such as Notability. The integration of digital tool use for skill development has the potential to positively impact the experience of learning for college students with ADHD in the classroom.

Lessons from the Field

In this final substantive section of the chapter, I introduce my own narrative within the context of the study. I first sketch the application that will serve as the linchpin of my intervention (and described more fully in Chapter 4), then I offer a call to action for academic coaches who are wondering about the use of technologies to support students, and finally I share a personal vignette from my own background in order to ground the case for my intervention.

Notability and bodily lived experience of ADHD in the classroom

As an example, to demonstrate hidden possibilities beyond intended purposed, Notability (2017) is a technology that is much more than productive and efficient. Notability, a new technology, is marketed as productivity tool for work and educational settings, yet it has features that can extend and enhance learning for students with ADHD. The Notability software application includes an audio recording feature that can be used while taking notes. While taking notes the audio recorder syncs the note taken with the place in the recording for ease of playback.

For students with ADHD or other concentration difficulties, taking notes can be challenging because they can become easily distracted or hyper-focused.

For example, while in class, a student may recognize a key point being made and begin jotting down a note. While doing so, they can either be so focused on the initial note that they miss information that follows or while taking notes they hear the next point being made in the lecture and lose track of the initial note they were writing, or they may hear a word or phrase that triggers a thought and draws their concentration to that train of thought. Notability's recording feature and its ability to sync with notation allows the student to easily retrieve the missed portions of the class in order to complete the note. In being able to complete the note, the student then has a more complete account of what took place during the class, which can help them deepen their understanding of the coursework.

Although these technologies exist, seldom are students with ADHD and campus disability services programs aware of them, their features, and applicability. Furthermore, this adds an additional layer of interpretation that educators and student affairs practitioners tend not to consider. One way to think of the Notability application, similar to the light switch example above, is as a productivity tool that leads toward greater efficiencies. However, to conceive of technology solely as a productivity tool reinforces an understanding of technology as an instrumentality (Heidegger, 1977). In stating explicitly that a technology or given device has a specific productive use projects limitation on its potential and denies possibilities for its creative application. When we consider Notability's features, in particular, its capacity to record audio and sync that audio to notation and then relate that capacity to students with ADHD, we begin to perceive that it is much more than just a productivity tool. Embedded within the application itself are features that can enhance learning for students with ADHD. This feature, in effect, extends

concentration and comprehension in manner similar to Merleau-Ponty's (1945/2002) depiction of the blind person's cane.

Returning to Academic Coaching & A Call to Action

The power and possibility of integrating digital technology for student learning in the model of academic coaching in higher education is underappreciated and tends to be overlooked (DuPaul et al., 2009; Rabiner et al., 2008; Reaser et al., 2007; Richmond et al., 2014; Swartz et al., 2005; Weyandt et al. 2013). Academic coaches are tasked with supporting student learning and development by way of teaching appropriate learning strategies that increase student achievement and success (Bettinger & Baker, 2014). One learning strategy and skill that academic coaches emphasize and aim to develop is effective notetaking in lecture courses. The approach and tendency in the development of college student note-taking skills focuses on a capacity to accurately identify key-points from the lecture in order to effectively document and account for the course content.

While this is entirely appropriate for some students, other students either may not have difficulty identifying key-points and instead have difficulty with pacing and concentration or may need a visible demonstration rather than a verbal explanation of how to identify key-points in a lecture. In these circumstances, the common approach to notetaking will fall short. Therefore, with this in mind, it becomes imperative that academic coaches look beyond the approach to development of typical learning strategies and toward the possibilities embedded in digital technologies. To demonstrate the potential of digital technology to enhance note-taking capacity of college students, I detail an instance from my own experience as a student in graduate school. The purpose of presenting this vignette is to showcase that digital technology

and its deployment as a learning strategy and skill for notetaking has the potential to enhance student learning and development.

Vignette – Notetaking software

The significance of digital technology for notetaking purposes comes from my experience in graduate school. The notetaking software Notability (2017) helps me to take a full rendering of lecture notes in seminars because I have difficulty with pacing and concentration when it comes to notetaking. I learned of this software from a classmate in my cohort. This classmate used the application and shared with me what it does and demonstrated to me how to use the program. From there, I was then able to take this insight and make the program work for me in the context for which I needed it. To indicate how it works as well as give some background and highlight its key feature, I present the following description.

Notability (2017), marketed as a productivity tool, carries within it a feature that will benefit college students who struggle with notetaking from lecture style courses. The software application itself incorporates audio recording and note-taking. While the audio recording feature is engaged, each note taken syncs the specific note documented with its location in the recording. The note taken in play back mode, then, becomes a link to a specific location of the audio recording. Subsequently, when listening back to the recording a written note can be used as a kind of hyperlink to the specific place in the audio recording where the note was taken directly from the lecture. For students with concentration challenges or students who express that the professor moves too quickly through lecture for them to keep up with taking notes, like I do, Notability supports our note-taking process and allows us to more fully account for lecture notes.

