An In-Depth Examination of Professional Adjunct Faculty's Integration of Technology, Pedagogy, Content Knowledge, and Contextual Factors in Higher Education

by Cody E. House

B.S.Ed. in Integrated Social Studies, June 2009, Ohio University
M.A. in Computer Education and Technology, June 2011, Ohio University

A Dissertation submitted to:

The Faculty of
The Graduate School of Education and Human Development
of The George Washington University
in partial fulfillment of the requirements
for the degree of Doctor of Education

August 31, 2025

Dissertation directed by

Curtis Pyke
Associate Professor, Curriculum and Pedagogy

Certification

The Graduate School of Education and Human Development of The George Washington University certifies that Cody Edward House has passed the Final Examination for the degree of Doctor of Education as of May 29, 2025. This is the final and approved form of the dissertation

An In-Depth Examination of Professional Adjunct Faculty's Integration of Technology, Pedagogy, Content Knowledge, and Contextual Factors in Higher Education

Cody Edward House

Curtis Pyke, Associate Professor, Curriculum and Pedagogy, Dissertation Director

Jonathon Grooms, Associate Professor, Curriculum and Pedagogy, Committee Member

Natalie Milman, Associate Dean, Office of Student Life; Professor, Educational Technology Leadership, Committee Member

Dedication

My friends and colleagues, thank you for your continued support throughout this journey. I greatly appreciate your kindness and genuine interest in my work and studies. I enjoyed answering your questions and sharing what I have learned.

To Jack Prostko, thank you for being a great mentor. Your compassion and patience showed me what it meant to be a leader. Thank you for always being there for my questions and taking the time to guide me. You are missed.

To my family, whose love and encouragement have always pushed me to shoot for the stars. Thank you for the long conversations and questions about school and my dissertation. It took me a while, but you're in luck; now you can read all about it!

To my parents, thank you for your unconditional love and support. You have always encouraged me to pursue what I love. Thank you for consistently modeling hard work and dedication, know that I was learning from you how to be the best version of myself. You have always joked that I am a forever student, and I can confidently say that you're correct; I will never stop learning.

To my children, I know you are too young to read this and will likely never read the whole dissertation; I cannot blame you. I love you all and am excited to close my laptop and spend more time with you.

To my loving wife, Sarah Beth. I could have never done this without you. When I started this program, we were just a family of two, and now we are blessed with three beautiful children. It has been quite the journey, but I have loved every minute of it with you. I cannot thank you enough for all the sacrifices and support you and the kids have given me.

Acknowledgements

I want to thank my dissertation chair, Dr. Pyke, for his unwavering support and guidance over the past six years. His expertise and mentorship have been instrumental in shaping this dissertation. I am deeply thankful for the many opportunities I've had to learn and grow under his direction.

I am also sincerely grateful to the members of my dissertation committee, Dr. Grooms and Dr. Milman, for their insightful feedback and invaluable advice throughout this process. Their perspectives have been essential in helping me develop a comprehensive and meaningful study.

I would like to express my gratitude to Dr. Olysha Magruder and Dr. Andrew Wiss for graciously serving as external readers on my committee. I truly appreciate their time, thoughtful feedback, and contributions to this work.

Abstract of Dissertation

An In-Depth Examination of Professional Adjunct Faculty's Integration of Technology, Pedagogy, Content Knowledge, and Contextual Factors in Higher Education

This qualitative study explores the teaching and learning experiences of professional adjunct faculty in higher education, with a focus on how they integrate technology, pedagogy, content knowledge, and contextual knowledge, framed by the Technological Pedagogical Content Knowledge (TPACK) model and expanded through a constructivist lens. As the demands for online and hybrid learning grow, professional adjunct faculty play a critical role in bridging academic content with real-world experience. However, these educators enter their roles with limited pedagogical preparation and insufficient institutional support. Through a basic interpretive research design, this study collected and analyzed data from semi-structured interviews with 17 professional adjunct faculty members. The findings reveal that while these educators possess deep content knowledge and industry experience, their pedagogical and technological skills vary widely. Key themes include the self-directed development of teaching strategies, evolving relationships with educational technologies, and the influence of contextual factors such as institutional culture, student demographics, and curriculum constraints. The study underscores the need for more robust professional development and institutional support to prepare adjunct faculty for the evolving landscape of higher education. Insights from this research contribute to the literature on adjunct faculty development and suggest directions for supporting effective and inclusive teaching practices in digitally mediated learning environments.

Tables of Contents

Dedication iii

Acknowledgements iv

Abstract of Dissertation v

List of Figures xvii

List of Tables xviii

Chapter 1: Introduction 1

Statement of the Problem 2

Purpose 3

Conceptual Framework 4

Theoretical Framework 5

Technological Knowledge 6

Pedagogical Knowledge 7

Content Knowledge 7

Contextual Knowledge 8

Research Questions 9

Statement of Potential Significance 10

Summary of the Methodology 11

Limitations and Delimitations 11

Definition of Key Terms 13

Chapter 2: Literature Review 17

Overview 17

Methodology of the Review 18

Integrative Review 18
Time Sensitivity of Topic 19
Guiding Questions for this Literature Review 20
Searching the Literature 21
Distinguishing Types of Literature 21
Scholarly Literature 21
Scholarly Research 22
The Database 22
Date Ranges Used 23
Keywords and Search Criteria 23
Search Results 24
Expanded Search Results 24
Selection of Literature 25
Themes 26
TPACK Framework 26
TPACK Breakdown 29
Exploring Uses of TPACK 31
TPACK in Use 32
TPACK as Knowledge 33
TPACK as Curriculum 34
TPACK as Assessment 35
Criticism of TPACK 36
Context 37

TPACK-ConK Framework 38
Variations of TPACK 41
Technology 43
Knowledge of Educational Technology 44
Information and Communication Technology (ICT) 45
Technology Acceptance Model (TAM) 46
TAM: Not labeled as TAM 48
TAM: Benefits to Students 49
Self-Efficacy 50
Professional Development 51
Difficulties with Professional Development 53
Types & Modalities 54
Increasing Collaboration 56
Building Community 57
Emergency Online Learning (COVID) 58
Teacher Education 59
Adjunct Faculty 60
Adjunct Faculty Literature Search 60
The Many Types of Adjunct Faculty 61
Identity 62
Identity in the Classroom 63
Identity in the Department 64
Reason for Teaching 66

Perceptions of Adjuncts 67
Potential Impact on Student Outcomes 67
Support & Retention 69
Improve Communication 69
Professional Development Opportunities 70
Mentoring Programs 71
Foster an Inclusive Faculty Body 72
Institutional Policies 73
Revisiting Guiding Questions 75
Question 1 76
Question 2 76
Question 3 78
New TPACK Framework 78
TPACK+XK Framework 79
Chapter 3: Methods 82
Statement of the Problem 82
Purpose 83
Research Questions 84
Research Design 85
Basic Interpretive Inquiry Design 86
Other Research Designs 87
Participant Selection 88
Selection Criteria 88

Recruitment Process 90
Implications of the Study 92
Data of the Study 93
Semi-Structured Interviews 94
Interview Protocol 96
TPACK Questions 97
Non-TPACK Questions 97
Memoing 98
Data Analysis 98
Data Coding and Categorization 99
Data Analysis Software 101
Procedures 101
Data Collection Timeline 101
Participant Consent 101
Semi-Structured Interviews 102
Data Recording and Transcription 103
Data Analysis Procedures 104
Trustworthiness and Validity 105
Self as Researcher 107
Ethical Considerations 108
Chapter 4: Results 109
General Data Collection Methods 109
Participants 110

The Institution 111
A Priori and Emergent Codes 112
Findings 115
Technological Knowledge (TK) 115
Definition 116
Technological Knowledge Codes 116
Technological Knowledge Emergent and Sub-Codes 117
Technology in Teaching/Ed Tech 117
Tools 118
Microsoft Office Suite 118
Presentation Tools 118
Learning Management System (LMS) 120
Institutional Tools 121
Video Conferencing Software 122
Other Tools 124
Artificial Intelligence (AI) - As a Technology 125
Availability and Cost of Technology 127
Use of Technology as Practitioners 128
Evolution of Technology Usage 129
Acceptance of Technology 130
By Students 131
By Faculty 132
By Institutions 135

Summary 135
Pedagogical Knowledge (PK) 136
Definition 138
Pedagogical Knowledge Codes 138
Pedagogical Knowledge Emergent and Sub-Codes 139
Educator 139
Developing Personal Pedagogy/Teaching Style 139
Evolving Pedagogy 145
Emphasis on Practical Application 147
Practitioner 148
Andragogy 150
Pedagogical Strategies 152
Summary 155
Content Knowledge (CK) 156
Definition 158
Content Knowledge Codes 158
Content Knowledge Emergent and Sub-Codes 159
How Adjuncts Learn Their Craft 159
Lifelong Learning 159
Learning By Doing 161
Learning As an Educator 162
Learning From Students 162
Summary 163

ConteXtual Knowledge (XK) 165
Definition 165
ConteXtual Knowledge Codes 166
ConteXtual Knowledge Emergent and Sub-Codes 167
Individuals 167
Professional Adjunct Faculty 168
Students 175
Adult Learners 178
Challenges Facing Adjuncts 180
Roles as Adjunct is Tedious and Stressful 181
Curriculum 185
Curriculum Development 185
Lack Of Ability To Edit 187
Lack of Curriculum Alignment 189
Lack of Editing Capabilities Undermines Role 190
Policies 191
Artificial Intelligence 191
Bureaucracy 193
Cheating/Integrity 194
Culture of Care 195
Pay 197
Rubrics/Grading 198
Student Engagement 200

Institutional Support 202
Feeling Supported 202
Lack of Support 203
On Adjuncts to Seek Out Support 205
Lack of Belonging 206
Lack of Community 207
Summary 209
TPACK 209
Definition 209
TPACK Codes 209
TPACK Codes 210
Summary 213
Other Emergent Codes 214
Other Emergent Codes 214
Online Learning & Future of Higher Education 215
Other Emergent and Sub-Codes 216
Artificial Intelligence 216
Need for Clear Guidance 217
Concerns 218
Acceptance and Embracing 220
Motivation 221
Student-Center Support 223
Desire to See All Students Succeed 224

Above and Beyond 225
Online Learning & Future of Higher Education 226
Professional Development 228
Likes 229
Dislikes 231
Peer Mentoring 233
Community Building (Need For More) 236
Student Experience 237
Feedback 239
Engagement 240
Value of Education 241
Summary 243
Chapter 5: Discussion 245
Summary of Findings 246
Discussion of Findings 247
How Professional Adjunct Faculty Experience TPACK 248
Self-Regulated 248
Vastness of Contextual Knowledge 251
Identity 252
Personal Pedagogy 254
Lifelong Learning 255
Professional Development Needs and Challenges 257
Practical Skills 258

Need For Community 261
Institutional Support 263
Study-Specific Summary of Professional Adjunct Faculty 266
Reflecting on TPACK 268
Adding To TPACK Literature 269
Limitations 271
Recommendations 272
Higher Education Administrators 273
Professional Adjunct Faculty 274
Researchers 275
Conclusion 276
References 277
Appendix A 299
Appendix B 302
Appendix C 305
Appendix D 309

List of Figures

Figure 1: The TPACK Framework.....29

Figure 2: The TPACK-ConK Framework.....41

Figure 3: Davis' (1989) Technology Acceptance Model (TAM) 47

Figure 4: Revised Version of the TPACK framework.....81

Figure 5: Frequency Breakdown of Each Code.....269

List of Tables

Table 1: Constructs and Keywords for Literature Search……..25

Table 2: List of Participant Pseudonyms…….111

Table 3: List of A Priori, Emergent Codes, and Sub-Codes……112

Table 4: List of A Priori, Emergent Codes, and Sub-Codes for Technological Knowledge……...117

Table 5: List of A Priori, Emergent Codes, and Sub-Codes for Pedagogical Knowledge……...138

Table 6: Professional Adjunct Faculty Strategies for Effective Teaching and Learning……...153

Table 7: List of A Priori, Emergent Codes, and Sub-Codes for Content Knowledge….158

Table 8: List of A Priori, Emergent Codes, and Sub-Codes for ConteXtual Knowledge……...166

Table 9: List of A Priori, Emergent Codes, and Sub-Codes for TPACK……210

Table 10: List of A Priori, Emergent Codes, and Sub-Codes for Other Emergent Codes……215

Chapter 1: Introduction

Adjunct faculty play a critical role in higher education, comprising approximately 44% of faculty in the United States (National Center for Education Statistics, 2024; Yakoboski, 2018). Despite their significant presence, institutions expect adjuncts to perform substantial responsibilities with limited resources. Adjunct faculty can receive minimal compensation, lack benefits, have insufficient preparation time, and experience limited employment stability (Flaherty, 2020; Freeman, 2015; Morales, 2020; Nica, 2018). Many enter their roles with little or no formal pedagogical training (Danaei, 2019). Although institutions rely heavily on adjuncts, they face increasing budgetary and enrollment pressures, compelling them to reevaluate instructional approaches. The recent slight decline in adjunct utilization does not diminish their ongoing importance in higher education (National Student Clearinghouse Research Center, 2022).

The growing acceptance of online and hybrid learning, coupled with increasing demand for skills-based education and expanded use of learning technologies, underscores the need to adequately prepare adjunct faculty for these evolving instructional environments (Bharadwaj et al., 2023; Brief, 2025; El Azar, 2022; McKenzie, 2021; Pelletier et al., 2021, 2022). This study investigates the current state of adjunct faculty, examining their teaching, learning, and technology integration experiences. Using a qualitative approach, the study identifies areas where enhanced faculty development and support can better prepare adjunct faculty for success in digitally mediated learning landscapes.

Statement of the Problem

Adjunct faculty will continue to exert significant influence in higher education. As institutions increasingly offer online courses to meet student demand (Bharadwaj et al., 2023; McKenzie, 2021), adjuncts remain integral to instructional delivery – yet they can lack sufficient resources and support to fulfill these roles effectively (Brien, 2025; Flaherty, 2020; Vicente, 2017; Zitko & Schultz, 2020). Many adjuncts report feelings of isolation and exclusion from institutional support networks, with resources either unavailable or misaligned to their needs (Ashton, 2012; Bosley & Custer, 2021; Burleigh et al., 2021; Wallin, 2004; Zitko & Schultz, 2020). As institutions contend with fluctuating enrollment and tightening budgets, it becomes imperative to prioritize the recruitment, development, support, and retention of adjunct faculty (Barnes & Fredericks, 2021; Cooper, 2021; Toner et al., 2021).

The higher-education landscape continues to evolve, shaped by broader digital learning trends. These include the widening digital divide, hybrid learning models, the proliferation of educational technologies, online professional development, skills-based learning, alternative credentials, evolving assessment modalities, and globalized online education (El Azar, 2022; Pelletier et al., 2021, 2022). These trends place increasing pedagogical and technological demands on adjunct faculty, many of whom already struggle with limited institutional support (Flaherty, 2020). Failure to address these growing demands may leave adjuncts underprepared to meet future instructional needs. Professional adjunct faculty play a vital role, particularly within professional-studies programs, by bridging academic content with real-world practice (Benjamin et al., 2015). This subpopulation, estimated at 160,000 individuals or 23% of adjuncts nationwide,

holds primary employment outside higher education (Yakoboski, 2018). Various titles describe this group, including professors of practice, practitioners of practice, contingent faculty, and professional adjunct faculty (Mandernach et al., 2015; Professor of the Practice, 2009; Yakoboski, 2018). While definitions vary, this study adopts Yakoboski's (2018) definition: "part-time faculty with career employment outside of higher education" (p. 3). As more adults pursue professional degrees, certifications, and micro-credentials, institutions increasingly rely on professional adjunct faculty to deliver practical, skills-based instruction (Barnes & Fredericks, 2021; Contreras-Mendez & Cruse, 2021; McGreal & Olcott, 2022; Olcott Jr., 2022; Pelletier et al., 2021, 2022).

Student motivation increasingly centers on career advancement and job-ready skills (Torpey-Saboe & Clayton, 2022). Students weigh costs, life balance, flexible scheduling, prior learning credit, and work-based learning opportunities in deciding to pursue higher education (Clayton & Torpey-Saboe, 2021; Torpey-Saboe & Clayton, 2022). These considerations highlight the importance of preparing adjunct faculty to deliver meaningful, career-aligned instruction. When faculty successfully connect coursework to career outcomes, students are significantly more likely to view their education as worth the investment (Clayton & Torpey-Saboe, 2021). Failure to meet these expectations may exacerbate enrollment declines and institutional financial pressures.

Purpose

This study explores the teaching and learning experiences of professional adjunct faculty, particularly as higher education adapts to post-pandemic realities. During the pandemic, many educators, including adjunct faculty, were thrust into online teaching

with little preparation, resulting in both challenges and valuable learning opportunities (Hodges et al., 2020; Pelletier et al., 2021). As institutions return to more stable instructional modalities, lessons from this period remain relevant. Examining adjunct faculty experiences can inform future faculty and professional-development initiatives that leverage these insights to prepare adjuncts for ongoing digital transformation.

Using a qualitative research design, this study examines professional adjunct faculty's pedagogical and technological development. Many adjuncts enter academia with limited formal training in teaching and learning (Cottom et al., 2018; Mandernach et al., 2015; Ramsay & Brua, 2017). However, some have engaged in professional development throughout their careers, attended conferences, or informally acquired instructional skills. This study investigates how professional adjunct faculty acquire pedagogical knowledge, integrate technology, and develop their teaching practices.

Currently, it remains unclear whether gaps exist between adjunct faculty's current skills and those required for future success. This study illuminates existing strengths and areas for growth, identifying pedagogical, technological, and content knowledge that can inform orientation programs and ongoing faculty development. Research on professional adjunct faculty remains limited, with faculty frequently expressing a desire for greater inclusion in professional development and institutional support structures (Packer, 2019).

Conceptual Framework

This study examines professional adjunct faculty's teaching and learning experiences through a conceptual framework that integrates the Technological Pedagogical Content Knowledge (TPACK) model (Mishra & Koehler, 2006) and a constructivist lens. Successful teaching requires more than simply agreeing to teach a

class; it demands the integration of multiple knowledge domains. The TPACK framework extends Shulman's (1986) Pedagogical Content Knowledge (PCK) model by incorporating technological knowledge alongside pedagogy and content. Each component—technology, pedagogy, and content—interacts to support effective teaching in contemporary educational settings.

One limitation of the original TPACK model was its insufficient emphasis on learners' characteristics (Shulman, 1987). This study addresses that gap by incorporating contextual knowledge, an understanding of students' needs, institutional culture, and technological access, through a constructivist lens.

Theoretical Framework

Constructivism serves as the theoretical foundation for this study, providing a lens through which the lived teaching and learning experiences of professional adjunct faculty are explored. Rooted in the belief that knowledge is actively constructed through experience and reflection (Dewey, 1938), constructivism aligns with the professional adjunct experience, wherein instructional strategies and practices are continually shaped by ongoing engagement with students and other institutional experiences. Rather than positioning knowledge as static, constructivism emphasizes the dynamic, situated nature of learning. This approach is particularly relevant when examining how faculty with industry backgrounds develop pedagogical and technological competence. This perspective is critical to understanding how adjunct faculty integrate their expertise with evolving educational demands in a range of learning environments.

Constructivism also functions as the connecting thread between the TPACK+XK conceptual framework, the design of the study, the analysis of data, and the interpretation

of findings. The TPACK+XK framework acknowledges that effective teaching results from the interaction of technological, pedagogical, content, and contextual knowledge. Constructivism reinforces this model by highlighting how knowledge in each domain emerges through experience and is shaped by context. It guided the study's use of a basic interpretive qualitative design, informed the development of interview protocols, and inspired the coding and analysis processes. As a result, constructivism did not merely serve as a philosophical foundation, but actively influenced how the study was conceptualized, implemented, and interpreted. The framework ensured that findings reflect not only what professional adjunct faculty know, but how they come to know it within the complexities of higher education and their careers.

Technological Knowledge

Technology has played, and will continue to serve, a critical role in higher education. This study primarily focused on online learning and, as a result, incorporates extensive discussions on the role and impact of technology. The term technology encompasses a broad range of advancements, as even a simple tool like scissors was once considered innovative. While this study does not examine the intricacies of scissors, it uses technology as a general reference to computer-based technologies. This conversation includes hardware such as computers, laptops, and smartphones. It also includes software such as learning management systems (LMS), virtual conferencing services (Zoom, Webex, Blackboard Collaborate), and other web-based applications. Each of these forms of technology has been a part of higher education over the last few years, and nearly every student and faculty member has engaged with different types of technology both inside and outside the classroom.

This study does not directly explore the coronavirus pandemic. However, the cascading impact and the widespread use of technology in connecting friends, families, and students across the globe is impossible to ignore. The time spent using the technology has introduced many individuals to the benefits of technology that they may have been reluctant to use before the pandemic. This concept, known as the technology acceptance model (TAM), is a widely influential model that examines how individuals perceive usage and acceptance of technology changes over time (Davis, 1989). TAM will not be explored beyond what has presented itself in the literature as this study is not applying the model.

Pedagogical Knowledge

While anyone can teach, effective teaching requires deep pedagogical knowledge (Chandra et al., 2021). Many adjuncts enter higher education with expertise in their professional fields but limited instructional training (Danaei, 2019). Pedagogy involves understanding how learning occurs and how to design instruction that promotes student success. Pedagogical knowledge develops gradually through study, reflection, mentorship, and experience (Cochran, 1997). This study explores how professional adjunct faculty acquire and apply pedagogical strategies in their teaching.

Content Knowledge

Professional adjunct faculty bring extensive content knowledge and practical experience to their teaching roles. As subject-matter experts, they connect theoretical concepts to real-world applications, providing students with valuable career-relevant insights (Beijaard et al., 2000; Hoyle & John, 1995). However, content expertise alone does not guarantee effective teaching. Faculty must also navigate the rapidly evolving

"half-life of knowledge," where information quickly becomes outdated due to globalization, technological advancement, and rapid knowledge dissemination (Arbesman, 2012; Knudsen & Lien, 2023; Ning et al., 2023). Effective adjunct faculty leverage their professional experience to keep course content current and relevant to students' career goals.

Contextual Knowledge

Stepping into a classroom is difficult for many reasons, but a big hurdle adjunct faculty face when joining the field is understanding who they will teach. Part of this study explores the learner characteristics professional adjunct faculty meet in their classrooms and how they impact pedagogical, curricular, and technological decisions. Today's students come into the classroom with many lived experiences. While these experiences are all unique, they do, however, all come from a collective society on the other side of the coronavirus pandemic. As a result of the pandemic, students spent a significant amount of time on their devices (computers, phones, tablets) and became increasingly comfortable with the technology. Many students favor online learning and have increased expectations of how technology and digital materials will be incorporated into their curriculum (Capranos et al., 2022; McKenzie, 2021). Not only do students have modified expectations, but their motivations for attending higher education have shifted. Career outcomes primarily drive online students, motivating them to improve job prospects, advance their careers, or start new ones (Capranos et al., 2022).

While this study explores professional adjunct faculty, it is essential to note that nontraditional students are the predominant student body indirectly discussed. This population of students also fall into the discussion around andragogy and the practice of

teaching adult learners (Knowles, 1986). A nontraditional student is an individual who may be older (over the age of 24), work full time, have a family/kids, or return to school after time away (Babb et al., 2022). Nontraditional students are a rapidly growing population that accounts for nearly 75% of the current student population in higher education (Chen, 2017; Radford et al., 2015). Nontraditional students are a large population directly in line to benefit from professional adjunct faculty being better supported and prepared.