For example, while in class, I may recognize a key point being made and begin jotting down notes, but while doing so, I may lose track of the lecture, either as a result of distractibility

or as a result of the professor moving through their lecture at too fast a rate. In these circumstances, I miss key information and my notes remain incomplete. The recording feature, however, allows me to capture the entirety of the lecture. So, in the event that the notes get initiated and then left unfinished, the syncing feature linking note and recording provides for easy retrievability. After class, then, I go back to my incomplete note(s) and link to the portion of the recording which I missed in order to complete the note(s). Ultimately, this software combined with understanding of how to put it to use in the context of the classroom becomes a way for me to render fully my notes from lecture; and, this complete rendering of notes, then becomes a more accurate accounting for me to be used to study from. Thus, skilled implementation of Notability in a classroom enhances my learning.

In this section, I depicted the bodily lived experience of notetaking for college students with ADHD in a lecture-based classroom and shared my own person experience with notetaking software. I spotlighted that the identification of key-points while taking notes from a lecture is not the critical area in need of developed for college students with ADHD. Rather, I contended that college students with ADHD can benefit from digital tool use that extends their capacity for concentration and enhances their bodily lived experience in a lecture-based classroom. Moreover, I called upon academic coaches to go beyond standard notetaking skill development strategies and toward the possibilities of notetaking software for academic support.

Conclusion

In this chapter I presented a case for a model of academic coaching that emphasizes the possibilities of digital tool use in lecture-based classroom settings as an extension of learning strategies. In making my case, I explored pertinent scholarship from the fields of disability, phenomenology, education, and philosophy of technology. I also provided a history of learning

assistance in higher education and situated academic coaching interventions within the realm of academic learning support. In a closing section, I drew upon personal experience to describe the bodily lived experience of ADHD in a lecture-based classroom and how it can be extended and enhanced through the use of Notability. This prepares the way for the following Chapter where I discuss in more detail my proposed intervention: a professional development workshop for academic coaches.

Chapter 4

Introduction

Students with disabilities arrive at college with limited exposure to assistive technology or other technologies that have the potential to support student learning. Susan Asselin's (2011) work clarifies that students with disabilities arrive at college with an insufficient understanding of assistive technology and how it can benefit their learning. The literature presented in Chapter 3 on academic coaching generally, and academic coaching for college students with ADHD in particular, highlighted that academic coaching tends to emphasize college student learning and development related to cognitive learning strategies (DuPaul et al., 2009; Swartz et al., 2005; Weyandt et al., 2013). Academic coaching interventions to address deficits in executive functioning of college students with ADHD is in contradistinction to the approach that I am proposing. There is an opportunity for academic coaches, and those who support the learning and development of college students with ADHD, to recognize the significance of digital tools as a way to extend students' skill development and, in so doing, enhance the bodily lived experience in the classroom for students. However, for this to occur academic coaches must be 'buy-in' to an appreciation and understanding for digital tool use and its relationship to the bodily lived experience of students.

To be sure, academic coaches *have* made considerations of technology for the purposes of academic coaching (Lehan et al., 2018; Oreopoulos & Petronijevic, 2016), but not in terms of specific skill development (e.g., notetaking), and not in terms of the specific experience in the classroom of students with ADHD. Therefore, one of the aims of this thesis is to address this gap in understanding. To bridge this gap, I consider the role of academic coaches and propose an intervention for academic coaches that seeks to develop an understanding of notetaking software

and how the use of digital tools can be taught to college students with ADHD as a means to extend and enhance these student's skillful involvement in the classroom.

Proposed Solution

This chapter outlines an intervention that is planned to take place over two phases: (1) professional development of academic coaches and (2) technical proficiency of college students with ADHD. The first phase, and the subject of this chapter, is a professional development workshop for academic coaches with the expressed aim of fostering an understanding of key analytical concepts from disability studies, phenomenology, and philosophy of technology. The newly acquired analytical lens can then become the ground upon which to support an introduction for how digital tools can be understood as learning supports that extend classroom involvements on the part of college students with ADHD and open up the possibility for enhancing these students' bodily lived experience of education. In the end, the academic coach will be equipped with a new level of analysis and be positioned to more effectively assist college students with ADHD to embody and orient themselves in the classroom space through digital technology.

The second component and phase, outlined in the following paragraph, is a design of a pilot program for college students with ADHD that will introduce them to *Notability* as a learning strategy coupled with academic coaches who will provide wrap around system of support. The two components and phases are connected because the academic coaches that complete the professional development workshop will be providing the wrap around support for the college students with ADHD in the pilot.

While the focus of this chapter is on the first phase, the second phase will take place over a quarter or semester with a cohort of 10-15 college students with ADHD. In the second phase,

students will be taught how to use *Notability* software and implement it in their lecture-based classrooms over a term. Throughout the pilot term, students will check-in regularly (weekly or bi-weekly) to debrief with their academic coach(es) and cohort to reflect on their experiences and give and receive feedback. At the conclusion of the term the cohort of students with ADHD and their academic coaches will engage as a focus group to provide their insight and experience and to determine the relevance and/or significance going forward as to whether or not this should be made available more broadly beyond the pilot program itself. By the end of the second phase the aim will be to assess the worthiness of establishing this intervention as a suitable service and support for college students with ADHD. Given that this thesis focuses on phase one, or the professional development workshop prepared or academic coaches, the following section introduces the theoretical research model that bounds the planned intervention.

Action Research

Action research is an approach to investigation and the resolution of social problems that is rooted in democratic ideals. Throughout the process of action research, key stakeholders and constituents lend their experience and expertise as a means to inform, interpret, and challenge unjust social conditions. The approach and solution to a given problem or set of problems in action research is socially constructed, value-based, humanistic, and democratic (Brydon-Miller et al., 2003). Action research situates problems within a context that tends to be imbued with power and privilege.

The methodology of action research frames my proposed intervention. Personal experience with ADHD, a knowledge of disability, phenomenology, and philosophy of technology, and experience as an academic coach has activated my interest to seek a solution to the misfit of college students with ADHD in lecture-based classrooms. The specific approach to

intervention (professional development of academic coaches) also doubles as an effort to advance professional practice and foster investment of academic coaches to help resolve an accessibility challenge for college students with ADHD. In the end, the solution to the problem at hand will emerge and potentially be resolved through key stakeholders and constituents. In the following section, I overview the aim of my proposed intervention and detail its objectives and intended outcomes.

Purpose

The overall intent animating this intervention is to advance an effort that helps to establish a fit and orientation for college students with ADHD in lecture-based classroom spaces. To this end, I have designed a professional development workshop that will foster in academic coaches a new frame of reference for interpreting the bodily lived experience of college students with ADHD. The workshop will also introduce academic coaches to Notability and demonstrate its significance as an academic learning support for the skillful development of college students with ADHD. The reason for developing in academic coaches an awareness of the value of Notability is so they can then teach its use to college students with ADHD as a learning strategy. Therefore, the first phase in the intervention is to attune academic coaches to the bodily lived experience of college students with ADHD in lecture-based classrooms and introduce to them the features and uses of Notability. In the section that follows, I outline the general structure of the workshop.

Brief Workshop Overview

The professional development workshop will be facilitated by an academic coach with content knowledge of disability, phenomenology, philosophy of technology, and experience with Notability software. The workshop itself will take place in a single day and last for 8 hours. It

will consist of mini-lecture presentations, group discussions, and demonstration. By the end of the workshop academic coaches will have developed an understanding of the bodily lived experience of college students with ADHD in a lecture-based classroom setting, learned the use of Notability software, and be positioned to design a pilot program for college students with ADHD in the introduction of notetaking software for academic support.

Learning objectives

The workshop will be organized to address and fulfill a number of learning objectives. By the end of the workshop, academic coaches will be able to:

- interpret the lecture-based classroom as a misfit to the bodily lived experience of college students with ADHD

- understand how digital technology can extend learning for college students with ADHD and enhance their bodily lived experience of the lecture-based classroom

- learn the applicability of Notability software for the purpose of note taking in lecture-based classrooms by college students with ADHD

- recognize the significant function academic coaches can play in fostering the orientation to lecture-based classroom space for college students with ADHD by way of the introduction of digital tool use.

Program outcome

Learning objectives are different from program outcomes. Whereas learning objectives are focused on a learner's experience in a workshop or classroom setting, program outcomes describe the tangible results that emerge as a result of the programmatic intervention. Therefore, the program will:

- recruit 8-10 academic coaches for involvement in professional development geared toward increasing academic support for college students with ADHD

- equip 8-10 academic coaches with the understanding and know-how to enhance the bodily lived experience of college students with ADHD through the integration of Notability as a means to extend their learning

- establish the task of creating a pilot program of support for college students with ADHD based on the newly acquired understanding and know-how.

Implementing the Workshop

The intervention will develop the awareness and understanding of academic coaches for how they can positively affect the bodily lived experience of college students with ADHD. The professional development workshop helps academic coaches to recognize the misfit between the bodily lived experience of college students with ADHD and their involvement when listening to a lecture, specifically, when considering the skill of notetaking. When the significance of the notion of misfit is grasped on the part of academic coaches, this then opens the possibility for them to recognize how digital tool use can play a role in mitigating the experience of misfit for the student.

The workshop for academic coaches will introduce key insights from materialist-feminist disability (Garland-Thomson, 2011), phenomenology (Ahmed, 2006; Merleau-Ponty, 1945/2002), philosophy of technology (Brey, 2000; Heidegger, 1927/1996; Simondon, 1958/2017), and progressive education (Dewey, 1938). The purpose of the workshop is to establish for academic coaches that the bodily lived experience is tied to an environment and that the experience in an environment is mediated by both the body and technology. With this groundwork established, a depiction of the bodily lived experience of college students with

ADHD will be provided. This description will indicate the specific mismatch that takes place in the relationship between college student with ADHD and the lecture-based classroom. It will then be shown how significant features of common digital tools can and should be used to extend and enhance the bodily lived experience of these students. At this point the focus will shift to Notability and its key feature that can extend the skillfulness of college students with ADHD. The critical feature of this application is its capacity to record audio and sync notation to locations in the audio recording. The use of this feature will be demonstrated to academic coaches and they will be provided with an experience of it for themselves. More detail about the workshop and its content is provided below.