Research Questions

Professional adjunct faculty serve in a unique capacity within higher education, and their impact on teaching and preparing students for future careers is critically important. Future trends within higher education are shifting the goals and skills necessary for teaching today's students. Learning and applying pedagogical skills are critical to the success of educators, and it is not uncommon for adjunct faculty to have limited or no background knowledge in the field. This exploration will focus on professional adjunct faculty's teaching and learning experiences and how they have come to understand technology, pedagogy, content, and contextual knowledge. The following research questions guide the foundation of this study:

1. How do professional adjunct faculty members experience integrating technology, pedagogy, content knowledge (TPACK), and contextual knowledge (XK) within the experience of their teaching and learning?
2. What are the professional development needs and challenges that professional adjunct faculty face when incorporating technology, pedagogy, content, and

contextual knowledge in their teaching within the proposed TPACK and contextual knowledge (XK) framework?

Statement of Potential Significance

This study contributes to the limited literature on professional adjunct faculty, highlighting their vital role in higher education and addressing emerging instructional trends. As online learning grows, this research identifies how professional adjunct faculty navigate technology and pedagogy in digital spaces. The findings will inform future faculty and professional-development efforts, providing actionable insights for institutions seeking to strengthen adjunct faculty support, inclusion, and retention. Throughout this study, professional development will be used as the primary term for training opportunities that help professionals and educators develop and improve their skills, knowledge, and effectiveness. This decision was made to better reflect the population of adjunct faculty that also maintain a career as a practitioner outside of their role as an adjunct. The term faculty development is a sub-set of professional development and thus does not fully cover the range of developmental opportunities from which professional adjunct faculty may develop their skills and knowledge.

By centering the experiences of professional adjunct faculty, this study offers a valuable perspective on their teaching approaches and contributions. As adjunct faculty continue to play an essential role in higher education's evolving landscape, these findings offer practical guidance for fostering effective, inclusive instruction in online and hybrid environments.

Summary of the Methodology

This qualitative study employs a basic interpretive research design (Schwartz-Shea & Yanow, 2012) to examine the lived teaching and learning experiences of professional adjunct faculty. Data collection methods include semi-structured interviews, memoing, and member checking. Seidman's (2019) interview protocol and reflective inquiry techniques guided data collection, ensuring deep engagement with participants' experiences. Each interview transcript received thorough, detailed analysis (Smith, 1996), focusing on participants' pedagogical development, technological integration, and professional identities as adjunct faculty.

Limitations and Delimitations

Several limitations affect this study. First, as with most qualitative research, findings may not generalize to all professional adjunct faculty due to the small, non-representative sample. Second, the basic interpretive design introduces potential researcher subjectivity, as my personal experiences may influence data interpretation (Schwartz-Shea & Yanow, 2012). Third, all interviews occurred via Zoom, which may have deterred technology-averse participants from participating. Finally, recruiting a diverse sample of 17 professional adjunct faculty across various geographic regions presented logistical challenges.

Delimitations establish clear study boundaries. First, the study focuses exclusively on professional adjunct faculty, limiting applicability to full-time or other adjunct populations. Second, the study centers on higher education, excluding K-12 and vocational contexts. Third, the TPACK and contextual knowledge framework informs the analysis, recognizing that other factors may also influence adjunct faculty experiences.

Lastly, the basic interpretive design acknowledges the inherent subjectivity of qualitative research (Schwartz-Shea & Yanow, 2012). These boundaries clarify the study's scope while allowing for meaningful, in-depth exploration of the research questions.

Definition of Key Terms

Adjunct Faculty: Part-time instructional staff in higher education institutions who are hired on a contractual basis and are typically not eligible for tenure. They commonly teach one or more courses per term and may work at multiple institutions (Yakoboski, 2018).

Andragogy: The theory and practice of adult learning, emphasizing learner autonomy, relevance to real-life situations, and the value of learners' prior experiences (Knowles, 1984).

Communities of Practice: Groups of people who share a concern or passion for something they do and learn how to do it better as they interact regularly and are commonly used in faculty development settings.

Constructivism: A learning theory suggesting that learners construct knowledge through experiences and reflection (Dewey, 1938).

Content Knowledge (CK): Mastery of the subject matter being taught, including key concepts, theories, and frameworks within a given academic or professional field (Mishra & Koehler, 2006; Shulman, 1986).

Contextual Knowledge (XK): Awareness of the broader context in which teaching occurs, including student demographics, institutional culture, access to technology, support systems, and the societal factors influencing learning (Mishra 2019).

Contingent Faculty: A broad term encompassing all non-tenure-track faculty, including adjuncts, lecturers, part-time instructors, and visiting professors.

Emergency Online Teaching and Learning: Instructional delivery that shifts suddenly to digital modalities due to an urgent external event (e.g., the COVID-19 pandemic),

without the deliberate planning that typifies standard online course design. Areas particularly impacted include, but not limited to, limited preparation time, improvised course design, and constrained support structures.

Faculty Development: A subset of professional development focused specifically on improving teaching effectiveness, curriculum development, assessment strategies, and instructional innovation in higher education.

Information and Communication Technology (ICT): ICT has no universal definition, but it is an overarching concept that encompasses all digital tools used to create, share, store, and manage information in educational settings, including internet tools, hardware, and media.

Instructional Development: Initiatives aimed at helping faculty design effective, learner-centered courses and instructional materials, often supported by teaching and learning centers.

Learning Management System (LMS): A software platform used to deliver, manage, and track educational courses and student progress, such as Canvas, Blackboard, or Moodle.

Online Faculty: Instructors who teach courses that are delivered primarily or entirely through digital platforms, commonly using learning management systems and other instructional technologies.

Pedagogical Content Knowledge (PCK): The blending of pedagogy and content knowledge, enabling educators to teach subject matter in ways that are comprehensible to learners (Mishra & Koehler, 2006).

Pedagogical Knowledge (PK): Understanding of the methods and processes of teaching and learning, including instructional design, assessment strategies, classroom management, and student engagement (Mishra & Koehler, 2006; Shulman, 1986).

Pedagogy: The art and science of teaching, particularly focused on methods for helping students learn, including curriculum design, instructional strategies, and classroom management.

Professional Adjunct Faculty: Adjunct instructors whose primary employment is outside of higher education, typically in the professional field they teach. They bring real-world experience to their teaching and are commonly employed in professional studies or applied degree programs (Yakoboski, 2018).

Professional Development: Ongoing learning opportunities and training that help professionals and educators improve their skills, knowledge, and effectiveness. Including workshops, conferences, online courses, peer mentoring, and reflective practice.

Self-Efficacy: An individual's belief in their own ability to successfully perform specific tasks or roles (Bandura, 1977). In education, faculty self-efficacy relates to confidence in teaching, using technology, and managing classrooms.

Technological Content Knowledge (TCK): Knowledge of how technology can support and transform understanding and delivery of specific subject-matter content (Mishra & Koehler, 2006).

Technological Knowledge (TK): Knowledge of various technologies, including hardware and software, and their application in teaching (Mishra & Koehler, 2006). This includes familiarity with tools such as LMS platforms, video conferencing, digital content creation tools, etc.

Technological Pedagogical Content Knowledge (TPACK): The interrelated and integrated knowledge that combines technology, pedagogy, and content in ways that support effective teaching (Mishra & Koehler, 2006).

Technological Pedagogical Knowledge (TPK): Understanding of how teaching and learning can change when specific technologies are used in particular ways, and how pedagogical goals can be supported by technology (Mishra & Koehler, 2006).

Technology Acceptance Model (TAM): A theoretical model that explains how users come to accept and use technology, based on perceived usefulness and perceived ease of use (Davis, 1989).

Professional Adjunct Faculty: Individuals whom educational institutions hire on a temporary or part-time basis to teach courses possess expertise in specific subjects or fields, and their primary employment is a career outside of higher education (Yakoboski, 2018).

Chapter 2: Literature Review

In Chapter 2, this study reviews literature and scholarly research related to the study of professional adjunct faculty and their teaching and learning experiences. The chapter begins with an overview of the problem and describes the foundational ideas driving this review. It then outlines detailed search criteria, including all keywords and search features applied throughout the inquiry.

Overview

A wide range of literature exists regarding adjunct faculty. However, few studies focus on professional adjunct faculty. This population of adjunct faculty serves a unique role within academia, and exploring their teaching and learning experiences will help illuminate their incredible work. As trends within higher education continue to change the landscape, the expectations for adjunct faculty will also have to evolve. Institutions have sought to meet the changing landscape and the demands of their students in the shifting job markets. Strong market influences shape the educational horizon, requiring adjunct faculty at all levels to modify their teaching and learning strategies. They must prepare job-ready students who graduate with the skills and knowledge to make an impact on day one. This study examines how professional adjunct faculty approach teaching and learning, identifying the skill set and expertise required to meet future demands effectively. I applied a constructivist lens during this exploration of the teaching and learning of professional adjunct faculty to understand how hands-on experience guides them.

Additionally, this study applied the Technological Pedagogical Content Knowledge (TPACK) framework, following the work of Mishra and Koehler (2006),

which originated from Pedagogical Content Knowledge (PCK) and the work of Shulman (1986). There was also an equal focus on the contextual knowledge of learners. When paired with the constructivist lens, these elements form a framework that highlights the essential attributes of successful professional adjunct faculty. The broader question of how scholarly research has addressed the utilization of the TPACK framework in informing professional development resources and opportunities for adjunct faculty, particularly the subpopulation of professional adjunct faculty, guided this review.

Methodology of the Review

The design of this study employs a qualitative approach; however, the literature for this review is drawn from a wide range of sources and incorporates a combination of qualitative and quantitative literature. Exploring all available literature and research will be crucial for understanding the current state of the field and identifying any existing gaps. Quantitative studies will inform this review, providing data-driven resources that are generalizable to larger populations across higher education. The data is also derived from experimental and survey methodologies and guided by specific hypotheses. Quantitative data will provide a solid foundation for building this literature review. In contrast, qualitative data will insert the richness of the individual's perspectives and less of the researchers. Combining the two methodologies enhances the review's comprehensiveness in a way that neither single methodology could achieve.

Integrative Review

In the spirit of bringing together a diverse range of sources and methodologies, this study will employ an integrative review (IR) to guide its exploration of the literature. Researchers conduct an IR by systematically searching the literature and data to generate

a comprehensive knowledge synthesis on the respective topic (da Silva et al., 2020; Duquesne University, 2021). This is not to say that there are no other systematic approaches to reviewing literature and data; what distinguishes IR is the intentional inclusion of a diverse set of sources (scholarly research and literature) and methodologies (qualitative and quantitative) to help accomplish the goals of the review (Broome, 2000; Hopia et al., 2016; Whittemore & Knafl, 2005).

Kutcher and LeBaron (2022) share their seven sequential steps for using an IR. The process includes 1) the selection of a topic, 2) determining the goals of the review and analysis, 3) conducting the search of the literature, 4) organizing and gauging the data, 5) assessing and identifying patterns, themes, and relationships in the data, 6) summarize and draw conclusions, 7) share findings. This process was adapted based on the work of others (Beyea & Nicoll, 1998; Broome, 2000; Cooper, 1989; Hopia et al., 2016; Toronto & Remington, 2020; Whittemore & Knafl, 2005). The design of this literature review will closely follow the process outlined by Kutcher and LeBaron (2022).

Time Sensitivity of Topic

As part of selecting the topic for this review, it is essential to note the time sensitivity of a particular aspect of this study. The crux of this study is rooted in the teaching and learning experiences of adjunct faculty since 2018. Since 2018, there has been a unique moment in education, marked by the global impact of the coronavirus pandemic. As noted, the pandemic is not the central focus of this study; however, its impact is impossible to ignore when exploring teaching and learning over the last few years. The 2018 start date allowed for the inclusion of literature prior to the pandemic, as well as to capture a moment in contemporary teaching and learning. Ultimately, a unit of

time was necessary to frame this study, and the seven years encompass a period of growth in online learning, while also accounting for the pandemic's impact. A corpus of scholarly research and literature now exists that has explored this same period.

Guiding Questions for this Literature Review

These guiding questions for the literature review differ from the research questions for this study. These questions are essential because this review encompasses a body of scholarly literature and research. This component of the IR process strengthens the approach by utilizing a range of sources, databases, and types of studies, and ensuring the use of various search terms to enhance the accuracy and relevance of the results. The guiding questions for this literature review included:

1. Has the Technological Pedagogical Content Knowledge (TPACK) framework been utilized to inform the development of professional development for higher education?
2. What adjunct faculty populations have been explored throughout scholarly research?
    a. Does using slightly modified search terminology/criteria change what is shown?
    b. Have subpopulations of faculty been addressed within the literature?
3. Has professional development been explored with adjunct faculty without a TPACK framework?

Searching the Literature

The initial batch of literature to guide this review was collected using a systematic process. This section breaks down the databases used for searching the literature, the search terms used, additional search criteria, and the primary search results.

Distinguishing Types of Literature

This review distinguishes between scholarly literature and scholarly research by highlighting the differences between the two. This does not imply that one is superior to the other; they each have value in supporting this review. The purpose of this section is to recognize that there is a difference between the two before moving ahead into the review. While the term "literature review" is used, the review highlights the variance between terms and emphasizes key distinctions.

Scholarly Literature

Scholarly literature represents the synthesis of the work of others (Rutgers University Library, 2023). Much like this literature review, there is no original experimentation or methodology; I prepared a detailed synthesis and interpretation. Also included are sources specifically labeled as literature reviews in this review. Thus, the work is not original research or experimentation (Belt & Lowenthal, 2019; Danaei, 2019b; Leary et al., 2020). The contribution to the field is equally impactful, but it provides a detailed summary and a unique interpretation by the authors. Scholarly literature can still be equally valuable and go through a peer-review process to ensure its validity in the field.

Scholarly Research

Scholarly research, distinct from scholarly literature, is also peer-reviewed but is differentiated by its methodological design and the inclusion of conducted experimentation or original research (Younger, 2018). The nuance between the two is only slight. However, they are viewed separately to ensure, in the spirit of the IR process, that both the inclusion of scholarly literature and research are included in the review.

The Database

"Education Source" was the primary mechanism for collecting scholarly research and literature. "Education Source" is a scholarly database that includes educational abstracts and indices dating back to 1929, though online learning certainly does not reach that far back. The concept of distance learning has considerably predated the era of online learning; thus, the extensive digital archives of the database offer a vast selection of literature and research.

Google Scholar provided an opportunity to cast a broader net in certain circumstances where additional sources were needed. The tool offers a straightforward way to search scholarly literature across multiple disciplines. Some of the notable results available include articles, theses, and dissertations. Each resource helps provide a solid foundation to guide the literature review. Google Scholar also offers additional search features and opportunities, including related searches and articles based on the specified criteria. There is also the opportunity to dive deeper into individual authors and see the scope of their work. The most notable feature of Google Scholar is the ability to view how many times other works have cited an article. This feature helped expand the initial search, ensuring a broad exploration and the inclusion of highly cited works that may

have been overlooked in earlier searches. All works flagged and reviewed due to their citation number were vetted and reviewed through the same codes and thematic criteria as those pieces of work identified through the "Education Source" database.

Date Ranges Used

Particular dates were selected for each search. The years 2006 and 2018 are noteworthy. The TPACK framework, as it is known now, was introduced by Mishra and Kohler (2006). The framework serves as a contemporary update based on the Pedagogical Content Knowledge (PCK) framework of Shulman (1986). Although the TPACK framework (Mishra & Kohler, 2006) has evolved slightly over the years, with the acronym changing from TPCK (2006) to TPACK (2007). The 2018 date is crucial, in part, due to the time-sensitive nature of this study. While the coronavirus pandemic is not a central focus, it is impossible to conduct a dissertation on higher education, online learning, and adjunct faculty in the current landscape without factoring in the influence the last few years have had on the teaching and learning community.

Keywords and Search Criteria

The keywords searched included *adjunct faculty, adjunct professors, part-time faculty, contingent faculty, professional development, professional learning, professional training, professional education, tpack,* and *technological pedagogical content knowledge.* All possible combinations of these search terms, in conjunction with boolean search operators, such as **and**, **or**, and **not,** were used. Using the Boolean operators allowed the search to target the inclusion of all three search terms. Additionally, the search included the "TX All Text Fields" parameter. That parameter was selected after initially using the search terms and the "SU Subject" and "AB Abstract" options, yielding

little to no results. The "TX All Text Fields" produces some results; thus, that was the determined selection. Lastly, the "Peer Reviewed" limitation filter was applied to ensure the search yielded scholarly research and literature. While non-peer-reviewed work, such as theses and dissertations, is important in contributing to the dialogue, its presence was not necessary to contribute to the primary literature for this study.

Search Results

Using the search terms *adjunct faculty, adjunct professors, or part-time faculty or contingent faculty* AND *tpack or technological pedagogical content knowledge* AND *professional development or professional learning or professional training or professional education* along with the application of the date range (2006-present) and the "peer-reviewed" criteria, the search yielded 49 results. A review of each abstract, overview, and conclusion section highlighted that only six results directly relate to this study.

Expanded Search Results

After expanding the search results, it was imperative to document the range of literature that became available. The search terms are presented as constructs in Table 1, which displays the terminology combinations with the expanded search. A detailed overview of the search terms, date ranges, number of hits in the search, and notes on the search results are available (See Appendix A).

Table 1

Constructs and Keywords for Literature Search

Construct	Keywords
Adjunct Faculty	● Adjunct Faculty ● Adjunct Professors ● Contingent Faculty ● Part Time Faculty
TPACK	● TPACK ● technological pedagogical content knowledge
Professional Development	● Professional development ● Professional learning ● Professional training ● Professional education

Selection of Literature

After applying the range of search term constructs, I applied additional inclusion and exclusion criteria to review the search results. The final results (See Appendix A) were reviewed after the inclusion and exclusion criteria were applied. Close reads of titles and abstracts identified additional literature to include in this review.

Inclusion and Exclusion Criteria

The literature used in this review was limited to English-language, peer-reviewed publications. The search criteria apply a 2006 date restriction; however, the review also includes historically significant publications from before 2006. The intent was to limit the review to literature from the United States. However, after assessing the search results, I recognized the value of including high-quality international literature. Some literature from the primary review was excluded from the final review because it did not contribute to the overall dialogue, as the materials were either irrelevant or lacked the necessary

information. Most of the excluded materials mentioned some of the search terms within the publication but provided few, if any, direct exploration of the concepts and how they worked together. I also included additional literature that informed the study's understanding of constructs or gaps under investigation, beyond the expanded search parameters.

Themes

The search identified a total of 174 studies after applying the main search terms to the scholarly databases. The main themes that emerge from the review include criticism of the framework, a deeper exploration of the framework's context layer, and a review of TPACK variations, with a specific focus on the TPACK-ConK framework. Other emergent themes include technology, the technology acceptance model (TAM), self-efficacy, difficulties and modalities of professional development, communities (of practice), teacher/pre-service education, information and communication technologies (ICT), emergency online learning (COVID teaching time), and the final theme to discuss is adjunct faculty and the many facets of that population of educators. One area absent from the literature is the presence of the subpopulation of professional adjunct faculty. Although the literature does not consistently use the term, researchers broadly apply "adjunct faculty" as a blanket term to encompass all subpopulations.

TPACK Framework

Although the review does not focus primarily on TPACK, thoroughly exploring the framework provides context for the additional areas it encompasses, which this review will detail. The TPACK framework comprises three equally distributed components, each framed around technological, pedagogical, and content knowledge,

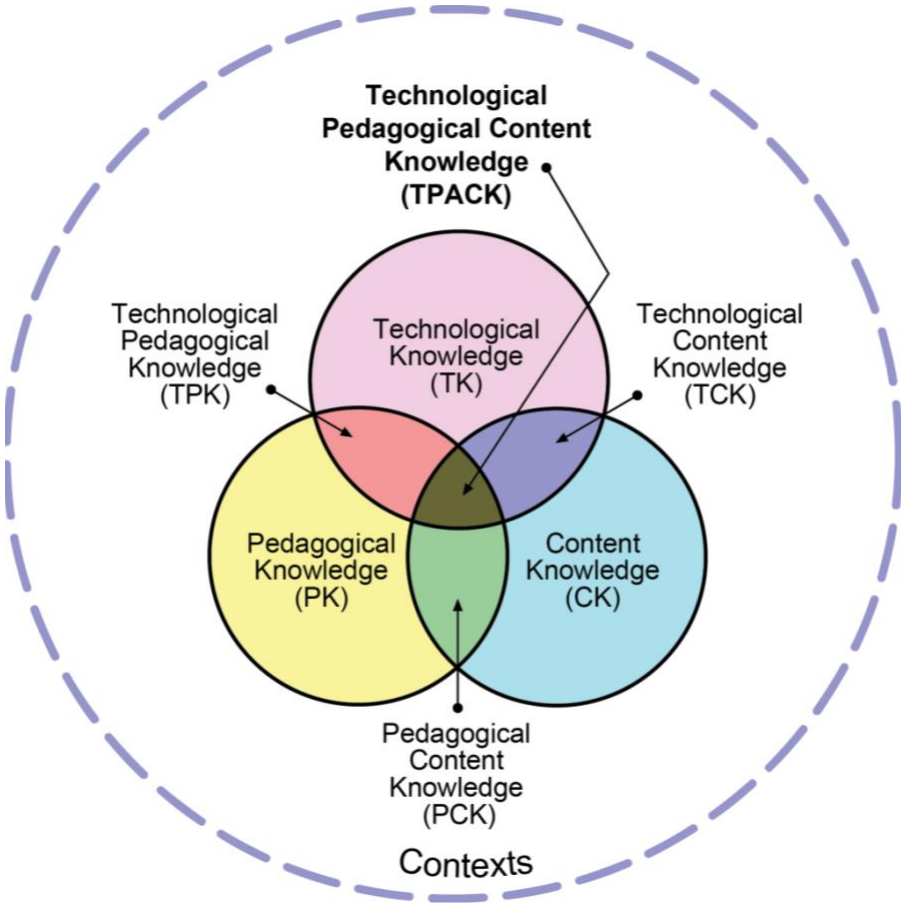
along with a contextual layer that encompasses the totality of these three knowledge bases (Figure 1) (Mishra & Koehler, 2006). Each knowledge base contributes equally to the development of an educator's TPACK (2006). Readers and scholars can overlook the context layer when reading or discussing TPACK. The contextual layer explores important aspects of the experience, such as the knowledge of learners and their characteristics, and other factors, such as available technologies and levels of institutional support, among other variables (Ajani, 2024; Blackwell et al., 2016; Brianza et al., 2024; Mishra, 2019; Mishra & Koehler, 2006).

Educators in K–12 settings use the TPACK framework and Pedagogical Content Knowledge (PCK) to recognize that effective teaching requires a balance between technology, pedagogy, and content knowledge (Mishra & Koehler, 2006; Shulman, 1986). It emphasizes the importance of understanding how technology can enhance the teaching and learning experience in a specific content area, without focusing on the inclusion of technology (Mishra & Koehler, 2006). TPACK encourages educators to find the intersection of these three knowledge components to create meaningful learning experiences for their students. Ultimately, TPACK empowers educators to make informed decisions about when and how to integrate technology into their teaching practice (2006). It highlights the importance of a thoughtful and purposeful approach to technology integration, ensuring that it aligns with the content taught and the pedagogical strategies employed. By developing their TPACK, teachers can effectively leverage technology to create engaging and meaningful learning experiences that prepare students for the challenges and opportunities of the digital world.

A key dimension of the TPACK framework is its content-dependent nature, an extension of Shulman's (1986, 1987) foundational work on pedagogical content knowledge (PCK), which emphasizes that effective instruction is shaped not only by the subject matter but also by the context in which it is taught and the characteristics of the learners. Within TPACK, Mishra and Koehler (2006) expanded the principle to include technology, highlighting the need for instructors to make context-sensitive decisions about how digital tools intersect with pedagogy and content. This becomes especially relevant when examining the instructional practices of professional adjunct faculty, who often teach industry-specific content across a wide range of applied disciplines. For example, the digital tools and instructional approaches appropriate for teaching a software engineering course differ considerably from those used in supply chain management or graphic design instruction. Even within a single discipline, such as mathematics, scholars note that PCK for Algebra differs meaningfully from PCK for Geometry (Ball, Thames, & Phelps, 2008), which implies that the technological integration associated with each content strand must also vary (Ajani, 2024; Meletiou-Mavrotheris & Paparistodemou, 2024). These distinctions reinforce the need to understand TPACK as both content- and learner-dependent. This study considers not only the tools professional adjuncts select, but also how those tools align with the content-specific demands of their fields and the needs of the diverse student populations they serve.