Theoretical Framework

The philosophical framework guiding this consideration of notetaking software as an academic support and enhancement to the experience of learning for college students with ADHD is rooted in materialist-feminist disability, phenomenology, philosophy of technology, and philosophy of experience in education. Materialist-feminist disability conceives of disability not as an individual deficit but rather as an incompatibility between a person and an environment, a misfit, to be overcome (Garland-Thomson, 2011). Phenomenology articulates that bodies are shaped in the way they inhabit space as well as through the objects they utilize to engage that space. Put differently, when a person picks up an object and turns towards their environment it supports one's orientation in that space (Ahmed, 2006). Philosophy of technology explains that technology is not merely a means to an end but rather mediates the relationship between a person and their environment (Heidegger, 1927/1996). Philosophy of experience in education emphasizes a relationship between a person or student and their environment whereby

an educative experience supports growth and development of a student to further meaningful involvement within an environment (Dewey, 1938).

Taken together these concepts (misfit, orientation, mediating relation of technology, educative experience), establish a ground for an interpretation of the bodily lived experience within a given situation and how digital tools can be put to use to support one's orientation in and increase the prospects of an experience being educative. In sum, this philosophical frame supports the purpose of my proposed intervention is revealed: to develop a support system that can foster the growth and development of college students with ADHD in relation to their academic environment. The professional development workshop for academic coaches, as an intervention, will help these students respond to and overcome the practical challenges they face in the classroom.

Theories of adult learning

Jack Mezirow's (1991) transformative learning theory informs the instructional practices of this intervention for academic coaches. Transformative learning theory articulates that an individual's beliefs and expectations are brought to bear on an experience or situation and help to "frame" how one processes and makes sense of new information, circumstances, or environments (Mezirow, 1991). This is significant for my intervention because the design of the professional development workshop has to take account of the beliefs and expectations of the academic coaches who attend. What is more, any insights gained and the possibility for changes to academic coaching practice must be filtered through these preset beliefs and expectations. For this reason, I have chosen to set the stage for the assimilation of new information with a frame of reference that is grounded upon disability, phenomenology, and philosophy of technology. The

strength of these perspectives is that they all challenge conventional wisdom by taking

consideration of the body in relation to its environment.

Playing a significant role in supporting the orientation of college students with ADHD to

a lecture-based learning environment requires an awareness and understanding of the bodily

lived experience in the classroom of this student population. In addition, it also requires the

know-how of Notability and how it supports the bodily lived experience of college students with

ADHD in their learning environment. Academic coaches equipped with a knowledge of

Notability for the enhancement of learning can support students as they develop their skills for

better orienting themselves in the classroom context. The proposed intervention offers one

solution to the challenge of the misfit between the classroom environment and the student with

ADHD. Therefore, to address the misfit, a modification in the form of digital technology can be

deployed to render the learning environment accessible.

Program Proposal

In this section, the design of the workshop is presented along with an outline of the

contents of the workshop and a schedule of the day of the workshop. In addition, the materials

required for the delivery of the workshop are provided as well as a description for how the

workshop will be evaluated. I turn now to the design of the workshop.

Design of Professional Development Workshop

The Professional Development Workshop for academic coaches will consist of a day-

long, 8-hour workshop (Appendix A – Schedule) and take place toward the latter part of the Fall

semester. The workshop will cover content knowledge, Notability, and preliminary planning of a

pilot program. In the morning participants will be introduced to three conceptual frameworks:

philosophy of technology, phenomenology, and disability studies. In the afternoon participants

will be introduced to Notability and its key features. Each academic coach in attendance will be provided an iPad with the Notability application pre-installed and an Apple Pencil. The iPad, Notability, and Apple Pencil will then be used by the academic coaches in an exercise to experience first-hand the functionality of Notability. The intent behind having the academic coaches experience for themselves the use of these digital tools is to concretize the key insights presented in morning session. Near the end of the afternoon, the facilitator will lead a working group to consider the prospects of creating a pilot program based on the insight gained from the day long workshop. In the section that follows, an outline of the contents of the workshop is provided.

Contents of the workshop

The following content will be presented in the workshop:

- Experience of college students with ADHD in lecture-based classrooms

- Disability

- Phenomenology

- Philosophy of Technology

- Notability software

A general overview of the lesson plan is provided below. The professional development workshop will be deemed successful if, in the end, academic coaches acquire insight into digital tool use, particularly Notability, and its potential for extending and enhancing learning for college students with ADHD.

Lesson Plan

Step 1: Facilitator presents experience college students with ADHD in lecture-based classroom and Garland-Thomson and Ahmed's notions of "misfit" and "orientation." The

presentation is trailed by a discussion of the following questions: Is the lecture-based classroom a "misfit" for college students with ADHD? What could it take for them to be "oriented?"

Step 2: Facilitator presents Brey's, Simondon's, and Heidegger's notions of "cognitive artifact," "network," and "positioning." The presentation is trailed by a discussion of how these insights from philosophy of technology inform key notions from disability and phenomenology.

Step 3: Notability, experience with software, study period, and discussion: Facilitator presents key features of Notability and distributes iPads, Apple Pencils, and Notability application. Facilitator delivers a 15-20 reading of a lecture on Maurice Merleau-Ponty's "Exploring the world of perception: Space" from the *World of Perception* while each academic coach uses Notability software to take notes. Academic coaches are then provided 20 minutes to review their notes and expand upon them through the use of Notability's features. Then, the facilitator debriefs with the academic coaches about their experience with Notability and any insights they have received.

Step 4: Action learning: Facilitator leads a working group to consider the creation of a pilot program for college students with ADHD based on insights gained from the workshop.

Materials

The following materials will be utilized for the workshops.

- Mini lecture of Merleau-Ponty's *World of Perception*
- Handout on conceptual frameworks
- iPads
- Apple pencils
- Notability application
- Surveys

Evaluation

In order to assess the workshop and its method of delivery, the facilitator will administer a survey to those who attended. The survey (Appendix C – Evaluation) will be used to evaluate the quality of the presentation and organization of the content as well as to understand how the workshop in general was received by the academic coaches that participated. The collection of survey data will be useful to understand the perceptions of the academic coaches who attended, and relevance of the analytical framework presented and experience of notetaking software to their professional practice. The survey is an appropriate mechanism for eliciting feedback and suggestions on the experience of the academic coaches who attend. The data collected will be used to inform delivery of future programming. In the next section, program implementation is discussed.

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Anticipated Challenges and Implementation

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In this section, I outline some of the implementation considerations as well as potential challenges associated with the professional development workshop for academic coaches that I have sketched. To begin, I detail the expenses needed to deliver this workshop as well as where that funding may come from to support the cost of the workshop. Then, I identify a plan for the recruitment of participants for the professional development workshop for academic coaches. Finally, I close out the section with an overview of the steps needed to be taken as part of the coordination of the workshop for academic coaches.

Sources of Funding and Expenses

The following table itemizes and totals the expenditures needed for the delivery of the professional development workshop for academic coaches. In addition, it identifies possible partners and sources of funding.

Table 1 - Budget

Expense	Description	Unit Cost	Units	Total Cost	Source
iPad Air	One per participant for use during workshop. One for facilitator.	$500	10	$5,000	Apply for internal / external grant to cover tech expenses or ask IS & T if can be purchased using Tech Fee funds.
Apple Pencil	One per participant for use during workshop. One for facilitator.	$130	10	$1,300	
Notability Application	One per participant for use during workshop. One for facilitator.	$15	10	$150	
Room rental	Space to conduct workshop	$150	2	$300	Seek partnership with campus learning center and the office of disability services to cover costs of space, materials, and food.
1" three ring binder	One binder per participant. One binder for facilitator.	$3	11	$33	
Printing	Reading, handout materials, surveys to go in binders. 50 pages per binder.	$0.10	700	$70	
Refreshments	Coffee, water, and drinks for participants	$40	5	$200	
Snacks	Pretzels or donuts for participants	$30	4	$120	
Lunch	Sandwiches for participants	$85	1	$85	
Facilitator wage	Hourly rate for facilitator time spent on prep and delivery of workshop	$23	20	$460	Paid for through staff wages from the university where facilitator is employed.
Total				$7718	

The table above details three areas of resources that are needed to deliver the workshop. The top third of the table identifies the hardware and software that will need to be procured for the workshop. To secure the funding necessary, the facilitator will apply for internal and external grants as well as approach the office of information technology to request material support from the student technology fee. The second third of the table identifies the resources necessary related to space, handouts, and refreshments and meals. To secure these resources the facilitator will look to partner with the campus learning center and office of disability resources to cover these expenses. The final third of the table identifies the cost associated with the time spent developing and delivering the workshop.

Recruitment

The workshop participants will be recruited from campus learning centers and disability services offices. The goal will be to recruit 10 academic coaches across these two campus entities. Outreach will be conducted to the Directors of the learning center and office of disability services. The facilitator of the project will conduct this outreach and through an initial meeting with the Directors explain the two phases of the project and how it can benefit both the professional development of academic coaches and academic support of college students with ADHD.

Timeline

Planning (Appendix C – Facilitator Timeline) for the implementation of the professional development workshop for academic coaches will commence at the start of the Spring semester that precede the Fall term when the workshop is delivered. The lead up time is necessary to allow time to outreach and meet with the learning center, disability services, information technology, and to apply grants to secure resources and materials. With these resources and partnerships

secured (no later than the end of Summer), the facilitator will procure the materials needed to deliver the workshop (e.g., iPads, Apple Pencils, Notability, Binders, and Printing) and schedule the location and date for the workshop to take place. The month before the workshop is scheduled to run the facilitator will order refreshments and lunch to be delivered the day of.