Figure 1

The TPACK Framework



Note: Used with permission from http://tpack.org

TPACK Breakdown

Definitions of each TPACK section, first as the three main knowledge components and then addressing how those components interact with each other:

- Content Knowledge (CK) refers to knowledge about the subject being taught or learned, or what the instructor knows about a subject they instruct (Mishra & Koehler, 2006; Shulman, 1986).

- Pedagogical Knowledge (PK) includes the "deep knowledge" of the range of instructional practices, strategies, and methods for promoting student learning (Mishra & Koehler, 2006, p. 1026; Shulman, 1986).
- Technological Knowledge (TK) refers to the knowledge of traditional and new technologies integrated into the educational experience (Mishra & Koehler, 2006).

The interaction of the three main knowledge components:

- Technological Content Knowledge (TCK) refers to knowledge of the relationship between technology and content (Mishra & Koehler, 2006).
- Technological Pedagogical Knowledge (TPK) refers to the application of technological knowledge to enhance the pedagogical effectiveness of instruction and to understand how teaching can evolve through the use of technology (Mishra & Koehler, 2006).
- Pedagogical Content Knowledge (PCK) is "knowing what teaching approaches fit the content, and likewise, knowing how elements of the content can be arranged for better teaching" (Mishra & Koehler, 2006, p. 1027).
- Technological Pedagogical Content Knowledge (TPACK/TPCK) is the "emergent form of knowledge" that transcends the three main knowledge components. It integrates content knowledge with applicable pedagogical methods and the use of emerging technology, enabling learners to grasp the subject matter (Mishra & Koehler, 2006, p. 1028; Voogt et al., 2013).
- Context serves as the encompassing perimeter of the framework, collecting all other influences, such as student characteristics, teacher attitudes, and the

availability of technologies, among other attributes. (Mishra, 2019; Mishra & Koehler, 2006). Kelly (2010) qualified context as "one of the most complex, important, and least understood components" of the TPACK framework (p. 52).

The TPACK model has been utilized, researched, and applied to a myriad of current studies involving the assessment of all types of educators, including K-12 teachers and higher education faculty of all varieties, and in some cases, pre-service or in-service teachers (Ball & Cohen, 1999; Greenberg, 2010; Gregory & Salmon, 2013; Jaipal & Figg, 2010; Kereluik et al., 2013; Özgün-Koca et al., 2010; Özmantar et al., 2010; Pehlevan & Ünal, 2023; Voogt et al., 2013; Ward & Benson, 2010). Introduced by Shulman (1986), Pedagogical Content Knowledge (PCK) sought to prepare instructors to become effective and competent without relying on our current multifaceted technologies, many of which did not exist at the time. The current TPACK is an updated version of PCK (Mishra & Koehler, 2006). TPACK builds upon the essential foundation of PCK, expanding its reach to incorporate the technological knowledge that enables instructors to integrate pedagogical strategies effectively while enhancing their technological usage. TPACK is a versatile framework that can be particularly useful for online-driven education courses (Hofer & Grandgenett, 2012; Mishra et al., 2009).

Exploring Uses of TPACK

Researchers employ the TPACK framework in various ways, applying it to multiple distinct contexts throughout the literature. The first aspect to explore is how and when TPACK is used, whether proactive, active, or retroactive (Archambault & Crippen, 2009; Britten & Cassady, 2005; Harris et al., 2012b; Harris et al., 2015; Hofer et al., 2011; Shiu, 2025; Tournaki & Lyublinskaya, 2014; Wagner et al., 2024; Wang, 2019; Yi

et al., 2016). The second area this review explores is how educators use TPACK—whether as a form of knowledge to guide curriculum development or as an assessment tool (Archambault & Crippen, 2009; Britten & Cassady, 2005; Harris et al., 2012b; Harris et al., 2015; Hofer et al., 2011; Shiu, 2025; Tournaki & Lyublinskaya, 2014; Wang, 2019; Yi et al., 2016). This review examines each of these areas in detail.

TPACK in Use

Researchers have applied the TPACK framework in three primary ways: proactively, actively, and retroactively (Archambault & Crippen, 2009; Britten & Cassady, 2005; Harris et al., 2012b; Harris et al., 2015; Hofer et al., 2011; Tournaki & Lyublinskaya, 2014; Wagner et al., 2024; Wang, 2019; Yi et al., 2016). In the proactive approach, educators use TPACK as a guiding framework during the design phase of content or professional development initiatives. This approach allows them to integrate technology, pedagogy, and content purposefully and strategically (Espinoza & Neal, 2018; Yi et al., 2016). For example, professional development teams may intentionally structure programs around TPACK to address all three knowledge domains.

Educators engage in the active use of TPACK during implementation—administering surveys, providing immediate feedback, and facilitating ongoing adjustments within TPACK-aligned professional development efforts (Tournaki & Lyublinskaya, 2014; Wagner et al., 2024; Wang, 2019; Yi et al., 2016).

In the retroactive application, researchers use TPACK to evaluate how instruction, content, and educator practices aligned with the framework after the learning experience had taken place (Archambault & Crippen, 2009; Britten & Cassady, 2005; Harris et al., 2012b, 2015; Hofer et al., 2011).

While this review does not delve further into these three approaches, it highlights an important distinction: educators and researchers may use TPACK either as a theoretical model to guide and inspire curriculum (proactive and active) or as an assessment framework for evaluating existing instruction (active and retroactive). This distinction underscores nuanced differences in the use and application of the model.

TPACK as Knowledge

According to some literature, TPACK is viewed as the combination of skills, experience, and expertise that come together to form an educator's actual TPACK (Kaaki, 2020; Phillips et al., 2017). This application of the framework differs from others because it positions TPACK as "personal knowledge" that individuals can form or develop through "explicit, formal knowledge and practical experiences" (Voogt et al., 2016, p. 38). This notion closely aligns with the constructivist perspective. Educators commonly participate in collaborative and dynamic learning environments that inform and enhance their formal knowledge; thus, their knowledge is dynamic and evolves (Voogt et al., 2016). Mishra and Koehler (2006) propose that good teaching with technology requires a well-rounded and balanced understanding of technology, pedagogy, and content knowledge, also known as TPACK. Suggesting that TPACK is a form of knowledge that can be acquired. Phillips, Koehler, Rosenberg, and Zunica (2017) describe teacher knowledge as a continuum, emphasizing that no two forms of knowledge are the same and should not be treated as homogenous. This notion transitions the discussion of TPACK as knowledge into the following two sections, where TPACK in curriculum and assessments looks to help define the boundaries of the framework.

TPACK as Curriculum

Viewing TPACK as a form of knowledge that educators can develop emphasizes the need for calculated and purposeful decisions about how technology, pedagogy, and content are prepared and presented (Belt & Lowenthal, 2019; Pehlevan & Ünal, 2023; Martin et al., 2014). Educators must carefully balance these three domains—technology, pedagogy, and content knowledge—while also accounting for contextual factors to design a TPACK-informed curriculum with a strong foundation (Alghasab & Handley, 2025; Baran et al., 2016; Eichelberger & Leong, 2019; Espinoza & Neal, 2018; Koehler et al., 2014; Wagner et al., 2024).

Researchers have developed several examples of TPACK-based curricula, including a 3D printer training course (Yi et al., 2016), mathematics and science instruction for pre-service special education teachers (Tournaki & Lyublinskaya, 2014), and a curriculum designed to enhance students' emotional intelligence (Wang, 2019). These curricula primarily target pre-service educators and focus on K–12 education (Alghasab & Handley, 2025).

Although many studies explore the implementation of TPACK in K–12 classrooms, a growing body of research also investigates how TPACK supports educators in higher education. This body of work includes the professional development of various educator types, from full-time faculty (Martin, 2018) to adjunct instructors (Kaaki, 2020) and graduate or teaching assistants (Allan et al., 2010). Regardless of an educator's role, each can benefit from the balanced, integrative approach offered by the TPACK framework.

However, most TPACK-related studies center on K–12 environments, with relatively few examining the needs of adjunct faculty. The limited literature reveals that adjuncts and graduate/teaching assistants enter the classroom with minimal or no training or support. Many adjunct faculty members express a clear desire for additional resources and support, but have reported not receiving them (Cutri & Mena, 2020; Kaaki, 2020; Lee & Jung, 2021; Letzmann et al., 2010; Masri, 2018).

TPACK as Assessment

This section examines the literature on TPACK as a tool for assessment. Researchers use the term "assessment tool" to describe a range of instruments designed to collect participant data and apply it in both qualitative and quantitative studies. Several scholars have validated TPACK-related assessment tools through rigorous review processes (Archambault & Crippen, 2009; Britten & Cassady, 2005; Harris et al., 2012b, 2015; Hofer et al., 2011; Mölgen et al., 2024; Meletiou-Mavrotheris & Paparistodemou, 2024; Pehlevan & Ünal, 2023; Wagner et al., 2024). Examples include an introductory survey (Archambault & Crippen, 2009), a TPACK interview protocol (Harris et al., 2012b), a technology integration assessment rubric (Britten & Cassady, 2005; Harris et al., 2015), a technology integration observation instrument (Hofer et al., 2011) and a domain-specific TPACK questionnaire (Mölgen et al., 2024).

Archambault and Crippen (2009) developed a survey tool comprising 24 questions, utilizing a 5-point Likert-type scale (1 = poor, 5 = excellent). They divided the TPACK framework into seven subsections, such as pedagogical knowledge, technological pedagogical knowledge, and technological pedagogical content knowledge, with each subsection addressed by three to four questions. In one study, Harris et al.

(2015) created an interview protocol to support the development of a technology integration assessment rubric. In another study, Harris et al. (2012b) used the interview protocol to gather information from in-service teachers about their technology-integrated lesson plans. Harris et al. (2012b) then used audio recordings from the interviews to allow rubric scorers (the authors) to evaluate the lesson plans and written descriptions using the TPACK rubric.

Hofer et al. (2015) designed the technology integration observation instrument based on the earlier assessment rubric developed by Harris et al. (2015). Reviewers used this instrument while watching video recordings of classroom lessons conducted by either pre-service or active teachers as part of a professional development activity. Educators trained to use the observation instrument served as scorers. After completing each observation form, the participants answered seven questions about the lesson and their experience. To validate the instrument, the scorers assessed the same video recordings one month later, and researchers compared the feedback and scores from both sessions.

These studies illustrate just a few of the assessment tools grounded in the TPACK framework. Collectively, they demonstrate how researchers have applied the model to evaluate educators' knowledge, instructional quality, and integration of technology, content, and pedagogy.

Criticism of TPACK

While the TPACK framework has gained recognition and adoption in educational circles, it is not without criticism. Some of the main criticisms of the framework are an overemphasis on technology, a lack of clear definitions, and a scarcity of empirical data. Technology has become essential in higher education, inspiring significant professional

development focusing on developing technological skills. For TPACK to be successful, a well-balanced approach is necessary; however, some studies lean heavily on technology (Mishra & Koehler, 2006). Some criticism of the technological knowledge domain has been that it is vague and overly extensive (Cox & Graham, 2009; Graham, 2011). One of the biggest criticisms of TPACK is the lack of universal and consistent definitions for each knowledge domain (Koehler et al., 2014; Willermark, 2018). Some researchers have raised concerns about the limited empirical evidence supporting the TPACK framework (Koehler et al., 2013). They argue that more rigorous research is needed to establish a clear link between the framework's implementation and improved student learning outcomes (Koehler et al., 2013). Although these criticisms exist, the TPACK framework remains influential and widely used in educational contexts. Emerging work by educators and researchers constantly appears as they explore ways to refine and further validate the framework to address the documented concerns.

Context

One of the lesser-discussed aspects of the TPACK framework is the contextual layer. The framework's three overlapping circles reside within the larger circle labeled "context" (See Appendix B). Although scholars discuss it less frequently, both the original creators of the TPACK framework (Koehler & Mishra, 2008; Koehler et al., 2014; Mishra & Koehler, 2006; Mishra, 2019) and other researchers (Angeli & Valanides, 2009; Brianza et al., 2024; Doering et al., 2009; Harris & Hofer, 2014; Kelly, 2007, 2008a, 2008b, 2010; Koh et al., 2014; Porras-Hernandez & Salinas-Amescua, 2013; Wagner et al., 2024) describe context as a critical element of the framework. Kelly (2010) qualified context as "one of the most complex, important, and least understood

components" of the TPACK framework and discussed the claim through a series of publications in 2007, 2008, and 2010 (p. 52). In the original framework proposed by Mishra and Koehler (2006), they posited that grade level, student background, subject matter, and available technology are the original "context-bound" features and forms of knowledge (2006, p. 1032). While context was described in the original framework as an important component, visual inclusion in the framework (See Appendix B) did not occur until the publication of the "*Handbook of Technological Pedagogical Content Knowledge (TPCK) for Educators"* in 2008, some two years after the initial framework was released (Rosenburg & Koehler, 2015).

Much of the literature explores context as a wide range of factors influencing the framework, including student backgrounds, teacher attitudes, technology availability, administrative support, and many other contextual factors. (Blackwell et al., 2016; Mishra & Koehler, 2006). Each context directly or indirectly influences how TPACK is understood, experienced, or integrated into the content and/or curriculum. One review of empirical journal articles found that contextual factors were included in the descriptions and explanations and integrated into the studies in 36% of 193 identified articles (Rosenberg & Koehler, 2015). That investigation also found that when contextual factors were detailed, they were typically more likely to be related to classroom and instructor issues than student and societal issues (Rosenburg & Koehler, 2015).

TPACK-ConK Framework

From the conversation around context, the necessity arises to modify and generate variations of the TPACK framework. The TPACK-ConK (Context Knowledge) framework added a more thorough layer of context knowledge to the TPACK model

(Espinoza & Neal, 2018). This new framework addressed the professional development needs of faculty in higher education. Like other variations of TPACK, this framework builds upon the foundation of the original, leaning into the contextual factors and positing nine interconnected factors that influence the teaching of higher education faculty online (Figure 2) (2018). There are three overarching contextual themes to the ConK framework: resources (R), legitimacy (L), and positionality (P) (2018). The inclusion of ConK in the framework aims to support faculty across all disciplines by promoting the unique perspectives of all faculty while helping to develop their "digital wisdom and appreciation of virtual spaces" (2018, p. 34). Encompassing the existing TPACK framework are nine factors that work together to form the faculty's contextual knowledge. Each factor pairs with one of the contextual themes to emphasize the balance among the themes and factors. Figure 2 shows the nine factors, which include preparation and design (R), teaching and engagement (R), availability and access to technology (R), institutional support (R/L), sector is legitimacy (L), discipline (L), role (L), epistemology (P), and ontology (P).

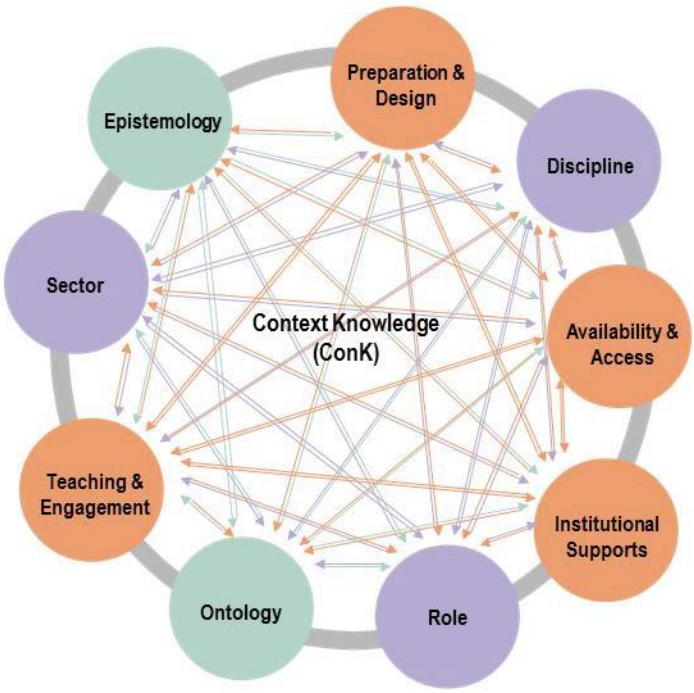
Definitions of each of the nine ConK factors, as outlined by Espinoza and Neal (2018):

- Preparation and design (R) include the time and effort required to develop an online course (Cavanaugh, 2005; Van de Vord & Pogue, 2012).
- Teaching and Engagement (R) include the time and energy required to engage with students and teach an online course (Cavanaugh, 2005; Van de Vord & Pogue, 2012).

- Availability and access to technology (R) outline what technology is available to faculty and the ease of access to these technologies and resources (Meyer, 2012; Paloff & Pratt, 2011).
- Institutional support (R/L) describes the institution's stance on the validity and importance of online learning (Cherry & Wise, 2010; Halvorson et al., 2011; Rovai, 2000).
- Sector legitimacy (L) is the level to which a particular institution type or sector values teaching online as legitimate (Allen & Seaman, 2013; Halvorson et al., 2011).
- Discipline (L) refers to the level at which a discipline prioritizes online teaching (Allen & Seaman, 2013; Halvorson et al., 2011).
- Role (L) refers to a faculty member's employment status at an institution, which impacts their ability to engage in meaningful teaching and learning opportunities (Allen & Seaman, 2013; Halvorson et al., 2011).
- Ontology (P) and Epistemology (P) examine how educators perceive knowledge acquisition and what they consider knowledge (Allen & Seaman, 2013; Halvorson et al., 2011).

Figure 2

The TPACK-ConK framework



Note: Used with permission from Espinoza & Neal (2018).

Variations of TPACK

With a strong emphasis on the concept of context, several publications have introduced modified versions of the TPACK framework. Each modified version utilized a particular context to expand where and how the framework was integrated. Some variations are explored above (TPACK-ConK) as well as others within the literature, including AI-TPACK (Runge et al., 2025), ICT-TPACK (Angeli & Valanides, 2009; Otrel-Cass et al., 2012), TPACK-21CL (Koh et al., 2017), TPACK-XL (Saad et al., 2012), TPACK-deep (Yurdakul et al., 2012), TPASK (Jimoyiannis, 2010), and TPACK-practical (Yeh et al., 2013). Each variation brings a unique element from the context perspective to enhance and expand the framework. The ICT-TPACK framework

examines how information and communication technologies (ICT) transform teaching and learning (Angeli & Valanides, 2009; Otrel-Cass et al., 2012). Some articles detail the theoretical and practical concepts of how educators apply their ICT knowledge within the guidelines of the TPACK framework (Angeli & Valanides, 2009; Otrel-Cass et al., 2012). The AI-TPACK significantly influenced pre-service teachers' perceptions of AI's usefulness and ease of use, which, in turn, predicted their intentions and actual use of AI in professional teaching contexts, underscoring the importance of AI-related coursework in extending the Technology Acceptance Model (Runge et al., 2025). The TPACK-21CL is situated within the context of professional development, focusing on the development of educators' technological, pedagogical, and content knowledge for 21st-century learning (21CL), thereby providing the framework for TPACK-21CL (Koh et al., 2017). Koh et al. (2017) framed 21st-century learning as something that "involves the engagement of students in collaborative work and real-world problem solving through effective exploitation of information and communications technologies (ICT)" (p. 173).

TPACK-XL builds upon the ICT-TPACK framework, incorporating the context (X) and the learner's (L) knowledge, and how they contribute to ICT within the field of educational technology (Saad et al., 2012). TPACK-XL showcases interdisciplinary knowledge and constructs and is to be featured as an enhanced lens of the ICT-TPACK framework for pre-service teacher education (Saad et al., 2012). TPACK-deep explored a particular intersection of the core sections (TK, PK, and CK) of the TPACK framework within international literature (Yurdakul et al., 2012). The contextual factors of design, exertion, ethics, and proficiency (DEEP) were explored and were used to create the TPACK-deep title (Drummond & Sweeney, 2017; Yurdakul et al., 2012).

Another contextual variation of the framework is TPASK, which focuses specifically on science education, leading to the development of the Technological Pedagogical Science Knowledge (TPASK) framework (Jimoyiannis, 2010). The TPACK-practical framework examines the practical knowledge that a panel of 54 teachers brings to their role as educators (Yeh et al., 2013). These variations provide a foundation and blueprint for implementing a modified TPACK framework for this study.

Technology

Technology is an exciting topic to explore within the literature. Smart, Finger, and Sim (2016) explored technology through a historical lens. They laid out a scenario around an individual named Carmelina. They juxtapose Carmelina's modern-day experiences as an educator with those of Nancy, an individual initially described by Shulman (1987). Carmelina and Nancy exist as individuals, separated by some 30 years, and the prevalence and types of technology that have become part of their everyday practices shed light on how much has changed. Smart et al. (2016) describe Carmelina's experience as the "hypothetical life of a teacher in 2014" (p. 54). Carmelina's day began with checking her email, responding to three students' questions about the presentation, and reviewing questions she had uploaded to their virtual classroom. She then posts an announcement to their learning management system (LMS), encouraging her students to download a particular app they will use in class that day. Much of Carmelina's day follows events similar to those of educators in the modern day, such as responding to emails, phone calls, texts, posting content, and having students complete a quiz in the LMS.

In comparison, Shulman (1987) presented Nancy's teaching experience. Email existed during Nancy's time, but likely would not have been used, as computers were expensive and clunky. The dissemination of information in Nancy's classroom would have come via the chalkboard and readings from a textbook. If a student had a question about their homework, they would have waited until the next day to ask the teacher. No virtual classrooms, LMS platforms, or quizzes were being administered anywhere other than on paper. One of the most significant shifts from Nancy's experiences to Carmelina's is that technology has come to the forefront of the education discourse (Smart et al., 2016). This shift is primarily due to the widespread availability of technology and the growing emphasis on incorporating technology-based educational content into the classroom.

Knowledge of Educational Technology

Within this conversation about technology lies a deeper discussion on the use of educational technology. Much like the juxtaposition between Carmelina and Nancy in Smart et al.'s study (2016), there is a difference between knowledge of technology and educational technology. Readers should not dismiss this point. Educators sometimes blur the line between educational technology and instructional resources when they reimagine tools not initially designed for education as educational tools. Standard technologies such as podcasts (Grisham & Wolsey, 2012; Palenque, 2016) and social media (Chugh & Umar Ruhi, 2017; Vandeyar, 2020) have become commonplace applications in the classroom. Koehler, Mishra, Kereluik, Shin, and Graham (2014) discuss how knowledge of educational technology differs from the TPACK framework, detailing how the TPACK framework explicitly explores the engagement between content, pedagogy, and

technology (Lakhe Shrestha et al., 2025; Margerum-Lays & Marx, 2003; Wagner et al., 2024). They posit that technology knowledge is viewed as independent but intertwined with other forms of teacher knowledge (Koehler et al., 2014). In contrast, they view knowledge of educational technology as integrated within the teacher knowledge framework, as outlined by Shulman's work on PCK (Shulman, 1986).

Information and Communication Technology (ICT)

One term that emerged throughout much of the literature was information and communication technology (ICT). ICT is used in various ways within the literature and is also predominantly a term used outside the United States. In some conversations, it is a design framework around which teacher education programs exist (Graça et al., 2021), while others present it as something educators can have expertise in (Koh et al., 2013), while in other contexts it is a skill that students will leave school with to be contributing members of society (Reyes Jr. et al., 2017). ICT has no universal definition, but it is an overarching concept that encompasses a wide range of technologies. The literature seemingly circles some of the concepts such as knowledge acquisition (Minelli de Olivera et al., 2015), competencies (Koh et al., 2013; Manzuli et al., 2016), technology (Reyes Jr. et al., 2017), collaboration (Koh & Chai, 2013), pedagogy (Reyes Jr. et al., 2017), self-efficacy toward technology (Koh et al., 2013) skill development (Reyes Jr. et al., 2017), and educational reform movements (Drummond & Trudy, 2016; Kafyulilo et al., 2015). Each facet contributes to rounding out the wide net that ICT encompasses. Generally speaking, ICT encompasses a range of tools, technologies, knowledge, and services that facilitate and support information and communication. Many examples of ICT physically refer to technologies and software, such as computers, smartphones, and

popular communication platforms such as social media (Vandeyar, 2020). ICT is a tool, resource, or concept designed to enhance the teaching and learning experiences of educators and students.

Technology Acceptance Model (TAM)

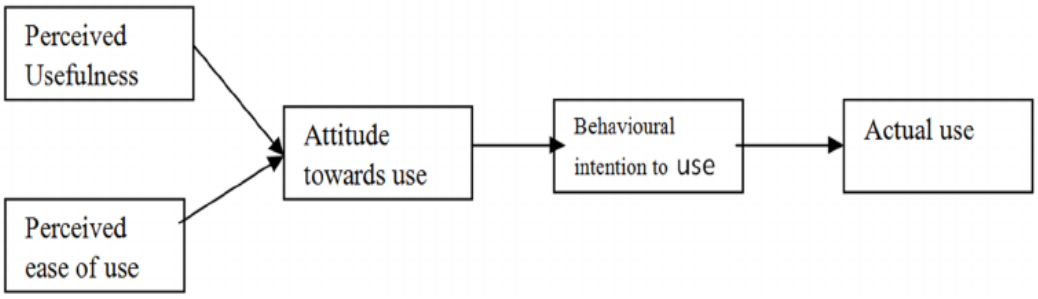
The use of the TPACK framework inherently increases the reliance on technology in the discourse. The Technology Acceptance Model (TAM), a theory in information systems, becomes critical when discussing the era of digital learning (Davis, 1989). TAM examines how individuals, knowingly or unknowingly, perceive their acceptance and usage of technologies and how those change over time (Davis, 1989). Davis (1989) spotlights two primary factors of an individual's intentions when using new technology: (1) perceived ease of use and (2) perceived usefulness (Figure 3). When technology was integrated into the PCK framework to create TPACK, it was recognized as an essential component for the framework to evolve and meet the needs of educators in a technology-driven world (Shulman, 1986; Mishra & Koehler, 2006). While technology is an equal contributor to the framework, the idea of technology and its role, usage, and usefulness in the classroom place a major emphasis on learning and understanding it.

The term "technology" can be vague in many cases, while also serving as a generic term that encompasses items that require a power source or batteries. In a world where computers and smart devices have become ubiquitous, some of the most basic "technologies" hardly register as technology anymore, like calculators, light switches, or cars. This has occurred over the years of usage and acceptance from users. When viewed through the TAM (Figure 3), these items have progressed to the "actual use" phase of the model (Davis, 1989) and have become universally accepted as part of life and have

become fully accepted. This chapter discusses TAM only as it appears in the literature; the study does not incorporate the model and will not explore it in depth.

Figure 3

Davis' (1989) Technology Acceptance Model (TAM)



Note. Technology Acceptance Model outlined by Davis (1989). Adapted from "Predicting users' continuance intention toward e-payment system: An extension of the technology acceptance model," by Tella, A., and Olasina, G., 2014, *International Journal of Information Systems and Social Change (IJISSC)*, *5*(1), p. 50.

At the start of the pandemic, when faculty and students transitioned online in March 2020, nearly every class became reliant upon using a wide range of technologies, including their institution's learning management system (LMS) (Blackboard, Canvas, etc.), some sort of web conferencing systems (Webex, Zoom, Blackboard Collaborate, etc.) (Aguilar, 2020; Cameron-Standerford et al., 2020) and other web-based tools. For many educators and students, these technologies were either brand new or had limited exposure and usage (Sablić et al., 2020). As educators have moved beyond the pandemic and returned to a sense of normalcy within the classroom, many faculty members

continue to use the same systems to teach their courses (Cesco et al., 2021). Regardless of their appreciation or desire to utilize technology, faculty and students have become familiar with its use (Sablić et al., 2020). While faculty may not want to continue using technology, there was a moment of usage and familiarity with the systems that should not be ignored (Aguilar, 2020; Camilleri & Camilleri, 2021; Cesco et al., 2021; Runge et al., 2025; Sablić et al., 2020).

TAM: Not labeled as TAM

Some literature presents concepts related to the essence of TAM without directly referencing the framework. The literature discusses the motivation for using technology for teaching and its perceived usefulness, the perceived enjoyment of utilizing the technology, attitudes toward the technology, and the desire to know that the technology is improving the learning experience (Elçiçek, 2021; Mabán & Mulenga, 2019; Moessenlechner et al., 2021; Oved & Alt, 2025; Phan et al., 2021; Runge et al., 2025). They go on to say that the use of technology "directly stems from the behavioral attitudes towards technology" (Moessenlechner et al., 2021, p. 30), which correlates with the "attitudes towards use" stage from ESL (Figure 3). One important piece that emerged was the importance and impact of educators who have accepted technology and recognized the power of their voice. They can continue to promote technology and encourage others to explore, expand, and experience it (Nicolle & Lou, 2008). These educators can become champions within their professional circles and be a trusted voice to other educators. Their voices can carry significant weight in encouraging others to embrace technology. Harris et al. (2009) discusses the importance of not pressuring faculty into incorporating technology and not allowing them to be "bullied by a technocentric world" (p. 207).

TAM: Benefits to Students

Another aspect of TAM is the impact on students and their exposure to and perceptions of technology (Phan et al., 2021). Staub and Stern (2002) explored some of the leading factors influencing faculty's adoption of technology and its instructional methodologies. The main factors were the instructors' knowledge of the technology and their perceptions of its value (Marbán & Mulenga, 2019; Martin et al., 2020). As a result of the faculty's perceptions of value, students may or may not have exposure to particular technologies (Martin et al., 2020). The decisions made by educators regarding the technologies they introduce into their classrooms can have both direct and indirect influences on students (Martin et al., 2020).

Students now have expanded expectations regarding the level of technology they would like to be used in the classroom (Conole, de Laat et al., 2008; McKenzie, 2021; Sablić et al., 2020; Young, 2012). They live in an interconnected world where data, knowledge, and communication are at their fingertips (Kacetl & Klímová, 2019; Iqbal & Bhatti, 2020). The careers they seek and learn about in their courses should use new and emerging technologies (Alexander et al., 2019; Rios et al., 2020). Students deserve to be exposed to these critical technologies and educated about the future technologies that will impact their lives and careers (Runge et al., 2025). This notion pressures institutions to develop well-balanced professional development opportunities to sharpen the TPACK skills of professional adjunct faculty and recruit other educators to champion new and emerging technologies.

Self-Efficacy

The Technology Acceptance Model (TAM) discussion introduced the concept of self-efficacy. Bandura (1977) first introduced the concept of self-efficacy, emphasizing individuals' belief in their ability to influence events affecting their lives, which plays a crucial role in motivation and behavior. Faculty self-efficacy is the belief or confidence to execute and possess the knowledge (pedagogical, technological, content knowledge) and skills necessary to produce a particular educational outcome (Horan & Kim, 2020; Horvitz et al., 2014; Semiz & Ince, 2012; Yazu & Erten, 2014). The TAM overlaps with a portion of this theme that emerged from the literature. In the TAM discussion, self-efficacy comes into the picture in the stages of "Behavioral intention to use" and "actual use" (Figure 3). This moment of intention and self-belief moves the technology from perception to execution. If the instructor possesses confidence and is comfortable with the deployment of technology, then that confidence will expand their self-efficacy and, as a result, can potentially improve and enhance the student learning experience (A et al., 2022; Blackwell et al., 2016; Horan & Kim, 2020; Horvitz et al., 2014; Phan et al., 2021; Yazu & Erten, 2014). This can move into a cyclical pattern where educators with higher levels of self-efficacy are more likely to explore and experiment with other technologies, again enhancing the student learning experience (Blackwell et al., 2016; Horan & Kim, 2020; Horvitz et al., 2014; Phan et al., 2021; Yazu & Erten, 2014). Most importantly, educators must perceive and realize the benefits of technology themselves, rather than just being told that it will benefit them.

As the literature has detailed, faculty with higher levels of self-efficacy are more likely to persevere through difficult and negative experiences that are not necessarily

related to technology (Blackwell et al., 2016; Horan & Kim, 2020; Horvitz et al., 2014). This shift in attitudes and confidence can enhance the learning environment for students. With variables such as perceptions of student learning, satisfaction with online teaching, and future interest in teaching emerging as resonating with educators, there is an opportunity to provide support and develop those skills (Horan & Kim, 2020). Faculty can be better prepared and educated about students' learning and be allowed to expand their pedagogical skills (Blackwell et al., 2016; Martin et al., 2020; Phan et al., 2021; Siliņa-Jasjukeviča et al., 2025). Through targeted professional development, the necessary technical skills and experience with online teaching and learning can be improved (Blackwell et al., 2016; Yazu & Erten, 2014). Exposing less confident educators to exemplary course materials, instructional design models, practical resources, and real stories from experienced online instructors can help build enthusiasm and encourage deeper engagement with online teaching and learning. Developing faculty skills and knowledge can be purposeful and impactful when designed and delivered through meaningful professional development opportunities (Horan & Kim, 2020).

Professional Development

Being an effective and impactful educator is a challenging task. It requires time, energy, dedication, and passion. Some of those factors are intrinsic. There are other areas where support and resources can feed educators' passion and hunger. Unfortunately, as Korthagen (2010) said, "many teacher educators seem to forget that educational knowledge cannot be simply "transmitted" to teachers and thus improve their actions" (p. 99). Further highlighting the importance of professional development (PD), which allows educators to learn and grow from the knowledge and opportunities made available to

them (Nīmante et al., 2025). PD opportunities for faculty should "meet a need, be convenient, accessible to the intended audience, and be valued by the institutional administration" (Ibrahim, 2020, p. 46). Desimone (2007) advocates for a standardized, research-based framework to evaluate the effectiveness of professional development in targeting energies on delivering opportunities focused on content, active learning, and collective engagement among participants, which will, in turn, improve student outcomes.

Online education is likely to be a focus, with many institutions aiming to reintegrate students into higher education. With an expanded focus on online learning, there will be a continued need to provide support and resources through PD (Brien, 2025; Butters & Gann, 2022; Joshi, 2023; Koksal, 2020; Magda et al., 2020; McKenzie, 2021; Wagner et al., 2024; Wallis, 2020; Yeager-Okosi et al., 2024). There must be a sense of support and urgency to provide PD that promotes technology acceptance, self-efficacy, and faculty involvement (Brien, 2025; Butters & Gann, 2022; Leary et al., 2020; Martin et al., 2020; Scherer et al., 2021; Siliņa-Jasjukeviča et al., 2025; Wagner et al., 2024; Yeager-Okosi et al., 2024). Scherer et al. (2021) have found that those levels of support and development have been modest thus far. There has been a demand from faculty for additional support and resources (Butters & Gann, 2022; Cutri & Mena, 2020; Kaaki, 2020; Lee & Jung, 2021; Letzmann et al., 2010; Masri, 2018). A host of considerations come into play when exploring PD in the literature, such as difficulties, types/modalities, and the trend of increasing collaboration.

Difficulties with Professional Development

Designing, developing, and delivering PD requires significant work and attention to detail. Educators must conduct a thorough needs analysis to ensure the content is both necessary and worthwhile, considering the unique contextual characteristics of the audience. It is crucial to understand how educators transfer their learning and understanding from PD into their teaching practices and recognize that those conditions will allow for prolonged success with teaching and learning with technology (Baran et al., 2016; Butters & Gann, 2022; Siliņa-Jasjukeviča et al., 2025). A delicate balance between the two needs to be understood and addressed.

Other challenges arise when planning and coordinating PD opportunities, such as leadership changes, both at a micro and macro level. At the micro level, simple strategic plans or personal opinions from instructional designers to deans can impact how and what PD is delivered (Donnelly, 2018). The macro level can encompass institutional policies, but it extends even further to include local, state, and federal policies (Flannery, 2022). Changes in university presidents and provosts can impact goals and strategic initiatives, while government policies can affect more extensive, systematic processes, as well as financial and budgetary restrictions. Another common factor impacting an institution's ability to deliver PD is budget cuts, whether due to low enrollments or federal funding cuts. Cuts could come in the form of cutting positions or slashing budgets, and if those in leadership view priorities differently, then PD funds may be some of the first funds cut. Other difficulties within PD stem from the actual delivery of the opportunities. There are many considerations when offering PD, such as when, how often, and how. Finding a time, frequency, and location can be challenging. Timing is a

significant factor in getting faculty to attend PD opportunities (Castleberry et al., 2018; Lowenthal et al., 2013; Parker et al., 2016). Another area for improvement arises from the frequency and regularity of the PD opportunities offered. Researchers have found that one-time technology professional development opportunities have minimal impact on long-term sustained improvement (Bickerstaff & Cormier, 2015; Bose & Lowenthal, 2018; Siliņa-Jasjukeviča et al., 2025).

With the widespread adoption and use of video conferencing software during the pandemic, a growing struggle has emerged between modalities. The options include in-person, hybrid, online, synchronous, asynchronous, or self-paced (Belt & Lowenthal, 2020; Leary et al., 2020). Belt and Lowenthal (2020) discuss the devil's advocate paradox and how participant feedback from an online PD workshop will suggest that they would prefer to attend future PD opportunities in the opposite modality than what they attended previously. Their takeaway is that individuals designing PD "should give special care when disseminating these findings to avoid biases and present misleading information about one modality over another" (p. 256). While the topic of modalities warrants further discussion, highlighting the challenges helps provide perspective on how they are presented.

Types & Modalities

Many themes emerged from reviewing PD types and modalities, including the faculty's role as learners and delivery methods. The role of faculty as learners impacts the PD and how it is designed and deployed. Some types of opportunities include staff-led, faculty-led, and student-led. Faculty consider each option, as each style offers different opportunities for learning and growth. Staff-led is the most common approach used when

it comes to PD (Castleberry et al., 2018; Englund et al., 2017; Fairchild et al., 2016; Godsk & Nielsen, 2024; Meletiou-Mavrotheris & Paparistodemou, 2024; Parker et al., 2016; Wagner et al., 2024; Wu et al., 2016). Typically, institutions will have teaching and learning centers, or something similarly named, where much of the PD is conducted (Belt & Lowenthal, 2020). These centers are traditionally run by staff who bring knowledge and experience on emerging technologies and often provide support based on institutional strategic plans (Belt & Lowenthal, 2020). The least common approach is student-led support, which, although less common, has strengths and benefits, such as the direct sharing of curricular experiences and insights on technology integration into the classroom (Ajani, 2024; Belt & Lowenthal, 2020; Godsk & Nielsen, 2024; Siliņa-Jasjukeviča et al., 2025).

PD opportunities are typically in three modalities: in-person, hybrid, and online (Belt & Lowenthal, 2020; Donovan, 2022; Godsk & Nielsen, 2024; Schmidt et al., 2016; Wynants & Dennis, 2018). Each modality has its respective benefits for faculty. In-person opportunities are the preferred delivery method for higher education faculty (Cook & Steinert, 2013; Wynants & Dennis, 2018). One major downside to in-person meetings is the requirement for a set time and physical location. With "lack of time" commonly noted as a barrier, this can present a significant challenge for faculty to attend in-person opportunities (Belt & Lowenthal, 2020; Godsk & Nielsen, 2024; Schmidt et al., 2016). The hybrid format offers additional flexibility to time-strapped faculty, with a virtual component made available. Through video conferencing software paired with online resources, this method provides increased flexibility by minimizing the need for physical travel to attend in person. The final modality is online, which presents two sub-

modalities: synchronous and asynchronous (Belt & Lowenthal, 2020; Donovan, 2022; Godsk & Nielsen, 2024; Horan & Kim, 2020; Schmidt et al., 2016). The synchronous online modality presents the same benefits as a hybrid offering. However, it increases the instructor's flexibility by minimizing the need for physical space on campus and allowing for remote hosting. The asynchronous modality offers a "self-study" approach (Belt & Lowenthal, 2020, p. 252) that allows faculty to explore and interact with the content at their own pace and convenience (Schmidt et al., 2016; Wynants & Dennis, 2018). Each modality presents unique opportunities for faculty to engage with materials to enhance their teaching and learning skills.

Increasing Collaboration

A final element within the discussion of PD was the notion of collaboration. While PD is a targeted experience with the goals of improving individuals' teaching and learning skills, there is still a need for engagement among faculty, staff, students, and administrators (Al-Naabi et al., 2021; Belt & Lowenthal, 2020; Butters & Gann, 2022; Moessenlechner et al., 2021; Siliņa-Jasjukeviča et al., 2025). These PD offerings present opportunities where workshops and training can provide strategically planned interactions among the attendees. Whether the collaboration is organic or planned, bringing together faculty into formal settings can lead to meaningful conversations where technology, pedagogy, and content knowledge can be shared (Al-Naabi et al., 2021; Baran et al., 2016; Belt & Lowenthal, 2020; Butters & Gann, 2022; Schmidt et al., 2016; Siliņa-Jasjukeviča et al., 2025; Wynants & Dennis, 2018). By fostering collaboration, PD can improve teaching and learning skills while building a sense of community among faculty members (Banasik & Dean, 2016; Butters & Gann, 2022; Siliņa-Jasjukeviča et al.,

2025; Tucker, 2022). Building and maintaining a sense of community is critical when promoting technology, pedagogy, and innovation within an institution (Belt & Lowenthal, 2020; Butters & Gann, 2022; Tucker, 2022; Yu et al., 2021).

Building Community

Dovetailing out of the discussion around PD and increasing collaboration brings the emergence of community-building. Wegner, McDermott, and Snyder (2002) defined communities (of practice) as "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (p. 4). Whether they are called learning communities (AuCoin & Vah Seliskar, 2024; Baran et al., 2016; Belt & Lowenthal, 2020; Schmidt et al., 2016; Tucker, 2022), teaching circles (Ashton, 2012), communities of practice (Al-Naabi et al., 2021; Donovan, 2022; Mahlo et al., 2024; Siliņa-Jasjukeviča et al., 2025), or communities of inquiry (Wynants & Dennis, 2018) these spaces are created to provide a safe space for faculty to come together and share ideas, collaborate, and learn from each other. These communities play a crucial role by supporting faculty and providing them with resources for growth and exploration. Ibrahim (2020) says that the creation of opportunities and how they "create a sense of online learning communities is important; such efforts do not need to be time or labor-intensive but can signal administrative support for faculty" (p. 49). Building a community where faculty members feel supported from the top down can foster a relationship of trust and promote enthusiasm for technology and pedagogy (AuCoin & Vah Seliskar, 2024; Belt & Lowenthal, 2020; Donovan, 2022; Siliņa-Jasjukeviča et al., 2025). During the pandemic, community spacing became even more critical for both developing faculty's teaching and learning

skills as well to support faculty, as many struggled to cope with the sense of isolation (Al-Naabi et al., 2021; Ashton, 2012; AuCoin & Vah Seliskar, 2024; Donovan, 2022; Hofman et al., 2024; Horan & Kim, 2020; Ibrahim, 2020; Tucker, 2022).

Emergency Online Learning (COVID)

With the onset of the coronavirus pandemic in March 2020, the entire world turned upside down almost overnight. The educational landscape was no different. In the United States, many students entered spring break and emerged as fully online students, navigating the online learning environment (Hodges et al., 2020). Despite the growth of online learning, prior to the pandemic, more than half of college faculty across the United States had never taught an online course (Jaschik & Lederman, 2018; Snyder et al., 2019). Many educators and students tiptoed into the new and unimaginable environment of online learning (Cameron-Standerford et al., 2020; Gardner, 2020; Hodges et al., 2020; Milman, 2020). In a matter of days, instructors were learning how to create online assignments and activities, typically with little or no guidance (Hodges et al., 2020; Milman, 2020; Moessenlechner et al., 2021; Quezada et al., 2020). Video conferencing softwares such as Zoom and Webex, became popular as synchronous teaching and learning transitioned online. Terms like “Zoombombing” and “doomscrolling” became popular terminology (Cleveland Clinic-Health Essentials, 2020; Elmer et al., 2021). This period became known as “emergency online learning” (Cameron-Standerford et al., 2020; Gardner, 2020; Hodges et al., 2020; Milman, 2020; Moessenlechner et al., 2021). Through the emergency online learning movement, it has become evident that there are gaps in faculty members’ knowledge and capabilities regarding technology usage (Milman, 2020; Moessenlechner et al., 2021). While this study will not focus on the

emergency online learning period, the knowledge and skills developed by faculty are essential to recognize. There are valuable skills that will continue to serve faculty well within their classrooms, regardless of the teaching modality. However, there were also many issues and struggles with teaching and learning during the pandemic. This study will help explore some of the wins and losses that have lingered with professional adjunct faculty. Highlighting these ups and downs and exploring faculty's technological skills and usage further supports the idea of increased PD that can bring together an understanding of what has occurred and where the educational landscape is now going.

Teacher Education

One theme prevalent throughout the literature, particularly in conjunction with the emphasis on the TPACK framework, was the importance of teacher education programs. Another similar term used in this conversation was pre-service education, but teacher education was used for this review. Bringing together teacher education and the TPACK framework provides a clear emphasis on integrating technological knowledge (TK) through the development of digital literacy (Elçiçek, 2021; Göltl et al., 2024; Grisham & Wolsey, 2012). It underscores the interplay between the key domains of the PCK and TPACK frameworks and finds a balance between TK, pedagogical knowledge (PK), and content knowledge (CK) (Mishra & Koehler, 2006; Shulman, 1986).

Educators and program designers can utilize the TPACK framework to equip future and current teachers with the skills and mindset necessary to navigate the ever-evolving landscape of educational technology (Elçiçek, 2021). By fostering an understanding of how technology can amplify pedagogical strategies and facilitate content comprehension, TPACK equips educators to design dynamic, student-centered

learning environments that cater to diverse learning styles and needs (Baran et al., 2016; Blackwell et al., 2016). In their introduction, Mishra and Koehler (2006) emphasized how TPACK could "transform the practice of teacher education, teacher training, and teachers' professional development" (p. 1019). Ultimately, integrating the framework helps to develop a holistic approach in educators that can bridge the gaps between content mastery, effective pedagogy, and innovative technology integration, thus better preparing them for the demands of 21st-century students (Ajani, 2024; Baran et al., 2016; Blackwell et al., 2016; Elçiçek, 2021; Göltl et al., 2024; Grisham & Wolsey, 2012; Özmantar & Akkoç, 2017).

Adjunct Faculty

This final section explores the professional adjunct faculty population. As previously discussed, researchers have called for more focused studies on this subpopulation. This section thoroughly examines adjunct faculty, with specific attention to professional adjuncts woven throughout the discussion. This emphasis reinforces the significance of both the review and the broader study. It also outlines key needs and identifies areas where institutions can offer additional support to adjunct faculty at all levels. These educators consistently demonstrate a strong commitment to their teaching and express a clear desire to be included and supported within the academic community.

Adjunct Faculty Literature Search

When searching the literature for adjunct faculty, there were more than 11,000 results in the initial search (See Appendix A). However, when applying the TPACK criteria to the exact search, the results dropped drastically to 55 (from 2006 to the present day) and 30 (from 2013 to the present day). This illustrates that the TPACK framework

has not been applied strategically toward the adjunct faculty population. This outcome is not surprising, given that Mishra and Koehler (2006) originally designed the framework for P–12 education. A closer review of the limited search results revealed only a few mentions of adjunct faculty, with some references to the use of technology being somewhat loose. Only six studies specifically mentioned both TPACK and adjunct faculty. None of the reviewed results addressed the subpopulation of professional adjunct faculty.