Possible Challenges

There are two possible challenges that are worthy of addressing. The first is related to a larger societal or culture perception of providing services or accommodations to students with disabilities or needs. At present, it is common for classroom interventions to connect students who require specific accommodations or modifications (additional time to complete tasks or providing printed copies of course materials) to a centralized "Office of Disability Services". My proposed intervention, however, is structured to be introduced and supervised by academic coaches and is not meant in any way to supersede the work of the official university response to meeting student needs, which is often required by law. Thus, one possible challenge will be taking account of this culture of disability services and addressing any confusions or misunderstandings of stakeholders.

A second challenge is the age-old concern about time and possibility of the introduction of Notability into the work of academic coaches becoming just "one more thing" that they must do in their already busy work lives. This concern will be addressed in the professional development workshop as the academic coaches will be able to experience the bodily engagement of using the notetaking application. By experiencing this firsthand, I expect that the academic coaches will find value in the application and want to share more with their respective students.

Conclusion

In this chapter I discussed an intervention for academic coaches to realize the possibilities of notetaking software as an academic support. I explained the purpose of this intervention and situated it within the paradigms of action research and adult learning theories. I also described the learning objectives and program outcomes intended for this intervention and detailed the contents of the workshop and the materials that will be used. Furthermore, I identified possible challenges to the implementation of this proposed intervention and how it can be resourced. The next and final chapter will lay out a strategy of leadership to promote this intervention and situate the approach this intervention within the professional competencies of student affairs.

Chapter 5

Introduction

Building on the work of earlier chapters, this chapter indicates what constitutes effective and transformative leadership in a higher education setting as it relates to my thematic concern (see Chapter 1) and the proposed intervention(s) associated with it (see Chapter 4). Academic coaching is the process of supporting student learning and development by way of teaching appropriate learning strategies to increase student success (Bettinger & Baker, 2014). The model of academic coaching falls under the umbrella of learning assistance (Arendale, 2010). The specific interventions I am developing are workshops aiming to increase technological proficiency of two constituent groups. First, I am proposing a professional development workshop for academic coaches where they will both be introduced to a conception of technology via a philosophical lens, which will then be coupled to a demonstration of specific digital technology to support student learning. Second, I am proposing a student success workshop for first-year students to demonstrate for them a specific use of digital technology for notetaking purposes in the classroom context. The former is discussed in this thesis and the latter will be reserved for a future extension of the thesis reported here. The piece of digital technology that will ground this integration of technology for academic coaches and first-year students is a software application called Notability.

In this chapter I discuss the importance of Notability for college students with ADHD and what has led me to believe why this change is necessary. Next, I outline my approach to affect change in academic coaching and identify the professional competencies that are embodied in this strategy. Then, I conclude with my closing and parting thoughts on this critical action

research proposal. I turn next to an overview of the Notability app, which plays a key role in my intervention.

Significance of Notability

In this section, I remind the reader of the relevance of Notability software as an academic support for college students with ADHD. Notability, although perhaps not seen as an assistive technology for college students with ADHD, is a cognitive artifact (Brey; 2000) with embedded features that can extend concentration and enhance the bodily lived experience of education in a lecture-based classroom. What follows is a description of the software and how it can support learning for college students with ADHD.

Originally marketed as a productivity tool Notability (2017), includes features that can benefit college students who struggle with notetaking in lecture style courses. The software application itself allows for audio recording while simultaneously taking notes. Each note taken while the audio recording feature is engaged, syncs the specific note taken to the location in the recording itself. The note taken, while the recording is being played back, then becomes a link to a specific location of the audio recording. Thus, upon listening back to the recording a written note can be used as a kind of hyperlink to the specific place in the audio recording where the note was taken directly from the lecture. For students with concentration challenges or students who express that the professor moves too quickly through lecture for them to keep up with taking notes, Notability can support the note-taking process for these students and allow them to make a fuller account of the course content.

Impetus for Change

This focus on the skill development of college students with ADHD through the use of Notability as a learning support for academic success stems from both my personal experience as

a student with ADHD and prior years that I have worked as an academic coach. Operating in this capacity, I have learned from the perspective of students. In hearing them out and sifting through words they express to grasp what they mean; I better understand what they need. Time and time again in that role, I came across students who expressed that they experienced difficulty keeping up with notetaking in lecture-based classrooms, or that they were distracted, or had lost concentration in the middle of their notetaking, leading to gaps in the retrieval of information and subsequently lapses in understanding. To be sure, it would be completely appropriate to interpret these students' learning need to be the development of better notetaking abilities. For example, how to identify key points that an instructor is trying to make. But would that get to the root of the problem?

For many of these students, it may not be that they experience trouble identifying key points, but rather they are challenged by the pace of the instruction or concentration difficulties that trouble their efforts to take notes in a lecture-based classroom. Teaching students effective notetaking skills misses the point and becomes the juncture at which Notability, and perhaps other similar digital tools, can come in handy. For this to be realized, academic coaches must first possess an understanding of these students' bodily lived experience couple with the know-how to demonstrate their significance for these students in a lecture-based classroom.