Because the original search terms yielded limited results, I explored additional literature within the adjunct faculty search results. Using the citation index features in Google Scholar, articles cited more than 100 times were flagged and reviewed. After reviewing abstracts and cross-checking information, 20 articles emerged to help support this subsection of the literature review about professional adjunct faculty. This section provides a crucial foundation for the study so I could ensure the use of relevant literature to support it.

The Many Types of Adjunct Faculty

Roughly 44% of the faculty teaching in higher education are contingent or adjunct faculty (National Center for Education Statistics, 2024; Yakoboski, 2018). The term "adjunct faculty" is not easy to define, as there are a variety of designations that can be used as synonyms, such as temporary, part-time, contingent, non-tenure track, freelancer, aspiring academic, professors of practice, career-enders, non-permanent, or sessional, to name a few (Anderson, 2007; Etzkowitz & Dzisah, 2007; Mandernach et al., 2015; *Professor of the Practice*, 2009; Ramsay & Brua, 2017; Wallin, 2004). A commonly referenced title is Professor of Practice (PoP), which the American Association for

University Professors (AAUP) defines as a designation for practitioners appointed based on their skills and expertise acquired in nonacademic careers, though some appointments may also include individuals with academic backgrounds (American Association of University Professors, 2023; *Professor of the Practice*, 2009). Another population of educators, on the surface, who are sometimes viewed as adjunct faculty serving an essential role, are teaching and graduate assistants (American Association of University Professors, 2023; Meixner et al., 2010). Although this study does not focus on teaching and graduate assistants, their contributions and unique roles within higher education remain critically important. Many of the strategies recommended for enhancing adjuncts' teaching and learning experiences also apply to teaching and graduate assistants.

Within the population of adjunct faculty is a smaller sub-population; roughly 25% of adjuncts fall into the category of professional adjunct faculty (Yakoboski, 2018). As defined in Chapter 1 of the terminology section, the term "professional adjunct faculty" refers to those who have full-time employment outside of their teaching responsibilities and teach as a means of sharing their expertise and passion for teaching, while seeking to contribute to their field of work (Mandernach et al., 2015). This subpopulation of adjunct faculty is rarely directly mentioned in the literature. The lack of direct reference could be related to the variety of terms and definitions. Despite the limited research, it further supports the importance of this study in helping to elevate the professional status of adjunct faculty.

Identity

Despite bringing industry knowledge, a wealth of experience, and diverse perspectives, adjunct faculty struggle with their identity in higher education (Anderson,

2007; Butters & Gann, 2022; Levin & Hernandez, 2014; Masri, 2018). Because adjuncts serve in roles with little job security and contracts that commonly depend on enrollment, institutions tend to view them as "not regular faculty," reinforcing their status as flexible and non-permanent (Anderson, 2007). Levin and Hernandez (2014) discuss how adjunct faculty have divided their identities into two distinct roles: the classroom and the department. Scholars in the literature define this distinction by examining the identity of adjunct faculty.

Identity in the Classroom

When an adjunct walks into their classroom on day one, what the students see is "the teacher." Although the adjunct may not feel like "the teacher," they have now been assigned an identity. Whether they were assigned this teaching assignment three months or three days ago, some students have paid to be in the class and depend upon 'the teacher' to deliver an educational experience (Anderson, 2007; Jolley et al., 2014). Anderson (2007) shares the story of one adjunct who details their first experience as an educator and the notion of "faking it until you make it" with students. The adjunct details their role, and students expect that they know what you are doing and that you have the answers to their questions (Anderson, 2007).

Like most of their students, professional adjuncts are adult learners who bring a variety of expertise and knowledge into their curriculum (Belt & Lowenthal, 2019; Yakoboski, 2018). Most adjuncts enter their first teaching experience with little to no formal pedagogical knowledge or training (Belt & Lowenthal, 2019; Butters & Gann, 2022; Cottom et al., 2018; Ramsay & Brua, 2017). As a result, they typically learn about their teaching style and identity while actively teaching the course or through

professional development (Butters & Gann, 2022). Many educators who lack formal pedagogical training teach the same way they were taught and will continue to develop their skills (Belt & Lowenthal, 2019; Powell, 2015). These pedagogical knowledge and skills gaps present an ideal opportunity to provide adjunct faculty with meaningful professional development and other resources to support their continued growth as educators.

While pedagogical skills may be lacking in some adjuncts when they begin their teaching careers, they can typically compensate for these shortfalls with increased motivation, intentionality, and awareness of their students' needs (Layou et al., 2022). Adjuncts believe they are playing an essential role in the education of their students and the overall success of the institutions that have hired them (Layou et al., 2022). However, they simultaneously feel invisible and isolated, and the significance of their role goes largely unnoticed (Fedock et al., 2019; Jolley et al., 2014; Layou et al., 2022; Mueller et al., 2013). Adjunct faculty take great pride in their role as educators, care deeply about their students, and strive to provide them with the best possible curricular experience (Smith, 2019). While adjuncts care profoundly and have formed their identities with their students, they must also contend with their identity within higher education and the institution itself.

Identity in the Department

With terms like "academic underclass" used as a descriptor, it should come as little surprise that adjunct faculty struggle with their identity within higher education (Taylor, 1999). There are many instances throughout the literature where adjunct faculty describe feeling like their professional expertise, knowledge, and skills are being

overlooked and underutilized and that their voices are not heard by their departments (Anderson, 2007; Burleigh et al., 2019b; Butters & Gann, 2022; Hofman et al., 2024; Jolley et al., 2014; Layou et al., 2022; Masri, 2018; Meixner et al., 2010). Jolley et al. (2014) discuss one community college adjunct faculty who when asked about their interactions with other faculty and administrators, said, "I always feel invisible. Like they don't really care what we say or what we do, you know. We're replaceable. They could care less if we were there or not" (p. 225). Despite making up nearly half of the teacher population in higher education (National Center for Education Statistics, 2024), they "are commonly treated as outcasts by the academic mainstream" (Dolan, 2011, p. 65). Within the literature search for this study, the term marginalized describes how adjunct faculty are viewed and treated (Anderson, 2007; Levin & Hernandez, 2014; Masri, 2018). The sentiment of being marginalized, invisible, and generally unappreciated was a recurring theme in the literature.

Not all aspects of adjuncts' identities within the institution are negative. Positive aspects help form their identities, such as the diversity, experience, and scheduling flexibility they provide (Wallin, 2007). While there are downsides to last-second course assignments and little stability from year to year, some individuals appreciate the opportunity and are OK with short-term commitments and teaching assignments. Institutions value professional adjunct faculty—like other adjuncts—for their specialized knowledge, real-world experience, and strong connections to business and industry (Wallin, 2007). Gappa (2008) has praised the importance of adjunct faculty and referred to them as "the new faculty majority," while acknowledging that, although technically contingent, they will continue to play a permanent role in the success of higher education.

Many others cited the importance of adjunct faculty and their role within higher education, but the voices promoting adjunct faculty are raising concerns about their lack of recognition within their institutions (Anderson, 2007; Jolley et al., 2014; Masri, 2018). The role that institutions play in supporting their adjunct faculty is critically important. Adjunct faculty enjoy teaching and being in the classroom to support and educate their students (Smith, 2019). Institutions need to recognize adjuncts' calling to the classroom and find ways to support them better across the board (Smith, 2019).

Reason for Teaching

Adjunct faculty choose to teach for many reasons, stemming from a deep passion for education and a desire to make a meaningful contribution to students' lives (Dolan, 2011). The values and motivations driving adjunct faculty differ from those of full-time faculty (Dolan, 2011). While some adjuncts are drawn to the prospect of sharing their expertise and industry insights, others are motivated by the fulfillment of guiding the next generation of professionals and find great satisfaction in their work (Hoyt, 2012; Smith, 2019). It is common for adjunct faculty to be motivated by intrinsic factors in teaching, and many indicate that flexibility, joy, and personal satisfaction are key motivations, resulting in a high level of loyalty to teaching (Butters & Gann, 2022; Green, 2007; Hoyt, 2012). The flexible nature of adjunct roles also attracts those who seek to maintain a connection to academia while pursuing their primary careers. Despite potential challenges related to workload and compensation, adjuncts' intrinsic motivation to impart knowledge and shape young minds continues to drive their commitment to teaching (Smith, 2019). One adjunct demonstrated their passion and reason for teaching, saying,

“Though my labor may be contingent, my devotion to my students is not’ (Layou et al., 2022, p. 144).

Perceptions of Adjuncts

Numerous discussions about adjunct faculty have taken place within this literature review and across a vast body of scholarly research beyond this study, all of which shape perceptions of adjunct faculty and their role in higher education. Beyond the identity that adjunct faculty have helped define for themselves is the identity that the literature and voices around higher education have also discussed. There are voices across the literature and individuals from higher education institutions who have raised concerns about adjunct faculty and their potential impact on student outcomes, particularly in comparisons between adjunct and full-time faculty (Masri, 2018; Mueller et al., 2013; Ran & Sanders, 2020; Wallin, 2007; Yeager-Okosi et al., 2024).

Potential Impact on Student Outcomes

There is a recurring debate about the relative effectiveness and impact of adjunct faculty versus traditional full-time faculty on student outcomes. The term “student outcomes” in this discussion refers to a general concept encompassing student grades, graduation rates, transfer rates, and enrollment persistence (Masri, 2018; Mueller et al., 2013; Ran & Sanders, 2020; Wallin, 2007). This review presents only a selection of nuanced iterations; readers should consult the individual studies for a more in-depth understanding of how each unique case is examined. While many studies treat student grades as a distinguishing variable between adjunct and full-time faculty, this review emphasizes broader educational outcomes.

Throughout the literature, there is inconclusive evidence regarding the actual impact of adjunct faculty on students' academic outcomes, particularly in comparison to full-time faculty (Masri, 2018). Some literature suggests that adjunct faculty may be negatively impacting student outcomes (Ehrenberg & Zhang, 2005; Juszkiewicz, 2016; Kezar et al., 2014; Mueller et al., 2013; Ran & Sanders, 2018; Ran & Xu, 2019). Some literature suggests that students in courses taught by adjuncts are less likely than their peers to return as sophomores or register for subsequent classes in their academic sequence (Eagan & Jaeger, 2008; Ran & Sanders, 2020). Kezar et al. (2014) found that the more classes students take from adjuncts, the lower their chances of reaching commencement and completing their degrees. Again, some voices have found impacts on student outcomes.

Conversely, in other literature, some have found that adjunct faculty do not negatively impact student outcomes (Hoffmann & Oreopoulos, 2009; Masri, 2018; Meixner et al., 2010; Wallin, 2007); while others investigate additional variables that may impact the adjunct faculty's ability to properly support and educate their students (Bettinger & Long, 2010; Mueller et al., 2013; Ran & Sanders, 2020). Some additional variables explored include understanding how adjunct faculty provide tutoring and academic advising to students in developmental courses (Mueller et al., 2013; Ran & Sanders, 2020). When discussing the implications of providing advising, Ran and Sanders (2020) raise additional concerns that adjunct faculty feel isolated and have little support. They also indicate that adjuncts typically teach academically vulnerable students and have courses in the evenings and weekends when few support offices are open and available (Green, 2007; Ran & Sanders, 2020). Ran and Sanders (2020) discuss solutions

for addressing many considerations detailed throughout their work. Many of the solutions presented focus on providing better support, including involving adjunct faculty in administrative discussions, increasing access to meeting spaces and office availability, and enhancing professional development opportunities (Bettinger & Long, 2010; Ran & Sanders, 2020).

Support & Retention

Creating a supportive environment for adjunct faculty is crucial for their professional growth and the overall quality of education. Providing support and resources is also a means of investing in adjunct faculty, in the hope of retaining them (Wallin, 2007). Many adjunct faculty find joy in teaching and return each year because they enjoy sharing their expertise and professional knowledge with students (Butters & Gann, 2022; Layou et al., 2022). Adjunct faculty want support from their institutions to be better prepared for their students, better informed on institutional materials, and provided with better administrative and technical support (Layou et al., 2022). Providing support and encouragement further reinforces institutional commitment to their work and importance within higher education. Many examples of this type of support exist, far more than can be captured in this review. Some key takeaways from the literature include an emphasis on improving communication, providing professional development opportunities, fostering an inclusive faculty environment, implementing mentoring programs, and revising institutional policies to support these efforts.

Improve Communication

The most common theme when discussing ways to improve support for adjunct faculty was the need to enhance communication. With many adjunct faculty feeling

isolated and having limited guidance on their role, improving communication is an easy first step to bridging the gap and building relationships (Burleigh et al., 2021; Butters & Gann, 2022; Green, 2007; Layou et al., 2022; Meixner et al., 2010; Mueller et al., 2013; Wallin, 2007). In this regard, communication is a broad term that encompasses various ways institutions can enhance how adjunct faculty receive important information. Improving communication goes beyond just sending emails and posting announcements on a listserv. However, creating a targeted email distribution list that details events and opportunities specifically for adjunct faculty is an action that would highlight the commitment to improving communication (Meixner et al., 2010). Some of the essential items available to adjuncts include detailed overviews of institutional resources (for both adjuncts and their students), points of contact, an overview of their course and how it fits into the broader program or sequence of courses, ensure adjuncts are included in campus-wide communications, in particular those related to strategic initiatives, and significant faculty events (orientations, training, workshops) (Burleigh et al., 2021; Butters & Gann, 2022; Green, 2007; Layou et al., 2022; Meixner et al., 2010; Mueller et al., 2013; Wallin, 2007).

Professional Development Opportunities

Like much of this review, providing professional development opportunities to adjunct faculty is crucial for enhancing their support and teaching. The resources and professional development opportunities made available to adjunct faculty must meet the needs and expectations of these faculty members (Dolan, 2011). Additional professional development is something that adjunct faculty have long requested. It is a logical first step to meeting their needs, which helps improve their teaching and learning (Danaei,

2019b). It is also important that the resources shared in those gatherings have balanced representation and inclusion of technology, content, and pedagogy (TPACK) (Mishra & Koehler, 2006). Scholars have written extensively about professional development for adjunct faculty, including its importance, delivery modalities, and implementation details. Nevertheless, this section helps round out the enhancements and support that should and could be available.

Mentoring Programs

Contemporary higher education increasingly recognizes the critical importance of mentoring programs for adjunct faculty. The unique challenges that adjuncts face in integrating into the academic community present an opportunity for introducing mentoring programs. These programs can be tailored to the specific needs of adjunct faculty and serve as a crucial support mechanism. There must be clear expectations and guidance for adjunct faculty when mentoring programs are established (Danaei, 2019a). While faculty are supportive of the concept, without careful planning and execution, adjunct faculty may be unaware of the programs or uncertain about their goals (Danaei, 2019a). When executed correctly, such programs provide a structured framework for nurturing professional growth, enhancing teaching skills, and fostering a sense of belonging within the institution (Danaei, 2019a, 2019b; Layou et al., 2022; Parker et al., 2018; Wallin, 2007).

Moreover, mentoring programs can improve teaching and learning outcomes, providing a platform for sharing pedagogical best practices and innovative instructional strategies (Layou et al., 2022; Wallin, 2007). These programs not only empower adjunct faculty to excel in their roles, but also promote the retention of highly qualified educators,

thereby enhancing the institution's educational quality and reputation (Danaei, 2019a, 2019b; Layou et al., 2022; Parker et al., 2018; Wallin, 2007). Mentoring programs can reinforce the institution's commitment to supporting and fostering a culture of academic excellence, faculty development, and inclusivity, ultimately benefiting both educators and their student body.

Foster an Inclusive Faculty Body

The literature details that adjunct faculty feel like outsiders and are isolated within their institutions (Ashton, 2012; Fedock et al., 2019; Hofman et al., 2024; Jolley et al., 2014; Layou et al., 2022; Mueller et al., 2013). To help address these concerns and feelings of isolation, institutions should strive to foster an inclusive faculty body (Ashton, 2012; Hofman et al., 2024; Layou et al., 2022; Wallin, 2007). This means creating an environment where adjunct faculty feel like they are part of the larger community and welcome. While numerous activities and events are available, the adjunct faculty is still responsible for taking ownership of this initiative. Adjunct faculty will be able to learn about the institution's priorities and strategic plans, serve on committees, meet other adjuncts or full-time faculty, have a clearer vision of their role as an instructor, the importance of their course(s), and understand the overall goals for their programs (Butters & Gann, 2022; Layou et al., 2022; Meixner et al., 2010; Mueller et al., 2013; Wallin, 2007). There are numerous other benefits to fostering an inclusive faculty. However, adjunct faculty must feel empowered to expand their network and skills through curated and intentional opportunities. For an inclusive faculty body to succeed, all parties must be aligned and willing to engage and contribute to the process.

Fostering an inclusive faculty body will also require the coordination and cooperation of full-time faculty and administrators (Layou et al., 2022). Full-time faculty will need to put themselves in a position where they support the roles and ideas of adjunct faculty. This is not to say that all full-time faculty, or even a majority, harbor animosity toward adjunct faculty. However, the literature has detailed the perceptions that adjunct faculty have communicated regarding their previous relationships with full-time faculty. Full-time faculty can be supportive by serving as advocates for adjunct faculty, nominating them for awards, recommending them for committees, or assuming a mentor role (Layou et al., 2022; Meixner et al., 2010; Mueller et al., 2013; Wallin, 2007).

The final component of an inclusive faculty body is the administration. Their role will focus on communication with all faculty with a solid commitment to balance and equity. It will be imperative that representatives of the administration actively seek opportunities for adjuncts to serve on committee roles, create and provide orientation programming, look for funding to support professional development through conferences and travel, treat adjunct faculty as equal and part of the team, and recognize and appreciate the diversity that adjuncts bring to an organization (Layou et al., 2022; Meixner et al., 2010; Mueller et al., 2013; Wallin, 2007). All parties involved in an inclusive faculty body must be fully committed and supportive of everyone for the community to succeed.

Institutional Policies

Improving the experience for adjunct faculty will require institutions to commit to revisiting and potentially modifying existing policies. Some policies may require financial investments, such as increasing compensation, providing a designated office

space or meeting area, or instructional resources (Danaei, 2019a; Jolley et al., 2014). Compensation is one of the main areas where adjunct faculty's commitment and hard work should be recognized and rewarded. Institutions typically rely on adjunct faculty to reduce costs, choosing to offer courses without hiring additional full-time faculty whose salaries and benefits require significant financial investment. Adjunct faculty typically receive zero benefits beyond their salaries for teaching a course. The average adjunct is paid $3,000 for each course they teach, while approximately 60% receive less than that (Yakoboski, 2018). Providing a physical space for students to meet is another improvement. Adjunct faculty have indicated that not having a designated meeting space with students has impacted their feeling of belonging (Butters & Gann, 2022; Jolley et al., 2014; Meixner et al., 2010; Wallin, 2007). While this may require some financial investment to repurpose an old storage room or add some additional desks to a space, it will be meaningful to the adjuncts who can benefit from having their own workspace (Butters & Gann, 2022; Jolley et al., 2014; Meixner et al., 2010; Wallin, 2007). While it is not a formal institutional policy, it is essential to ensure that adjunct faculty have access to, and are aware of, instructional resources and materials, such as pens, highlighters, printers, and other necessary items (Jolley et al., 2014). These resources are likely already available to full-time faculty. However, accommodations or additional purchases may be necessary to ensure that adjunct faculty can access resources at any time, including evenings or weekends (Butters & Gann, 2022; Danaei, 2019b; Jolley et al., 2014; Layou et al., 2022; Wallin, 2007). Not all policies must be financially driven; some can focus on equity by preserving grant-related opportunities, allowing adjuncts to apply for unused travel funds, or guaranteeing committee roles specifically for adjuncts

(Danaei, 2019b; Layou et al., 2022). While providing medical benefits to adjuncts may not be an option for many institutions, other low- or cost-neutral options for university benefits could be considered (Danaei, 2019b). Other campus-related benefits could be considered, such as providing tickets to sporting events or performances on campus, access to the university's gym facilities, parking facilities, or even the campus library (Green, 2007; Wallin, 2007).

Changing policies can reflect an institution's commitment to adjuncts, and with renewed commitment, can bolster job satisfaction and the loyalty of adjuncts toward their institutions (Hoyt, 2012). Ultimately, institutions must reassess their policies and seek ways to articulate change and support for adjuncts that foster and encourage them to invest their time, energy, and passion in their roles (Mueller et al., 2013). The more that institutions are willing to invest in their adjuncts, the more they will, in a perfect world, promote and establish highly qualified educators who will enhance the educational experience for students, improve the institution's reputation, and better serve the community.

Revisiting Guiding Questions

A set of guiding questions presented at the start of the chapter shaped this review. These questions directed the literature analysis and established a clear framework for the answers sought. Each question contributed to building a foundation for the refined framework that this study will apply. Before introducing the new framework, the review will revisit each question to connect the literature and demonstrate how it informs the direction of this study.

Question 1

1. Has the Technological Pedagogical Content Knowledge (TPACK) framework been utilized to inform how professional development has been developed for higher education?

The literature shows that researchers have used the TPACK framework to inform and support the development and delivery of professional development in higher education. The review above discusses multiple facets of the TPACK framework and its broader application, including the timing of its use, how researchers applied it, and the various adaptations of the model. Scholars explore TPACK through proactive, active, and retroactive applications, each carrying implications for how the framework shaped the corresponding study. These diverse applications highlight the framework's versatility and its capacity to support professional development at multiple stages. Three distinct themes emerge from the literature: the use of TPACK as a knowledge base, as a curriculum guide, and as an assessment tool. Researchers have consistently drawn on the framework to answer the guiding question and shape the structure of professional development programs in higher education. However, most of this work focuses on full-time faculty and students in teacher education programs, with minimal attention given to adjunct faculty.

Question 2

1. What adjunct faculty populations have been explored throughout scholarly research?
    a. Does using slightly modified search terminology/criteria change what is shown?

b. Have subpopulations of faculty been addressed within the literature?

This question is more challenging to address as there is no clear definition of the adjunct faculty population throughout the literature. Despite the lack of a proper definition, many different titles present themselves throughout the literature, such as temporary, part-time, contingent, non-tenure track, freelancer, aspiring academic, professors of practice, career-enders, non-permanent, or sessional (Anderson, 2007; Etzkowitz & Dzisah, 2007; Mandernach et al., 2015; Ramsay & Brua, 2017; Wallin, 2004). As noted, other populations sometimes grouped with adjunct faculty are teaching and graduate assistants (Meixner et al., 2010). They are not necessarily adjunct faculty, but they serve in a similar role, and it is important to note them in this review.

A quick search addressed each sub-question using the search term "*adjunct faculty"*, applying the same search criteria and time frames. The search identified 4,224 results (See Appendix A). An expanded search utilized all the alternative titles for adjuncts identified in this review, which include *temporary faculty*, *part-time faculty, contingent faculty, non-tenure-track faculty, freelancer faculty, aspiring academics, professors of practice, career-enders, non-permanent faculty, and sessional faculty*. Note that I did not use the term *adjunct faculty* in this expanded search in an attempt to identify other terminology used to define adjunct faculty. Using the expanded search, I found 11,246 results. Adding the term "adjunct faculty" to the expanded search yielded 14,123 results. All of this information together helps answer the two sub-questions: yes, slightly modifying the search terms does change the results, as it expands the results from 4,224 to 11,246. Secondly, this answers the question of whether subpopulations of faculty are present within the literature.

Question 3

1. Has professional development been explored with adjunct faculty without a TPACK framework?

The modified search terminology and the identified constructs (See Appendix A) yielded 182,983 results when searching for professional development since 2006 and 67,872 results from 2018 to the present. When using the search term combination of "Adjunct Faculty" and "Professional Development," there were 4,963 results when using 2006 to present and 1,665 results when using 2018 to present. The search results from the combination of "Adjunct Faculty" and "Professional Development" served as an essential query for the literature for this review. The literature and research detail some of the difficulties with professional development, including different types and modalities to consider, an emphasis on collaboration, the need to build community among participants, and a focus on emergency online learning. These elements combine to paint a broad picture of professional development and the essential focus areas for supporting professional adjunct faculty. To answer this guiding question, yes, professional development has been explored without a TPACK framework, and the results have provided a robust overview of professional development.

New TPACK Framework

The guiding questions for this literature review helped pave the way for exploring the literature and understanding how adjunct faculty, the TPACK framework, and professional development come together. This literature review, along with an in-depth examination of each construct, has highlighted the need for using a modified TPACK

framework to support this study. Each construct has yielded information that will inform this new TPACK framework.

TPACK+XK Framework

The TPACK framework provides a solid foundation for this study. It consists of three equally weighted components—technological, pedagogical, and content knowledge—framed together to support effective teaching and learning. Although the original TPACK model includes a contextual layer that surrounds the framework, it gives limited attention to contextual knowledge. To address this gap, Mishra (2019) introduced a revised TPACK framework (Figure 4), formally defining contextual factors as a distinct knowledge domain and renaming it contextual knowledge. The effort to create an acronym for contextual knowledge presents a challenge because CK already represents content knowledge. To distinguish it, the emphasis was placed on the X in "conteXtual," making the new "conteXtual" knowledge acronym XK. The X is uniquely appropriate as an X usually denotes a variable akin to the wide range of contextual characteristics (Mishra, 2019). Mishra (2019), when discussing formalizing contextual knowledge, says, "This implies that contextual knowledge is something we (as teacher educators) can act on, change, and help teachers develop" (p. 76). This study employs the revised TPACK framework, with its emphasis on contextual knowledge, to guide its design and analysis. Furthermore, this study will use the name TPACK+XK to reiterate the inclusion of XK.

The TPACK+XK framework will maintain the original TPACK components while also equally emphasizing the inclusion of contextual knowledge. The TPACK-ConK framework laid some of the groundwork for this new framework. However, the context knowledge, ConK, focus for the framework was far too nuanced and sought to

balance nine areas: preparation and design, teaching and engagement, availability and access to technology, institutional support, sector legitimacy, discipline, role, epistemology, and ontology. While those areas are all important, the level of detail required for this study is not necessary.

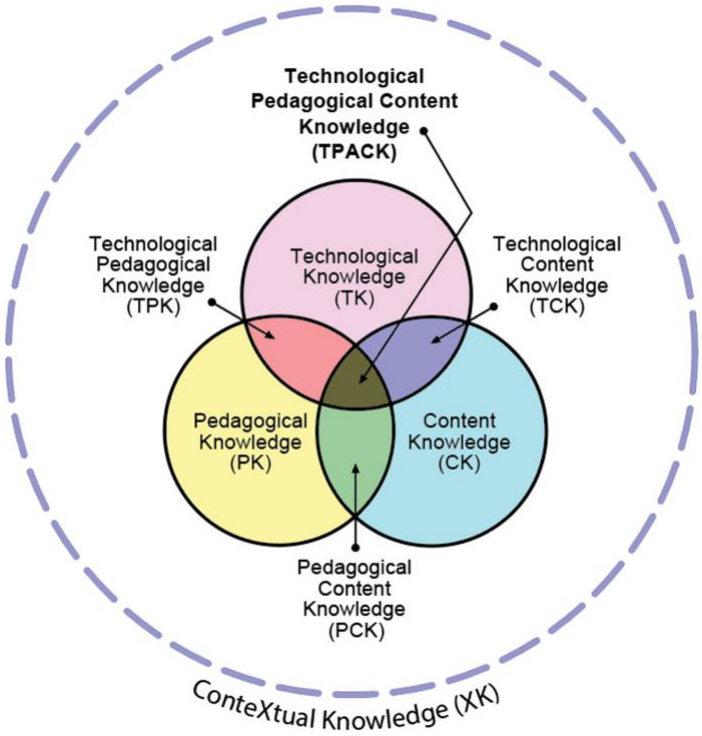
The +XK portion of this framework broadly focuses on exploring and understanding general contextual factors. While not an exhaustive list, some contextual factors to explore include adjunct faculty backgrounds, student backgrounds, administrative and institutional policies, and personal backgrounds. These contextual elements impact an educator's teaching and learning experience just as much as their technological, pedagogical, and content knowledge. Understanding contextual factors can help paint a comprehensive picture of professional adjunct faculty and identify the most effective ways to develop and deliver support.

This new framework ensures equal exploration of contextual factors alongside the core TPACK components. While the visual representation of this TPACK+XK framework largely resembles the regular framework (See Appendix B), the main alteration is the change in nomenclature. The main knowledge components and terminology were still utilized in the study. Technological, pedagogical, content, and contextual knowledge were the primary knowledge components used. The subcomponents of the TPACK framework, including technological pedagogical knowledge, technological content knowledge, pedagogical content knowledge, and technological pedagogical content knowledge, were still discussed as part of the study but were not a primary area of focus. When analyzing the interview data, the four main knowledge components served as the core conceptual framework and a priori codes for

this study. As a result, the study delves deeply into each of the knowledge components individually, focusing less on how they overlap or do not overlap.

Figure 4

Revised Version of the TPACK framework



Note: Used with permission. From Considering Contextual Knowledge: The TPACK Diagram Gets an Upgrade, Punya Mishra, Journal of Digital Learning in Teacher Education, ©2019. Reprinted by permission of Informa UK Limited, trading as Taylor & Francis Group, https://www.tandfonline.com

Chapter 3: Methods

Constructivism is a learning theory that posits learners build upon their existing foundation to construct new knowledge (Amineh & Asl, 2015). When adjunct faculty members are hired, they become the "teachers" and assume the role when they enter a classroom. In that role as a "teacher," there are skills and knowledge that can enhance their experience as an adjunct faculty member. According to constructivist learning theory, adjunct faculty must be given opportunities to experience and construct their understanding to gain the skills and knowledge necessary to enhance their teaching. This study will explore the experiences and opportunities through which professional adjunct faculty have constructed their knowledge and understanding of being an educator and developed their teaching and learning skills. The TPACK+XK framework will investigate how professional adjunct faculty have been introduced to and experienced technology, pedagogy, content knowledge, and contextual factors along their educational path.

Statement of the Problem

The role of professional adjunct faculty in higher education is undeniably important. As the world shifts toward increased online teaching and learning, and budget constraints persist, their importance continues to grow. According to the literature, adjunct faculty members do more with less, are paid poorly, receive limited preparation time, lack employment stability, and receive minimal support compared to their full-time counterparts (Flaherty, 2020; Freeman, 2015; Morales, 2020; Nica, 2018). Despite these challenges, there is a demand for professional adjunct faculty to teach. As a result, institutions must possess the necessary knowledge, insights, resources, and support

systems to ensure the success of professional adjunct faculty. Across the board, adjunct faculty need additional support and have explicitly requested it (Dolan, 2011). Moreover, they may feel excluded from university support systems, leading to isolation and inadequate resources (Al-Naabi et al., 2021; Horan & Kim, 2020; Ibrahim, 2020; Tucker, 2022). Many factors challenge the success of professional adjunct faculty, making preparation and available support critical.

As higher education experiences transformative trends, such as the expansion of online learning, the emergence of the digital divide, and the adoption of hybrid teaching models, the distinct pedagogical and technological skills necessary for adjunct faculty to succeed are also evolving. This shifting landscape necessitated a closer examination of the preparation and support provided to adjunct faculty, considering their unique challenges and responsibilities. This study examines the potential gap between the skills and knowledge of adjunct faculty and the demands of the evolving higher education landscape, with a focus on the sub-population of professional adjunct faculty who bring real-world expertise to the classroom.

Purpose

This study examines the teaching and learning experiences of professional adjunct faculty within the evolving landscape of higher education. As academia increasingly adopts online education, it is crucial to understand the preparedness and needs of adjunct faculty, who often require additional pedagogical knowledge and experience (Belt & Lowenthal, 2019; Powell, 2015). By exploring how professional adjunct faculty integrate and experience pedagogy and technology in their teaching, this study aims to identify

areas where additional support and preparation may be beneficial or necessary. This study also provides data from first-hand experiences of professional adjunct faculty.

Professional adjunct faculty play a critical role in preparing students for their careers, particularly in professional studies programs; understanding their backgrounds and current skills is essential. This study seeks to bridge the gap between where professional adjunct faculty begin their teaching careers and where they need to be to meet the educational needs of their current and future students. The findings will inform the development of tailored faculty development resources, including workshops, training guides, and revised institutional policies that benefit adjunct faculty, as well as improved communication. Ultimately, these improvements will help ensure that all adjunct faculty are better equipped to provide meaningful educational experiences, particularly as students seek flexible schedules and skill-based learning opportunities (Brownlee, 2023).

Research Questions

Professional adjunct faculty serve in a critical capacity within higher education. Their unique position allows them to share their professional expertise and impart essential knowledge to their students. However, they typically enter their classrooms with limited pedagogical knowledge beyond their own experiences as students (Belt & Lowenthal, 2019; Cottom et al., 2018; Ramsay & Brua, 2017). This study aims to gain a deeper understanding of the teaching and learning experiences of professional adjunct faculty and how their technological, pedagogical, and content knowledge, as well as contextual factors, have influenced their educational background. The study uses the TPACK+XK framework as a foundation to explore their experiences and understanding. In an educational world shaped by technology, this study aims to provide a deeper

understanding of how professional adjunct faculty meet the needs of their students, how institutions address the needs of their adjunct faculty, and how students' contextual factors influence the knowledge and skills required of professional adjunct faculty. The following research questions will guide the foundation of this study:

1. How do professional adjunct faculty members experience integrating technology, pedagogy, content knowledge (TPACK), and contextual knowledge (XK) within the experience of their teaching and learning?
2. What are the professional development needs and challenges that professional adjunct faculty face when incorporating technology, pedagogy, content, and contextual knowledge in their teaching within the proposed TPACK and contextual knowledge (XK) framework?

Research Design

The research design is grounded in the principles of a qualitative research approach, specifically adopting the framework of a basic interpretive inquiry design (Creswell, 2014; Schwartz-Shea & Yanow, 2012; Smith, 1992). The primary aim of this study is to understand the experiences of professional adjunct faculty members in integrating technology, pedagogy, content, and contextual knowledge into their teaching and learning practices. The basic interpretive inquiry design aligns with the study's goal of exploring the meaning and significance that professional adjunct faculty attribute to their teaching and learning practices within the TPACK+XK framework. This design choice for this study emphasizes the importance of context, subjectivity, and the uniqueness of participants' voices, all of which directly contribute to the foundations of a solid qualitative study with an interpretive lens.

Basic Interpretive Inquiry Design

This study employs a basic interpretive inquiry approach, enabling a deeper examination of the real-world context and experiences of professional adjunct faculty (Creswell, 2014; Schwartz-Shea & Yanow, 2012; Smith, 1992). A few primary advantages of using a basic interpretive inquiry include an opportunity for a rich interpretation of a complex phenomenon (Creswell, 2014; Schwartz-Shea & Yanow, 2012; Smith, 1992). This study thoroughly explores and seeks to interpret the intricacies between technology, pedagogy, content knowledge, and other contextual factors within the broader context of being a professional adjunct faculty member.

Another strong rationale for using a basic interpretive inquiry is the strong alignment with the constructivist perspective. The constructivist perspective emphasizes the role of meaning-making, social interactions, and contextual factors in the learning and development of knowledge (Amineh & Asl, 2015). With the range of influences and opportunities for knowledge acquisition, professional adjunct faculty enter their roles as educators with extensive real-world experiences. Allowing them to explore their experiences and understand how they construct TPACK within their teaching and learning environment. With an additional emphasis on context, a basic interpretive inquiry can help prioritize the exploration of contextual factors crucial to understanding the development of TPACK. It provides a nuanced perspective on how contextual factors shape TPACK while acknowledging the richness of the specific teaching context, the subject matter taught, and the diverse experiences of professional adjunct faculty. This design is also well-suited for inductive reasoning, allowing the identification of emergent themes, patterns, and concepts related to TPACK development (Creswell, 2014).

Lastly, a basic interpretive inquiry can inform practical strategies, institutional policies, and professional development initiatives (Creswell, 2014; Schwartz-Shea & Yanow, 2012; Smith, 1992). By closely examining the experiences and development of TPACK in professional adjunct faculty, this research provides institutions with valuable insights into the support and resources that could be beneficial in navigating the complexities of teaching and learning in higher education.

Other Research Designs

Other research designs explored by Maxwell (2013) and Creswell (2014), considered for this study, included case studies, ethnography, grounded theory, and a phenomenological design. Each was carefully considered after completing the literature review; however, ultimately, a basic interpretive inquiry design best serves this study. A case study design was briefly considered but was not selected because it focuses on exploring individual instances of a phenomenon (Creswell, 2014). A case study design would be beneficial in a study focusing on a particular institution that has implemented a unique or noteworthy approach to onboarding and supporting the development of TPACK among professional adjunct faculty. An ethnographic design was the easiest option to rule out, given its immersive nature, where the researcher becomes an active participant within the group being explored (Creswell, 2014). Using an ethnographic method would be helpful if the study were to explore a higher education administration known for its exemplary support of professional adjunct faculty. A grounded theory design is not a good fit because no theory about professional adjunct faculty needs to be formulated (Creswell, 2014). A grounded theory study would involve a data-driven exploration of the motivations and experiences that lead individuals with established

careers outside of academia to pursue adjunct teaching roles. The final method strongly considered for this study was a phenomenological design. The original vision of this study was to use a phenomenological design that would explore the lived experiences of professional adjunct faculty. The lived experiences would identify gaps and highlight where additional support is needed. Ultimately, the design of this study required more insights and exploration beyond the lived experiences of professional adjunct faculty.

This study still employs aspects of a phenomenological design by exploring the lived experiences of professional adjunct faculty. Guided by the literature and the research questions, shifting this study from a phenomenological design to a basic interpretive inquiry made sense. It provided a solid foundation for exploring the teaching and learning experiences of the participants and developing a firm conclusion on how to support the professional adjunct faculty best moving forward.

Participant Selection

Selection Criteria

This study employed purposeful and convenience sampling to recruit professional adjunct faculty members currently employed in higher education, who represent a diverse background of academic disciplines, teaching experiences, and collegiate levels (Seidman, 2019). Additionally, participants were sought based on their demonstrated use of technology in teaching; this allowed for the inclusion of technologically proficient individuals and those who could be more proficient but demonstrate a willingness to use technology. The study aimed to include professional adjunct faculty members from various institutional levels, such as undergraduate and graduate-level educators working at universities and colleges, thereby capturing diverse experiences related to integrating

technology, pedagogy, content, and contextual knowledge (TPACK+XK). Despite having a purposeful design for the study, there was an element of convenience sampling, as participants had to decide whether to participate based on the criteria and self-select if the study fit into their schedule (Seidman, 2019).

The inclusion criteria for the study specified that participants must meet the definition of a professional adjunct faculty member, which requires full-time employment outside of their teaching responsibilities. Being an adjunct faculty member cannot be the primary method of employment. The participant must be employed or have expertise in the field in which their course is academically aligned. Participants' employment was verified through discussions with each participant. Participants also had to be employed as professional adjunct faculty at an accredited higher education institution and serve as the instructor of record in a for-credit course listed in the university's course offerings. Another selection criterion was the requirement that the professional adjunct faculty must have taught at least three courses within the last five years. This course number requirement ensures that a participant has completed multiple course cycles, meaning they have supported a course from its launch through the submission of course grades and the completion of course evaluations. The courses taught do not have to be the same; they can be three unique courses, but the number of three courses ensures a valuable range of teaching experience. The final selection criterion was the willingness to participate in interviews over Zoom video conferencing software. The participants agreed to record the interviews after receiving a reminder that all shared information would remain confidential and that I would follow strict protocols to protect their identities and stories. Because Zoom is widely used and accessible, I conducted the interviews virtually to

facilitate recording, ensure preservation, and provide flexibility for participants' schedules and mental well-being.

There were no exclusion criteria for gender, salary, age, minimum or maximum years of experience (beyond teaching at least three courses within the last five years), formal titles (such as Dr., Ph.D., Ed.D., M.Ed.), technological skills, or other attributes not listed. Although this study thoroughly explored online learning, I did not exclude professional adjunct faculty who had not yet taught online. Their experience with technology, pedagogy, content, and contextual knowledge was equally insightful to the study. The purposeful selection criteria specifically sought professional adjunct faculty in higher education institutions who have taught at least three for-credit courses in the last five years.

Recruitment Process

Participants for this study were recruited from one institution of higher education. The institution is a public online university affiliated with a large, public land-grant research university in the southwestern United States. The institution offers flexible degree programs, encompassing more than 50 degree options, including associate, bachelor's, master's, and doctoral degrees. The institution also delivers educational opportunities to predominantly adult learners, with more than 87% of the student population aged 25 or older. As an online institution, the student body represents a diverse background (18% Hispanic, 30% Black or African American, 41% White) of students from all parts of the United States. The university operates primarily as an open-enrollment institution with approximately 23,000 students. The faculty population is represented by approximately 2,000 faculty members, with 95% being associate faculty,

meaning they are not full-time faculty. Approximately 60% of the faculty population is female, while underrepresented groups comprise more than 27%.

After consulting with the institution, I completed an additional internal IRB approval process. Following approval, I distributed a recruitment email to approximately 2,000 faculty members. The email included the study's purpose, inclusion criteria, informed consent policy, researcher contact information, and IRB number. It also included a Calendly link, allowing prospective participants to provide their information and schedule an introductory meeting.

Each 15-minute introductory meeting included a discussion of the informed consent form, a review of the study's purpose and inclusion criteria, and confirmation from the participant of their interest and eligibility. I concluded each meeting by expressing appreciation for the participant's involvement and reaffirming a commitment to confidentiality. After the meeting, I sent a follow-up email containing a new Calendly link, enabling confirmed participants to schedule their first interview. Upon completion of the first interview, I followed the same process and provided a final Calendly link for scheduling the second interview.

The recruitment process yielded 21 participants who signed up for the study and were assigned pseudonyms. Four of the 21 individuals who signed up for the introductory meeting completed it but did not proceed with the study. The remaining 17 individuals completed all study elements, including the introductory meeting and the subsequent two interviews, each lasting 60 to 90 minutes.

Implications of the Study

This study serves several critical functions within higher education, but, like many qualitative studies, it also comes with some potential risks. This study explored the experiences and understandings of professional adjunct faculty. In sharing those experiences and understandings, the participants may share sensitive information that could reflect poorly on them or their institution. Maintaining the strict confidentiality of participants was critical, but it is possible that a reader could deduce a participant's identity or the institution. Although steps were taken to protect participants' identities, the nature of qualitative research introduces a level of inherent risk. Every effort was made to anonymize the data, but participants may have been concerned about the potential consequences of being overly candid. Lastly, there were the emotional implications of participating. Discussing personal experiences, challenges, and successes may evoke some emotional responses. Participants may experience discomfort or stress when sharing about their professional journey. Participants were reminded of their ability to pause, walk away from, or end an interview if they felt uncomfortable.

There were other implications to consider for this study. First, exploring adjunct faculty and the subpopulation of professional adjunct faculty helps contribute to the literature by sharing their perspectives and stories. Adjunct faculty, in general, serve an important role, and revisiting a contemporary understanding of their needs, expectations, and experiences is always worthwhile. Additionally, this study helps promote the work of professional adjunct faculty, highlighting their strengths and the passion they bring to their teaching and learning.

The implications of this study also include the opportunity to enhance the quality of teaching and learning in numerous ways. Understanding how professional adjunct faculty experience and integrate TPACK+XK into their teaching can help inform the design and delivery of professional development and support resources. There is also the potential to improve student outcomes by focusing on the integration and support of professional adjunct faculty. When a faculty member is developing and improving their knowledge and expertise, then, by extension, the student experience and the opportunity for success can follow. Another implication of this study is the potential influence on policies and decision-making within higher education institutions. This study could impact their decisions on hiring, training, and providing adequate support for existing and future adjuncts. A final implication of this study lies beyond the purview of adjunct faculty, but rather in the application of constructivism and learning theories to explore the teaching and learning practices of adjunct faculty. This study adds depth to our understanding of professional adjunct faculty while examining the theoretical implications of their TPACK+XK and how they construct meaning. With little published on the subpopulation of professional adjunct faculty, this study serves as a step toward highlighting their roles and importance in higher education, as well as the vast expertise they collectively bring to the classroom.

Data of the Study

This study collected data from two primary sources: memoing and interviews (Creswell, 2014; Maxwell, 2013; Morgan, 2022; Seidman, 2019). The interviewing style was "in-depth, phenomenologically based interviewing" (Seidman, 2019, p. 14). The interviewing style combined life-history interviewing and in-depth, focused questioning

guided by “assumptions drawn from phenomenology” (Seidman, 2019, p. 14). The primary task of the interviewing style was to build upon participants’ stories and follow up with guiding questions that explored previous stories. Using open-ended questions allowed the initial interview protocol to guide each participant through the same framework, while still providing the opportunity for meaningful follow-up questions that probed deeper into their experiences.

In addition to semi-structured interviews, this study triangulated the data and themes collected through memoing and member checking. After each interview, I would take the time to write a memo of the interview, including my thoughts and reactions. Paired with the finalized transcripts, the memos were used for preliminary analysis. Each interview would undergo three rounds of the data analysis procedure, including cleaning the transcript, applying the a priori codes, and a read-through to identify emerging codes. Paired with my memoing, I used the analysis to identify questions or topics I would revisit during the second interview. Specifically, through this process, I identified two recurring topics that many adjuncts shared regarding their experiences with curriculum development and an institutional policy designed to provide leniency toward students’ grading and submissions. Those two topics emerged from my memoing, and analysis conducted between the two interviews. The two additional topics were included in the second interview, allowing members to verify my understanding of those topics and seek clarification from each participant.

Semi-Structured Interviews

Semi-structured interviews provided critical a strength for this study’s design. The first was the flexibility they provided. While the interview protocol provided a core list of

questions to ensure consistency, the flexibility allowed for deeper exploration, depending on a participant's shared experiences and perspectives. As Seidman (2019) notes, in interviews, one should "explore laughter" and "follow your hunches" (pp. 96-97). The design and use of semi-structured interviews enabled the exploration of laughter, moments of pause, and the inquiry process. I made a point to embrace the silence and explore the moments of laughter and pause. To embrace those moments, I provided ample opportunity for participants to respond to questions and complete their thoughts without interruption. Each of their insights reinforced the importance of the flexibility that semi-structured interviews provided.

Additionally, the ability to explore unforeseen areas is another vital attribute of the semi-structured interviews. Despite conducting a thorough literature review and interviews with other participants, there is always the possibility that a participant will steer a conversation into unplanned territory. This opportunity can provide new insights and themes that may have yet to be considered or explored. A final reason for using semi-structured interviews revolves around the comfort level of participants. Semi-structured interviews provide participants with some control over steering the discussion toward areas of interest and passion within the framework of the study. This increased flexibility can make participants feel more at ease during the interview, leading to more open and candid conversations, and thus providing a more comprehensive view of their experiences. The rich data collected through interviews provides each participant with a unique opportunity to share their experiences, challenges, and successes in integrating TPACK within their teaching and learning environments.