To acquire such an understanding of these students' learning needs and to be in a position raise this concern, I had "to put myself in the middle of chaos and find a pattern" (Sinek, 2017, p. 5). In doing so, it reinforced the purpose that brought me to this program and solidified my interest in academic coaching, not to mention the way I have always viewed the purpose of education: that is, learning is the imperative. In line with Sinek (2009), I have always held that any endeavor must be situated within a bigger picture, or the why of it all and what is at stake.

From there, efforts can be made to move toward specifics with the ground of the big picture as a foundation. Upon this ground and in the midst of the chaos of both being a graduate student with ADHD and academic coach for first-year students, I came to realize the promise of Notability as a learning support and digital tool that can extend and enhance the bodily lived experience of education.

But how can learning assistance professional development and program designs be revised to present this insight to college students and academic coaches? Making effective inroads and transforming aspects of programming in learning assistance and academic coaching requires a leadership strategy.

Leading for Change

The key component of my leadership strategy is a political approach through communication (HERI, 1996). In calling my strategy political, I am not indicating that it will be contentious, rather I am suggesting that it will require an approach to influence people in decision-making positions, and to do so as a means of bridge building. This particular approach is drawn from Robert Nash's (2010) strategies for effective advocacy. According to Nash (2010), there are "five communication styles of advocacy," but one stands out as critical to affecting change: gladvocacy (p. 13). An attempt to build bridges will be key to my leadership strategy as the success of this intervention will depend on my capacity to work across different offices (e.g., learning centers, disability services, and information technology).

The notion of gladvocacy establishes a foundation for this leadership strategy. For Nash (2010), a gladvocate recognizes change as stemming from the development of critical alliances. The gladvocate, in effect, is a builder of relationships. To do so, they must understand that change comes from partnerships that are developed on a basis of commonality. Put differently,

change does not come from individuated efforts of work done in isolation. Change is much more likely to occur when allies come together around a common purpose to find a solution to a problem. To affect change in the realm of academic coaching and influence the integration of digital technology, I intend to initiate conversations and to foster alliances with campus learning centers, offices of disability services, and offices of information technology. The commonality tying these entities together is an interest in supporting student learning, development, and academic success. Together learning centers, disability services, and information technology can recognize that the academic coaching model plays a fundamental role in the development of student learning and academic success.

Gladvocacy as outlined above combines with a notion of transformative leadership as defined by the Higher Education Research Institute (1996). The guidebook outlines four main components of transformative change: 1) to lead is to attempt change, 2) to affect change, its intentionality is political and value-based, 3) change takes place through a process, not an individual action, and 4) collaboration is required (HERI, 1996). Each of these component parts are reflected in an attempt to integrate digital technology with academic coaching.

In following this transformative approach, the motivation behind the intervention detailed in Chapter 4 is for academic coaches to focus more intently on the development of specific skills such as notetaking for college students with ADHD and to do so with the aid of Notability. As noted above, academic coaching for college students with ADHD tends to emphasize cognitive learning strategies, supporting them in becoming more aware of the impact of their disability on learning and teaching ways to mitigate those effects. While this is important and quite significant, it tends to overlook how digital tools, such as Notability, can directly enhance a college student's with ADHD skills in the classroom. A shift in focus from a deficit-based

approach to disability (DuPaul et al., 2009; Swartz et al., 2005; Weyandt et al., 2013) toward one of empowerment by equipping the college student with ADHD with understanding and know-how is required. The introduction of digital tool use as an extension of a college students with ADHD's capacities gives value to their bodily lived experience by support them in ways that enhance their experience of education in an environment for learning that was not setup in a way to account for their mode of being-in-the-world.

Change unfolds as a process and not by one individual or sweeping adjustment. It is for that reason that I have proposed a two-phased approach that begins with providing professional development for academic coaches and then subsequently encouraging skill development of college students with ADHD. Yet, the success of this project requires investment from administrators of centers for learning assistance and resources, offices of disability services and information technology, academic coaches, and college students with disabilities. Each of these constituencies can have vested interests in a project such as this, as well as have an active role to play in this called for change. In the following section, I discussion key professional competencies that reflect and further ground the leadership strategy detailed above.

Professional competencies

The ACPA/NASPA (2015) competencies that support this strategy of leadership for professional development of academic coaching as it pertains to the skill development of college students with ADHD includee: 1) to "[b]uild mutually supportive relationships with colleagues and students across similarities and differences" (p. 27); and 2) to "[u]se reflection to constantly evolve and incorporate one's authentic self into one's identity as a leader" (p. 28). The intervention I have proposed will require, first and foremost, established and supportive relationship with the directors of learning assistance, disability services, and information

technology. As noted briefly above, each of these entities share a common concern in promoting overall student success in higher education. To be sure, each of these offices exist on higher education campus, in part or as a whole, to enhance the student experience and foster student success. Each of their overlapping interests and the aims of this proposed intervention provide an opportunity and potential space for direct impact of student success.