Interview Protocol

I crafted the interview protocol for this study (See Appendix C) using a range of resources. The first resource used was previous studies that explored the use of TPACK (Andzenge, 2018; Archambault & Crippen, 2009; Harris et al., 2010; Hofer et al., 2011; Koehler & Mishra, 2005; Schmidt et al., 2016). No studies sought to replicate the same results as this study; therefore, the previous examples were used as reference materials to support the development of my interview protocol. The second resource was a thorough evaluation of the original interview protocol draft. After completing the initial draft, a colleague, a recent doctoral graduate in a teacher education program who actively teaches master's-level research methods courses at a local institution, reviewed the protocol and provided feedback. The feedback focused on validating that the questions closely adhered to the TPACK framework, were not leading, and ensured that participants' responses would provide meaningful insights. Each interview protocol includes 11 questions, along with a few potential probing questions. The potential probe questions were available as optional follow-up questions.

The second interview protocol includes a purposefully designated section for follow-up and member-checking questions. These questions were a direct result of insights provided during the first interview. Following each of the initial interviews, I completed a read-through of the transcript. That read-through served as an opportunity to examine shared insights closely. During that time, I would make notes, memos, and record thoughts and feedback that I wanted to seek clarification on during the second interview. After reviewing my notes and memos, I would determine the member-checking questions and follow-ups in the second interview protocol. I repeated this after

each of the first interviews. Some questions emerged from the memoing and required member checking, which became recurring questions for the second interview.

TPACK Questions

I selected the interview questions related to the TPACK framework to address several key areas. The first set of questions in the protocol refers directly to the framework's critical knowledge components by exploring technology, pedagogy, content, and contextual knowledge (See Appendix C). Notes were added to the protocol to clarify terminology and definitions used within specific questions, such as how this study defines professional adjunct faculty and what is precisely meant by contextual knowledge. The second section of the protocol examined the TPACK framework by asking two questions that addressed the full scope of the framework as outlined in this study. Those two questions specifically asked participants to share how they view all the elements of the TPACK framework overlapping. Missing from the protocol were questions directly related to the overlapping mid-sections of the TPACK framework, such as Technology Pedagogical Knowledge, Pedagogical Content Knowledge, and Pedagogical Content Knowledge. While important, those framework sections and themes naturally emerged during the data analysis phase. The foundation of the interviews directly explored only the critical knowledge components and the central point of the TPACK framework.

Non-TPACK Questions

Outside of the direct questions related to the TPACK framework, the protocol also explored other aspects of the professional adjunct faculty's understanding and experiences. The first interview protocol inquired about participants' backgrounds and

teaching experience. Rather than diving directly into the TPACK framework, the first question asked about their role as professional adjunct faculty and their years of experience in this role. Those questions were intended to ease the participants into the interview and make them feel comfortable while exploring some of their foundational aspects as educators and professionals. The initial questions concluded by asking participants to share about their first class and how they got into that role. That question and subsequent follow-up questions enabled participants to reflect clearly on their background and the reasons for taking on the role of an educator.

Memoing

After each interview, I took the time to memo my reactions, reflections, insights, feelings, and general thoughts about the interview and the data I had collected (Maxwell, 2013). The memos aimed to capture my immediate impressions of the interview and the interviewee. The insights captured in my memos were helpful when reviewing the interview recording and processing the transcriptions. My memos helped inform some of the member-checking questions during the second semi-structured interview. I memoed after every interview to ensure a consistent flow of information and convey my continued reflections and insights throughout the interview protocol phase. After writing each memo, I saved it using the participant's pseudonym in the designated folder on the secure cloud-based Box account affiliated with my university.

Data Analysis

It was time to begin the analysis with the interviews transcribed, memos written, and all securely saved. Data for this study were coded using a priori codes (Stemler, 2001) and emergent codes (Maxwell, 2013); additionally, the MAXQDA

(https://www.maxqda.com/) data analysis software assisted with organization and data management. The data analysis for this study aimed to aggregate and synthesize as much data as possible into themes, targeting a range of five to seven (Creswell, 2013). This study employed the TPACK+XK framework, as discussed, which led to a priori codes directly related to the TPACK+XK framework. I used the a priori codes initially to help sort the first analysis batch during the preliminary read-through. Additional themes emerged during the preliminary analysis, second analysis read-through, and memoing.

One additional concept that was kept in mind throughout the analysis, as discussed by Smith (2017), is the idea of data pieces being viewed as "gems." Smith (2017) defined a "gem" as "a singular utterance made by a participant with great resonance across the case and corpus" (p. 303). He went on to explain a range of gems to look for, ranging from shining (obvious), suggestive (requiring some attention to pick up), and secrets (easily missed, requiring significant attention) (Smith, 2017). These gems were essential to identify when examining the data while adhering to the abovementioned protocol. One example of a gem that emerged was the mention of McDonald's, the fast-food restaurant, by multiple participants without being asked about the restaurant or specifically about pay or compensation. Chapter 4 will further detail that gem when discussing pay and compensation for professional adjunct faculty.

Data Coding and Categorization

This study employed two distinct coding styles for data analysis. The first was using a priori coding (Stemler, 2001). A priori coding employs a predetermined set of codes, also referred to as deductive coding (Stemler, 2011)—the a priori, or deductive, codes derived from the TPACK+XK framework established for this study. The

TPACK+XK framework translates into the following a priori codes: Technological Knowledge, Pedagogical Knowledge, Content Knowledge, Contextual Knowledge, and Technological Pedagogical Content and Contextual Knowledge (TPACK). The other knowledge components of the TPACK framework, which include Technological Pedagogical Knowledge, Pedagogical Content Knowledge, and Technological Content Knowledge, will be noted here but not included as the primary a priori codes. The definitions of these knowledge pieces of the TPACK framework have already been detailed (See Appendix B). Each definition helped provide the parameters as data was analyzed, and it was determined which form of knowledge, within the framework, made the most sense for the data.

The second coding style used was emergent coding (Maxwell, 2013). Emergent coding allows additional codes to be present as the data is carefully reviewed (Maxwell, 2013). Although I used two coding styles, the analysis's design effectively strengthened the final themes and codes explored and detailed. Using the a priori codes, initial buckets were created where stories, insights, and comments were sequestered into the essential pieces of the TPACK framework. Emergent codes presented during the second and third read-throughs of the participants' interviews. Combining the two coding styles, a priori and emergent, helped deliver meaningful conclusions for improving the support of professional adjunct faculty across higher education. The discussion of the resulting emergent codes is in the next chapter and I present further recommendations in Chapter 5.

Data Analysis Software

This study utilized the MAXQDA (https://www.maxqda.com/) data analysis software to facilitate the organization and analysis of the data. With its robust features for qualitative data analysis, MAXQDA enables the organization and systematic coding of interview transcripts, allowing for the identification of recurring themes, patterns, and nuanced insights. Additionally, MAXQDA's visualization tools and functions enhanced the interpretive process, supporting the emergence of meaningful interpretations and the development of themes from the qualitative data. Overall, MAXQDA streamlined and enhanced the depth of data analysis, contributing to a deeper understanding of the complex relationship between the different elements of the TPACK+XK framework and other emergent themes.

Procedures

Data Collection Timeline

I collected all the data for this study over eight weeks. The recruitment email was sent out, and the first introductory meeting was held two days later. The final interview was concluded 52 days after the recruitment email was distributed. There were delays in scheduling some of the interviews, as the data collection occurred during the summer months, and family vacations presented an obstacle for some participants. Overall, the data collection process went smoothly with only a few scheduling conflicts to navigate.

Participant Consent

This study used informed consent. The use of informed consent was not simply about a participant granting permission to include them in research; it is an understanding between me and the participant (Klykken, 2021). The consent form outlined my and

participant's roles and responsibilities towards one another throughout the research process. A copy of the consent form was shared with each participant at multiple points throughout the recruitment process, including in the initial recruitment email, when scheduling interviews, and reiterated at the start of both interviews. The participant could retain a copy and review the agreement at any point. Even with every participant receiving a copy as part of the scheduling process for each interview, a verbal consent agreement was re-established before each interview as part of the interview protocol. This additional layer reinforced the seriousness of consent and confidentiality in this study.

Semi-Structured Interviews

Semi-structured interviews loosely followed the strategies outlined by Seidman (2019) and were constructed using a two-interview protocol (See Appendix C). Seidman (2019) proposed using a three-interview approach, with each interview having a purpose; the first interview seeks to establish the participants' lived experiences (focused life history), while the second interview focuses on the present-day experiences within the phenomenon of the study (details of lived experience). The final interview asks participants to reflect on the experiences explored in the first two interviews (reflection on the meaning). This study employed a two-interview protocol, with each interview scheduled to last 90 minutes. The first interview established the participants' experiences within the field of higher education and how they have developed their understanding of teaching and learning with a focus on the TPACK+XK framework. The second interview asked participants to reflect on the experiences they shared during the first interview. It also allowed me to ask follow-up questions related to the first interview and inquire about

future-focused topics around the TPACK+XK framework. The second interview was scheduled to take place within two weeks of the initial interview. Seidman (2019) recommends scheduling interviews at intervals of 3 days to a week apart. While it would have been ideal to follow the recommendation closely, most of the interviews were completed within two weeks of each other; however, not all were able to follow that process. Because participants had busy schedules and I conducted interviews during the summer travel months, vacations occasionally created scheduling challenges. Still, I completed two interviews with each participant.

The 90-minute interview duration was based on the protocol framework outlined by Seidman (2019). Seidman (2019) says about requesting a 90-minute interview with someone, "Most participants with whom I have worked come very quickly to appreciate the 90 minutes. Rather than seemingly too long, it's long enough to make them feel they are being taken seriously" (p. 26). While I requested 90-minute interviews, I recognized that this was a relationship. To be lenient, if a participant wanted to be part of the study but could not accommodate the requested 90-minute interview, I reserved the right to make accommodations and adjust the time slot accordingly. In the end, only a few of the interviews ended up being shorter than 60 minutes, either due to meeting time constraints or because the interview ran its natural course. Ultimately, having data-rich interviews with passionate participants was the most critical aspect of this study. I included them intentionally to help generate robust data that would support the study's findings.

Data Recording and Transcription

Each interview protocol for this study was conducted virtually using Zoom, a video conferencing software. I recorded each interview, but only the audio was used. I

have an institutional account that allows me to host meetings for an extended period, so no time constraints or considerations needed to be made. Zoom allowed me to record each interview and utilize the auto-transcription feature to process the preliminary transcripts. After concluding each interview, an email was automatically generated and sent to my institutional account notifying me that the recording and transcript were available for download. Once available, I downloaded the transcript and performed a manual review. The original recording was listened to during the manual review, and the downloaded transcript was corrected accordingly. After updating the transcription, the finalized files were saved and uploaded to the secure Box storage folder, along with the audio recording of the interview. A backup copy of the transcript and audio file was also saved on an external USB drive to ensure a copy was preserved.

Data Analysis Procedures

Reading and reviewing transcribed interviews and memos required a slow and methodical process, focusing on attention to detail. I read through each data set four times. The first read-through took place during the initial transcription process, which largely focused on correcting the interview transcript for accuracy. Memoing occurred after each transcription, emphasizing any takeaways from the process. I did no formal coding during the first read-through. The second read-through was the application of the a priori codes. The a priori codes were applied to each interview using the TPACK+XK framework. Only the a priori codes were applied to the transcripts during this read-through. Each interview followed a similar structure, closely adhering to the interview protocol, so applying the a priori codes was reasonably straightforward.

The third and fourth read-throughs explored the interviews for richer data and began identifying the emergent codes. Identifying the emergent codes was a slower and more diligent process. During this stage, I closely read through the transcripts, highlighting and underlining essential words, phrases, and insights that stood out during the analysis. At this point, I had read through the interviews three times. The transcripts were transformed into underlined words and phrases that naturally emerged throughout the analysis. After concluding the third read-through, I reviewed the highlighted words and phrases, and some preliminary codes were identified and documented. During the fourth and final read-through, the text was closely examined, particularly the highlighted and underlined sections, through the lens of the preliminary codes that had emerged during the third read-through. The final codes began to take form, and their identification was established. Through this process, the a priori and emergent codes naturally worked together without directly influencing each other.

Trustworthiness and Validity

Ensuring that this process produced trustworthy and valid results was the priority throughout this study. Several areas of consideration were directly applied to help solidify the reputation of the data and results, including triangulation of data, member checking, peer debriefing, and reflexive journaling. The first area was data triangulation, which involved collecting diverse data sets through various methods (Maxwell, 2013). Data triangulation occurs when multiple data points collectively tell a completer and more holistic story about a particular person, place, or event (Maxwell, 2013). Each piece of data supported shared stories or information gleaned from reviewing participants' interviews (Maxwell, 2013). This study triangulated the data through the two semi-

structured interview protocols and member checking. Member checking helped systematically solicit participant feedback about the data and analyses drawn during the study (Maxwell, 2013). Maxwell (2013) said, “This is the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying your biases and misunderstandings of what you observed” (pp. 126-127).

While member checks helped solidify my understanding, the clarifications and insights shared by participants served as additional evidence rather than a correction of my understanding (Maxwell, 2013). The third area of consideration was peer debriefing, which assisted in the accuracy of the data (Creswell, 2014). Peer debriefing provided an opportunity to consult with one or more peers who had no direct interest in the study. The peer reviewer also asked questions about the study to ensure its conclusions resonate with the community and individuals other than myself (Creswell, 2014).

The final consideration for trustworthiness and validity was the use of reflexive journaling. Reflexive journaling enabled me to preserve a written record of my actions, decisions, and feelings while analyzing the data (Creswell, 2014; Olmos-Vega et al., 2023). I generated the written record through the entire interview process. It included thoughts and insights before every interview, meaningful notes during the interviews, reflexive notes after the interviews, and a series of entries as coding and analysis occurred. The reflexive journaling coexisted with the memos written throughout the interview and data analysis stages (Maxwell, 2013). Memos served as small tidbits of vital information to remember and helped support the direct interactions with the

participants (Maxwell, 2013). The reflexive journaling grounded me as the researcher throughout the process and as a resource to share during my debriefing with my peers.

Self as Researcher

As a researcher, it was impossible to separate oneself from the study. In my current role as the Director of Academic Programs in a college of professional studies, I oversee our team of faculty support specialists, instructional designers, and a multimedia producer. Before taking on this role, I was an instructional designer, developing online programs and courses within the same professional studies college. As Director and as an instructional designer, I have worked closely with professional adjunct faculty for over a decade. I have spent countless hours in meetings, on phone calls, facilitating workshops, proofreading syllabi, and doing hundreds of other tasks, while supporting nearly every aspect of the teaching and learning experience. One primary task within my roles was, and is, identifying, developing, and delivering professional development opportunities to professional adjunct faculty. I have conducted numerous needs analyses to determine the topics to cover, when the workshops should be offered, and in what format the faculty would prefer. I am deeply familiar with the professional adjunct faculty at my institution. I know that my familiarity with my institutions professional adjunct faculty may not be transferable or generalizable to other professional adjunct faculty across higher education. So, while I have experience in supporting adjunct faculty at my current institution, I recognize that the resources and personnel that I work with may not be available at other institutions. Lastly, my professional experiences have also enhanced my ability to analyze data, identify key themes and topics, and connect them to relevant literature and other trends.

Ethical Considerations

Several ethical considerations were taken into account when designing this study. The first was implied consent, which ensured that all participants were fully informed and committed to the study's design and implications for their participation. I provided clear guidance on the purpose, procedures, potential risks, and benefits of participating in the study, reiterating that their participation was voluntary and that they could withdraw at any time. The second and third considerations were maintaining strict confidentiality and anonymity for all participants. I used pseudonyms for all participants and adhered to strict guidelines on data storage and the protection of personal information. The participants' identities and responses were protected, to the best of my ability, to ensure they could not be traced back to them. A fourth consideration was the privacy of participants. I respected the privacy and space of all participants by ensuring they were comfortable with the study's design. I provided opportunities for conducting our interviews in a location and environment that was supportive and convenient for them. A final consideration was ensuring fair representation of the participants and accurately presenting and representing their perspectives and experiences to avoid biases.

Chapter 4: Results

This chapter discusses my analysis of a priori and emergent codes. Data pieces collected within this study include interviews and memoing. Chapter 4 presents my themes, while Chapter 5 discusses the implications of these themes. This chapter focuses on the a priori codes and other emergent codes from the interviews, seeking to answer the following research questions:

1. How do professional adjunct faculty members experience integrating technology, pedagogy, content knowledge (TPACK), and contextual knowledge (XK) within the experience of their teaching and learning?
2. What are the professional development needs and challenges that professional adjunct faculty face when incorporating technology, pedagogy, content, and contextual knowledge in their teaching within the proposed TPACK and contextual knowledge (XK) framework?

General Data Collection Methods

Over the course of eight weeks, I collected data from professional adjunct faculty members. I sent a recruitment email to approximately 2,000 associate faculty, outlining the study's recruitment criteria and including a Calendly link to schedule an introductory meeting. During this 15-minute meeting, I discussed the informed consent form, inclusion criteria, and study design with interested individuals. After the meeting, I sent a follow-up email with another Calendly link to those who agreed to participate, enabling them to schedule their first interview. I used the same scheduling process after the first interview to arrange the second.

Each participant completed two interviews, initially scheduled for 90 minutes each. Most interviews, however, lasted between 60 and 75 minutes. Ultimately, 17 individuals participated and completed both interviews, resulting in a total of 34 interviews.

I personally conducted all interviews and collected between 120 and 180 minutes of interview data per participant. After each session—including the introductory meetings—I wrote a detailed memo reflecting on my role as the interviewer and a subject matter expert working with adjunct faculty. In these memos, I captured questions, insights, experiences, and my reactions during the interviews.

Throughout the data collection period, I conducted two interviews with each adjunct faculty member. Each semi-structured interview followed a set of protocol questions (see Appendix C). I developed these protocols prior to the study's commencement, allowing for follow-up and tailored questions to be addressed. The second interview protocol included prompts that revisited responses from the first interview and incorporated insights from my memoing process.

Participants

This study focused on 17 professional adjunct faculty members working at the same higher education institution. Each participant was given a pseudonym after agreeing to participate in the introductory meeting. A full list of participants completing both interviews is presented alphabetically (See Table 2). The list is not perfectly alphabetical, and some letters are skipped (I, N, S, and U). The letter U was assigned to the last individual who signed up for the study; in total, 21 individuals responded and expressed interest in participating. Of those 21 individuals, four participated in the introductory

meeting and were assigned a pseudonym but did not continue with the study. The list reflects the missing letters.

Table 2

List of Participant Pseudonyms

Allan (1)	Barbara (2)	Charlie (3)	Debbie (4)
Edna (5)	Fred (6)	Greg (7)	Harrison (8)
Janet (9)	Kellen (10)	Lydia (11)	Meena (12)
Oliver (13)	Pressley (14)	Quinn (15)	Remi (16)
Trinity (17)			

*Note***.** List of Participant Pseudonyms: The list excludes the letters I, N, S, and U, as they were assigned to participants who did not complete any of the interviews for the study.

The Institution

The institution used in this study is a public, fully online university that provides flexible degree programs. It offers associate, bachelor's, master's, and doctoral degrees across over 50 degree programs. The university operates primarily as an open-enrollment institution with approximately 23,000 students. The average age of the student population is 36 years old, and nearly 90% of the student body is older than 25. More than 60% of the students are female, and approximately 60% are people of color. The faculty population is represented by approximately 2,000 faculty members, with 95% being associate faculty, meaning they are not Full-Time faculty. Approximately 60% of the

faculty population is female, while underrepresented groups comprise more than 27% of the faculty.

This chapter is organized according to the aforementioned a priori and other emergent codes (Table 3). Each participant's data is presented with these codes to provide rich descriptors, promoting clarity and ease of reading. The distribution of the number of times coded for each participant is also broken down (See Appendix D).

A Priori and Emergent Codes

Table 3

List of A Priori, Emergent Codes, and Sub-Codes

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
Technological Knowledge		**259 Total Codes**
	Technology in Teaching/Ed Tech	16
	● Tools	55
	● Artificial Intelligence (AI) as a Technology	20
	● Availability and Cost of Technology	5
	Use of Technology as Practitioner	30
	Evolution of Technology Usage	47
	Acceptance of Technology	10
	● By Students	8
	● By Faculty	44
	● By Institutions	24
Pedagogical Knowledge		**480 Total Codes**

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
	Educator	5
	● Developing Personal Pedagogy/Teaching Style	49 51
	● Learning By Doing	32
	● First Class	14
	● Bad Experience	70
	● Evolving Pedagogy	73
	● Emphasis on Practical Application	
	Practitioner	49
	Andragogy	45
	Pedagogical Strategies	92
Content Knowledge		**168 Total Codes**
	How Adjuncts Learn Their Craft	2
	● Lifelong Learning	69
	● Learning by doing	45
	Learning As an Educator	28
	● Learning From Students	24
ConteXtual Knowledge		**887 Total Codes**
	Individuals	
	● Professional Adjunct Faculty	11
	○ Identity	39
	■ How They See Themselves	55
	■ Practitioner Mindset	11
	○ Balancing Work & Roles	14
	○ Personal Life	37
	● Students	25
	○ Characteristics of Students	39
	■ Language Barriers	6
	■ Generational Learners	11
	● Adult Learners	49
	○ Personal Life	12

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
	Challenges Facing Adjuncts	55
	● Role as Adjunct is Tedious and Stressful	18
	○ Poor Pay	36
	○ Lack of Benefits	11
	○ Lack of Role Stability	12
	■ Fear of AI Replacement	
	Curriculum	20
	● Role as Educator is Undermined	5
	● No Clarity on Curriculum Alignment	7
	● Lack of Ability to Edit	26
	● Limited Academic Freedom	21
	Policies	21
	● Bureaucratic Change	19
	○ What Policies Would You Change?	37
	● Artificial Intelligence	34
	● Cheating/Integrity	15
	● Culture of Care	31
	● Pay	24
	● Rubrics/Grading	24
	● Student Engagement	21
	Institutional Support	18
	● Feeling Supported	5
	● Lack of Support	55
	● On Adjuncts to Seek Out Support	18
	● Lack of Belonging	19
	● Lack of Community	26
TPACK		**45 Total Codes**
	TPACK	45
Other Emergent Codes*		**635 Total Codes**
	Artificial Intelligence	14
	○ Need for Clear Guidance	22
	○ Concerns	42
	○ Acceptance and Embracing	35
	Motivation	66
	○ Student-Center Support	53
	○ Desire to See All Students Succeed	32
	○ Above & Beyond	11

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
	Online Learning & Future of Higher Education	24
	Professional Development	92
	○ Likes	27
	○ Dislikes	26
	○ Peer Mentoring	34
	○ Community Building	21
	Student Experience	30
	○ Feedback	26
	○ Engagement	52
	Value of Education	28
Total Number of Codes		**2,474**

Note. List of A Priori, Emergent, and Sub-Codes: The table presents all the a priori, emergent, and sub-codes from the study. An additional section, "Other Emergent Codes*," includes a list of emergent codes that did not naturally fit into the distinct TPACK framework.

Findings

Technological Knowledge (TK)

Technology in education has evolved, offering educators and students tools that enhance engagement, collaboration, and efficiency. This section examines the technological knowledge of the participants, detailing the specific technologies used in their roles as professional adjunct faculty. Some technologies include standard tools like Microsoft Office Suite, Learning Management Systems (LMS), video conferencing software, and emerging technologies such as artificial intelligence (AI). Participants describe how they utilize these tools to enhance instructional design, streamline grading processes, and promote interaction between students and educators. At the same time,

technologies like PowerPoint and LMS platforms (Canvas, Blackboard, Moodle, and Brightspace) are widely adopted. Other institutional tools, such as Signals, Waypoint, and TurnItIn, help faculty monitor student progress and uphold academic integrity. AI-powered platforms, such as ChatGPT, Grammarly, and Microsoft Copilot, were also noted, each supporting participants in enhancing their efficiency while helping students with writing and communication.