Furthermore, two additional ACPA/NASPA aptitudes that reflect the approach to this concern and align with the proposed intervention are: 1) to "[t]hink critically, creatively, and imagine possibilities for solutions that do not currently exist or are not apparent" (p. 27); and 2) to "[a]dvocate for change that would remove barriers to student and staff success" (p. 28). Essentially, an emphasis on digital tool use geared toward skill development of college students with ADHD by academic coaches is a novel way to take advantage of possibilities that exist in the environment of higher education but have as yet to be cultivated. Moreover, the facilitation of this intervention reflects an organic interest and proclivity for helping students to be successful through means that may be outside the norm. This has been a key focus for me for a number of years. Put simply, the thrust of this intervention is to encourage, equip, and empower college students with ADHD with tools and a capacity to navigate and circumvent challenging aspects that are posed by a less than readily accessible educational environment.

Conclusion

In this chapter I have attempted to lay out a strategy for leadership and transformative change as it relates to the realization of the possibilities that notetaking software has for academic coaching as a profession and for college students with ADHD in higher education. Attention to digital tools as potential learning supports on the part of academic coaches can only help to improve the profession and increase the prospects of student learning and development.

Serious engagement with these ideas can open up the space and possibility to advance professional development and program design.

Manufacturing this type of a change does not presuppose leadership and energy to solve this problem will emerge from above. In fact, it is more likely that change will come from below because administrators and practitioners tend to focus on different fields of play. It will be those working directly with students who are best positioned to recognize student learning needs. From that vantage point, academic coaches are positioned to draw upon their experience and perspective and imagine interventions that can and will support student learning. Ultimately, it will take courage to the risk of both posing the problem to administrators as well as seeking the solution. Even still, it will require administrators to avail resources and to recognize the value of this proposed intervention.

Not only will change likely come from below and the posing of questions and solutions to problems best be framed by academic coaches in the field, relevant and significant analytical frames may likely lie outside of commonplace philosophies of education and notions of student learning and development. It is my hope that this thesis has made clear the relevance and significance of analytics, often falling outside of frameworks commonly leveraged to resolve educational issues, such as disability, phenomenology, and philosophy of technology. The strength of each of these analytical lenses lies in the manner in which each style of analysis and interpretation holds central the way the individuated bodies or beings are always situated within an environmental context, situation, or world.

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Appendices

Appendix A

Schedule

830 – 9 AM	Welcome	Participant arrive, meet and greet, introductions.
9 – 1030 AM	College students with ADHD	Present experience of ADHD in lecture-based classroom.
	Disability and phenomenology	Present Garland-Thomson and Ahmed's notions of "misfit" and "orientation."
	Dialogue	Is the lecture-based classroom a "misfit" for college students with ADHD? What could it take for them to be "oriented?"
1030 – 1045 AM	Stretch and refreshment break	
1045 – 1215 PM	Philosophy of technology	Present Brey, Simondon, and Heidegger's notions of "cognitive artifact," "network," and "positioning"
	Dialogue	How can insights from philosophy of technology inform key notions from disability and phenomenology?
1215 – 115 PM	Lunch	
115 – 230 PM	Notability	iPads, Apple Pencils, and Notability distributed to participants. Demonstration of use of Notability software and its key features.
	Mini lecture	10-15 minutes mini lecture. Reaading of Maurice Merleau-Ponty's "Exploring the world of perception: Space" from World of Perception. Each participant uses Notability and its

		audio-recording feature to take notes.
	Study period and discussion	20 minutes study period for participants to review notes and expound upon them using Notability. Followed by discussion.
230 – 245 PM	Stretch and refreshment break	
245 – 415 PM	Action learning	Working group to consider creation of pilot program for college students with ADHD.
415 – 430 PM	Evaluation and farewell	Survey and parting thoughts.

Appendix B

Evaluation

Title of Workshop: Date:
Please assist with the evaluation of the quality of presentation and organization and give you input on workshop as a whole. Your specific comments and suggestions for improvement are valuable and appreciated. For each question, circle the number that best reflects your view: 1   No   2   Somewhat   3   Yes Presentation and Organization 1. Was the material presented relevant and valuable to you for the work you do?   1   2   3 Comments/suggestions: 2. Was the material presented at an appropriate pace?   1   2   3 Comments/suggestions: 3. In general, did the instructional and presentation techniques used assist you in   1   2   3 adequately learning the material? Comments/suggestions: 4. Overall, was the program well organized and effectively conducted?   1   2   3 Comments/suggestions: 3. Did the presenters have expert knowledge of the content?   1   2   3 Comments/suggestions: 4. Did the presenters make an effort to help you feel comfortable?   1   2   3 Comments/suggestions: 5. Did the presenters provide you with adequate assistance in learning the material? 1   2   3 Comments/suggestions:

Workshop

1. Will you be able to apply what you have learned in your work?   1 2 3
Comments/suggestions:

2. Were you challenged by the content and the way the material was presented?   1 2 3
Comments/suggestions:

3. How do you rate the program overall?   1 2 3
Comments/suggestions:

4. Please comment on the major strengths of the program and changes you would   1 2 3
recommend.

Major strengths:

Suggestions for improvement:

Additional observations:

Thank you for your assistance!