Participants also revealed challenges in technology adoption, including institutional constraints, cost barriers, availability of technology, access to industry-based technologies, and the general acceptance of new tools. Institutions play a pivotal role in training faculty, implementing new technologies, and ensuring accessibility. Participants advocate for a more substantial investment in AI training and institutional support for adjunct faculty. Ultimately, technology in education continues to evolve, requiring ongoing adaptation and a balanced approach. Participants' understanding and knowledge of technology are critical in how professional adjunct faculty approach their careers and classrooms. The insights provided will illuminate the experiences and perspectives of professional adjunct faculty and how they view and accept technologies that will serve a role in their teaching and learning now and in the future.

Definition

Technological Knowledge (TK) refers to the knowledge of traditional and new technologies brought into the educational experience (Mishra & Koehler, 2006).

Technological Knowledge Codes

Table 4 displays the a priori, emergent, and sub-codes for technological knowledge.

Table 4

List of A Priori, Emergent Codes, and Sub-Codes for Technological Knowledge

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
Technological Knowledge		**259 Total Codes**
	Technology in Teaching/Ed Tech	16
	● Tools	55
	● Artificial Intelligence (AI) – As a Technology	20
	● Availability and Cost of Technology	5
	Use of Technology as Practitioner	30
	Evolution of Technology Usage	47
	Acceptance of Technology	10
	● By Students	8
	● By Faculty	44
	● By Institutions	24

Note. This data was pulled directly from Table 3, exploring only the technological knowledge component of the TPACK Framework.

Technological Knowledge Emergent and Sub-Codes

Technology in Teaching/Ed Tech

Technology in education has numerous applications and has evolved significantly over the years, from chalkboards to whiteboards to smartboards. Educational technology provides students and educators with tools to engage and collaborate. One opportunity that educational technology provides is in determining with whom and what constitutes engagement and collaboration. Engagement can be between students, both near and far, educators, the curriculum, content, multimedia, and now with artificial intelligence. Lydia (Interview #2) highlighted how important technology can be to educators and the

benefits it can present, saying, “I saw the technology as a means to fix that, you know, make it easier to grade. That, to me, is a big plus for educators.”

Tools

Microsoft Office Suite

One of the most essential tools referenced was the Microsoft Office Suite, which includes software like Word, Excel, and PowerPoint (PPT). Microsoft Office is well-established within education and many organizations. The Microsoft Office Suite offers essential features, including word processing (Word), spreadsheet creation and management (Excel), and presentations (PowerPoint). At least one of the Microsoft tools was mentioned by 15 of the participants. Trinity (Interview #2) finds the tools helpful with organizing her work, saying, “I definitely use Microsoft Excel workbooks to keep things organized.” When discussing different Microsoft tools, Debbie (Interview #1) said, “I’ve worked with every Microsoft platform: Access, Word, Publisher, PowerPoint, Microsoft Teams…”

Presentation Tools

Participants mentioned two specific presentation tools. The first was Microsoft PowerPoint, and the second was Prezi. PowerPoint is a standard tool for designing and delivering presentations among educators and professionals. Ten participants mentioned using PowerPoint in some capacity. Some participants discussed their usage and engagement with the tool. Charlie (Interview #2) was straightforward with her usage, saying, “I can do a presentation with the PowerPoint.” Pressley (Interview #1) talked about her recent introduction to a tool that uses AI to assist with generating PowerPoint slides, saying in our first interview, “I recently discovered a website called Slide Carnival

that creates PowerPoint presentations for you. You just go in and put in a keyword, and it will create the PowerPoint. I thought that was interesting because it saves a lot of time." She (Interview #2) reiterated this tool during our second interview: "I found out from a colleague about these new AI-generated PowerPoint slides, which save a lot of time." This helpful tool saved her time, which is a valuable asset.

Other participants discussed PowerPoint from a student perspective and the students' opinions about PowerPoint as an instructional tool. Janet (Interview #2) shared about student feedback, saying, "I usually got 4.8 or 4.7 ratings out of 5, and every so often, you get a student that says, 'Too many PowerPoints' or 'Death by PowerPoint,' or something like that." Remi (Interview #1) also shared her experience balancing student feedback and how the input impacts the resources she prepares for her class, saying, "...I also consider how the number of assignments affects my turnaround rate for feedback, which is more important now. Balancing this with making my PowerPoints and using technology is crucial." Harrison (Interview #1), experiencing similar feedback from students, shared, "I backed down on the PowerPoints." Harrison (Interview #2) shared how he has tried accommodating students' feedback, saying, "I try to mix it up with group exercises and different methods, not just going through PowerPoints." Harrison (Interview #2) continued to share his students' use, saying, "In the HR course I teach, they write a paper, but at the end of the semester, they have to make a presentation on it with a PowerPoint." While he recognizes that students are not particularly fond of PowerPoints, he still utilizes the technology as part of the academic experience for assignments.

One participant, Oliver, mentioned using Prezi. Prezi is a web-based presentation tool that uses motion and zooming to create an engaging and interactive experience (https://prezi.com/). Oliver (Interview #2) mentioned the ease of using Prezi, saying, "With Prezi, you can put together a presentation in an instant."

Learning Management System (LMS)

Participants discussed LMSs such as Canvas, Blackboard, Moodle, and Brightspace. As many of the participants work at other institutions, it is not surprising that they have experience using various platforms. For reference, the institution participating in this study uses Canvas. Debbie (Interview #1) shared her experience using multiple LMS, saying, "I've taught for five universities now, using all of their different software and platforms. I've used [another institution's] unique learning management system, Moodle, Blackboard, Blackboard Ultra, Salesforce, Canvas, and Yellowtail." Each platform is slightly different. Janet (Interview #2) addressed this by saying, "I got exposed to Moodle, Canvas, Blackboard, and all of those do similar things but in slightly different ways because of the schools where I was teaching." Charlie (Interview #1) shared her experience: "We use Canvas at this university and Brightspace at my other university."

When specifically talking about how they use Canvas, Edna talks about how she utilizes the Canvas system to stay in touch with her students. She (Interview #1) says, "I use my cell phone for Canvas notifications, which allow me to send a quick text." Edna (Interview #1) shared her course, saying, "...class is basic, focusing on getting the students used to using Canvas." Greg (Interview #1) shared his experience with Canvas and some of the difficulties he has encountered in getting students to use the platform to

engage with each other, saying, “I sort of like Canvas, but we have a tendency to just have students respond to a question, and there is no real discussion.” Greg (Interview #1) finds the platform helpful, saying, “I also like to use video capabilities so that I can send out videos or voice recordings inside of Canvas.”

Institutional Tools

Professional adjunct faculty from the participating institution mentioned three lesser-known tools commonly used across higher education. The first is Signals, a tool used to communicate with students within the institution’s ecosystem. The second tool is called Waypoint, and the third is TurnItIn. Each tool enables faculty to access students, provide feedback, and establish a communication line. Kellen (Interview #2), Meena (Interview #2), and Janet (Interview #2) discussed Signals during their interviews. Janet (Interview #2) captured the use of Signals and its application, saying she uses the platform to “monitor their progress and provide personalized support.” Kellen (Interview #2) reinforced this, saying, “I use the Signals part where we can communicate directly with the students when they’re doing good or when they’re doing bad.” Access to the student’s performance is essential, and providing meaningful support is vital. Meena (Interview #2) touched on providing support when she said, “If they are having learning issues, make sure they get the resources they need, using the Signals platform to signal students.”

The second tool discussed was Waypoint, a grading tool that integrates into the LMS ecosystem for the professional adjunct faculty. Trinity (Interview #2) mentioned the platform approvingly, saying, “One really good thing that we have is Waypoint.” According to Barbara (Interview #1), all faculty are expected to use the platform, saying,

"We are required to use Waypoint." Pressley (Interview #2) reinforces that sentiment, sharing, "The university has programs they want used, like Waypoint for grading." Pressley (Interview #2) talked about one positive aspect of the platform, saying it helps to "minimize the software used. Commit to one program like Waypoint and avoid reinventing the wheel. This will keep IT problems to a minimum."

The final institutional tool mentioned was TurnItIn, a plagiarism detection tool built into the Canvas LMS used by the institution. Nine different participants mentioned using TurnItIn. The tool supports faculty in identifying plagiarism; some participants have dealt with cases. When talking about plagiarism, Barbara (Interview #1) says, "It hurts my soul to have to fill out these papers, but I have students that will turn in a paper that they did not write and put their name as the author, and the paper on TurnItIn will show me it's a 95, 99, a hundred percent match." One specific feature discussed regarding TurnItIn was an AI detector option designed to indicate text generated using AI. However, while discussing his use of TurnItIn, Quinn (Interview #2) says, "TurnItIn has an AI detection part, and [our institution] has it disabled." Edna (Interview #2) explained her experience with the AI detection tool, saying, "We took AI out of TurnItIn and turned it off because there were too many false positives." Despite issues with AI, others like Barbara (Interview #1) continue to use TurnItIn, saying she will "run every single assignment through TurnItIn."

Video Conferencing Software

Tools like Zoom, Webex, Microsoft Teams, and Google Classroom have become widely used across higher education. Not all institutions have the same system, and as a result, participants with employment at other institutions discussed each of the four

systems. Participants shared their experiences with using the platforms and how they typically utilized them. Greg (Interview #1) captured this when he said, “We use Zoom, Webex, and Google Meet for my office hours.” While Kellen (Interview #1) mentioned using “Skype, Zoom, and Google” for his “virtual communications.” Quinn (Interview #1) also disclosed his preference, sharing, “I use meeting software like Zoom or Teams for virtual office hours, which have been very helpful.” Allan (Interview #1) shared his experience, describing, “I also use Microsoft Teams and Zoom for synchronous classes.”

Another point was the rapid evolution and usage of Zoom and Microsoft Teams platforms. Oliver (Interview #1) shared, “When I started teaching online, I had to quickly learn. They said, “Okay, we’re going to go, and you’re going to teach on Zoom.” I said, “What’s Zoom?”” He said about his experience with Zoom, “So, I quickly learned that Zoom existed, and I carried forward with that when COVID hit and learned the ins and outs of Zoom.” Quinn (Interview #2) also shared his insights, saying, “...when I first started teaching, Teams and Zoom weren’t really a thing. I mean, I’m sure there was something, but I don’t really remember. I’m sure I didn’t have access to it…”

One point of contention regarding the video conferencing software was the lack of institutional accounts and the onus on professional adjunct faculty to provide their own. In fact, at the primary institution, participants reported that they were not provided with Zoom accounts but were instead encouraged to use a free, limited account or utilize accounts from other institutions. Allen (Interview #2) said, “I was told, ‘Just sign up for a free Zoom account.’ Well, that’s limiting. So, I just use my [other institution’s] account instead.”

Other Tools

Participants mentioned other widely used tools across higher education, such as YouTube and Kahoot! Eight participants mentioned YouTube. Barbara (Interview #1) called YouTube "very influential," saying, "It's very useful, and it helps tie in the curriculum." Remi (Interview #2) commented on the widespread usage of YouTube, saying, "We watch YouTube videos all the time, right, to learn things." Quinn (Interview #2) reiterated that same sentiment about students using YouTube, saying, "...if they don't know something, they'd just go Google it or find a YouTube video." Other faculty members embrace YouTube as a tool to support learning. When discussing the provision of introductory information to students, Harrison (Interview #1) says, "I'll utilize YouTube or what I call primer videos for the online courses." Like Harrison, Pressley (Interview #1) encourages students to use YouTube when learning new materials, saying, "... here's a YouTube video on how to do it."

Kahoot! is a popular game-based learning platform used across all levels of education. It allows educators and students to quickly build highly engaging activities, such as quiz games (Kahoot!, n.d.). Building a new activity in Kahoot! is quick and easy, as the platform offers many premade options, while also allowing you to create a custom event. When played, participants are shown a question along with possible answers. Participants also see a countdown timer that prompts them to make a selection quickly. Higher point totals are rewarded for correct answers, the quicker they are submitted. If participants wait too long, they will receive fewer or no points for incorrect answers. The quiz games are quick and highly engaging, offering a gamified experience that covers educational material. Allan (Interview #2) talked about integrating Kahoot!, saying,

"Now I'm using quizzes on platforms like Kahoot! to do teaching and development and incorporating video content." Charlie (Interview #2) mentioned that Kahoot! was a tool she had previously used, saying, "I like using the Kahoot! tool, and I started using it when I was in my doctoral program. My professor would do it with us, and I said, "Oh, this is a great way to open the classroom to engage with the students." Charlie (Interview #2) went on to say why it was so engaging, "...it kind of creates that level of competition where, you know, you put a question out there and who's going to respond first. It helps to increase the energy and the mood of the classroom." While discussing other tools, Kahoot! was mentioned to Harrison (Interview #2), and he responded to the tool, saying, "I'll look into that. It sounds useful, especially for competitive students."

Artificial Intelligence (AI) - As a Technology

Participants discussed artificial intelligence many times. However, this section will focus solely on its objective usage as a technology and the various formats employed. AI has become a popular topic in education, and participants were eager to discuss it. AI was discussed by participants in 27 of the 34 interviews and directly mentioned by every participant. When discussing AI, Meena (Interview #2) shared her overall feelings towards the technology and the opportunities it presents for engaging and supporting her students, saying, "I enjoy finding tools such as ChatGPT or any of these AI resources that help you synthesize so that you can add value to that experience."

AI has become popular amongst faculty and students due to the vast array of tools that feature high-powered technology. Participants explicitly mentioned tools such as Grammarly, ChatGPT, and Copilot. Other tools have been used across education that have recently started to integrate AI into their products. Still, tools like Kahoot! are not

discussed here, as they were not built around the AI model but have instead embraced the opportunities that the technology presents. One of the most popular AI tools is ChatGPT (OpenAI, 2023). Of the 17 participants, 13 mentioned ChatGPT specifically during our conversations. Some of them generally referenced it as a tool they were familiar with, while others discussed specific use cases for the technology. Meena (Interview #2) likes to find and summarize articles, saying that using ChatGPT "allows me to find and locate articles that are more recent. Locate examples and summarize the data much faster." Quinn (Interview #2) discussed using ChatGPT to assist with "composing a better email than I can come up with on my own" or using it to assist with cleaning code as part of the technical writing that his students do for assignments.

Grammarly is an AI-writing assistant software that can integrate directly into tools such as Google Docs (Grammarly, n.d.). When enabled, it will provide real-time spell-checking, grammar recommendations, and proofreading, among other features. Harrison (Interview #2) shared about his usage of the tool, saying, "Grammarly can rewrite the whole damn thing." He (Interview #2) further promotes the tool to his students, saying, "You should take advantage of this because I use it when I'm grading your work. I want to make sure my writing is clear and concise and that you understand what I'm trying to say." Edna (Interview #2) also supported using Grammarly, saying, "Grammarly makes writing better and has been a huge benefit. Who cares if a program helps if the outcome is better?" Kellen (Interview #1) also agrees about introducing his students to Grammarly, "I like to introduce my students to the advancements as they need it. I'm here to help them succeed." While conflicted about AI, Remi (Interview #2) has

used Grammarly, saying, “I don’t want to say AI is completely terrible because Grammarly has been a godsend.”

Another tool discussed was Microsoft Copilot, which is an AI-powered assistant (Microsoft, n.d.). It is available to users of Microsoft products. It enables users to collaborate with large language models (LLMs), which are large, pre-trained datasets that comprise AI-supported platforms (https://copilot.microsoft.com/). Copilot can be built into the user workflow to complete tasks directly within an internet browser (Microsoft, n.d.). For example, Janet (Interview #2) shared that she uses it “when I am grading papers.” She (Interview #2) says Copilot is “just right on the corner over your screen.” When grading specific assignments, Janet (Interview #2) says, “If I’m grading a paper where they’re doing financial analysis of a company and they tell me the company is doing well but don’t give me the stats, I go to Copilot and ask, “What are the current stats for such and such company?” She (Interview #2) also appreciates that Copilot, “gives you the source at the end, so you can check the validity of the information.” Alan (Interview #1) also mentioned using Copilot, saying he used it to “help with creating content and assessments.”

Availability and Cost of Technology

One issue that arises when technology becomes an entitlement is the sunk costs associated with upgrading, maintaining, and replacing old technology with new versions as they are released. Lydia (Interview #2) shared an anecdote about a coworker who has experienced the difficulty of maintaining technology when she says, “You know, the mannequins they use, she said hers at her school don’t work, some of them, so they can’t even really use them for what they’re supposed to be used for. But the school can’t afford

to buy new ones because they're so expensive, so they do workarounds for them. But how can we continue to give the students the most cutting-edge because they have to have it?" Fred (Interview #1) mentioned the lack of availability of technology, noting he would bring his personal equipment for students to use, saying, "...there was no formal lab or whatever, I'd bring in equipment and that kind of thing, and then literally hook it up."

Use of Technology as Practitioners

Many participants discussed the technology they use in their careers and how they seek opportunities to bring these tools to their students. Quinn (Interview #1) shared the technology he brings to the classroom, saying, "...they are using industry-standard tools. It's beneficial because if they learn to use these tools, it might lead to better job opportunities. The labs provide software that will benefit them if they know how to use it." He (Interview #1) said, "I can't teach a class on databases without students having access to an actual database. Screenshots won't help much."

Fred (Interview #1) shared his background in using video and audio for communication, saying, "I did a couple of things in IT, and then I did some startups in the Bay Area…delivering various types of experiences. We didn't call it audio or audio and video. We just called it a part-time or a partial, or full experience. Being able to deliver that in a business sense." He (Interview #1) went on to share the importance of integrating technology, saying, "I'm a full believer in the practicality of technologies, that the only way in many cases that you can get a person to understand how you practically or physically involve yourself or engage yourself." Debbie (Interview #1) summarized

many experiences with technology when she said, “You pick up things along the way throughout your education and professional career.”

Evolution of Technology Usage

Much like the evolution of technology, the use of technology has also evolved for educators. In many cases, the evolution of using technology has been to support their performance and make their jobs as educators easier. Kellen (Interview #1) shared his long-lasting experience with technology, saying, “I’ve always tried to use technology in whatever form it’s in, whether it’s a computer versus a manual typewriter.” He (Interview #1) talked about how technology has changed over the years, sharing, “When I started back in the late eighties, we didn’t have technology. Desktop computers were just new. You know, I told you, I think jokingly, my first computer had a real floppy. I mean, the floppy disk was floppy.”

Pressley (Interview #2) shared another anecdote about how technology has changed since she started teaching: “When I started teaching back in 2008-2009, it was all paper for the most part. Pen and pencil, you would manually do everything.” Lydia (Interview #2) described using technology and looking for ways to make her life and her students’ lives easier by reducing the amount of paper she would need. This evolution of technology captures the basic level of some technology that participants started using and have found to change over time. It is noteworthy that evolution is important, as each participant shared valuable insights on their experiences with technology and the changes they have observed over time. Kellen (Interview #1) summarized what many participants shared when discussing technology changes and what is essential about those changes when he said, “Technology advances. It keeps improving. I like that. I like to learn as it

advances, and I like to introduce my students to the advancements as they need it. I'm here to help them succeed." Similarly, Debbie (Interview #1) captured the remaining sentiments shared by all who use technology and the successes and challenges, saying, "I love technology when it works the way it's supposed to. When it doesn't, then I'm not happy with it."

AI will continue to be discussed, with a deeper dive at the end of the chapter that will explore participants' insights, perceptions, and opinions on the technology as it relates to aspects such as institutional policies, access to the technology, and academic integrity. Many participants mentioned their usage of AI and how they have integrated the technology into their workflows to support their teaching and everyday lives. While artificial intelligence is part of the participants' technological knowledge, the vastness of the technology and its applications transcend all knowledge bases, making it a more prominent and cross-cutting theme.

Acceptance of Technology

Inherently, when using technology, whether new or old, there is a level of acceptance that the user must pass through to either accept or reject the technology's usage. This concept is known as the Technology Acceptance Model (TAM). While this section will not provide a deep examination of TAM, the model suggests that users accept technology based on their behavioral intention, which stems from their perception of the technology's usefulness for completing a task and its perceived ease of use (Davis, 1989). Three distinct sub-users emerged, each with their own perceptions and technology usage: students, faculty, and the institution. Once a user has accepted the usage of a technology, it becomes expected. Lydia (Interview #2) summarized that sentiment by

saying, “I just think that we, in every industry now, are technologically dependent, so give the students the most cutting-edge technology to move forward.”

By Students

Students enter their educational experience with a diverse range of backgrounds and varying levels of understanding of technology. Participants shared about their experiences with technology and how their students’ skills, acceptance, and struggles have impacted their teaching and learning.

Pressley (Interview #2) shared her experience introducing technology to students, saying, “Some of the students are not very tech-savvy. Teaching them some basic skill sets is pretty time-consuming.” On the other hand, Oliver (Interview #2) shared his experience with tech-savvy students, saying, “They grew up with computers. They grew up with programming. They are very, very savvy in terms of technology, which is a good thing. I often marvel at the amount of knowledge they have in terms of being able to use technology, sometimes to their disadvantage when they try to use their cell phones in my classroom.”

Like Oliver, participants shared their thoughts on students and their comfort and familiarity with technology. Pressley (Interview #1) shared how quickly she can gauge her students’ comfort level with technology, saying, “You can usually tell in the introductions what level of technology skills they have. Some can upload a video or post a picture, and some can’t figure that piece out.” While I will discuss this topic in more detail in the contextual knowledge section, it is worth noting that the student body these professional adjunct faculty work with can range from 18-year-old undergraduate students to adult learners. Some participants stated they teach learners from upwards of

four or five different generations. In light of the note around generational learners, Debbie (Interview #1), when sharing about generational learners, said, "...you do have to be aware that you can't bring technology into the classroom that you think students are not going to be versed on."

While discussing his acceptance of technology, Kellen (Interview #1) spoke about using his experience to inspire confidence in his students, saying, "A lot of them are leery about technology. By overcoming some of those obstacles myself, I teach them they can do it, too. Embrace technology. Don't be afraid of it. See what it can do for you." Like Kellen, Barbara (Interview #1) discussed her feelings towards technology and emphasized the importance of making students feel connected, which can lead to a deeper acceptance of the technology. When asked how technology makes her feel, she (Interview #1) said, "More engaged, absolutely. Even just the capability that I have to share in my announcements and to be able to speak back and forth with the students. I think it's really prominent and important because it makes them feel more connected to school. And we're not in person. So, I think that's really important for them to feel that connection."

By Faculty

Participants shared numerous examples of their usage and level of comfort with technology, as well as how their perceptions and acceptance of it changed over time. Some participants detailed their standing as not tech savvy, like Charlie (Interview #1) saying, "I don't consider myself technologically savvy," or Oliver (Interview #1) saying, "Quite frankly, I had not really been very technically savvy in my career," or Pressley (Interview #1) sharing, "I wouldn't say I'm real tech-savvy, but I can do a lot of it."

Others recognize that they are slower to utilize newer technologies, as Allan (Interview #2) said, “I’m usually behind the curve when it comes to technology.” Kellen (Interview #2) discussed his age, interests, and understanding of technology, saying, “I try to stay abreast of technology, but I’m still a digital immigrant, a long-term digital immigrant.” Oliver (Interview #1) also highlighted his age, how students view him today, and his technology usage, saying, “Oh, I think they grew up with it. At their age, I mean, I’m paleolithic to them.”

Many participants expressed their enthusiasm for embracing technology and developing skills to use and navigate the digital space. Edna (Interview #2) shared her motivation about staying connected to technology, saying, “I don’t ever want a kid to look at me and say, ‘Hey, grandma, you need me to help you with that smartphone there.’” When asked how she finds technologies, she (Interview #2) said, “I think more, you know, and I guess you’d say I search things out.” When pressed on her background, she (Interview #2) said, “I’ve always been comfortable with technology. I started programming computers in the 80s and have used various platforms for my degrees. Technology has been seamless for me, and I help others with it.” Harrison (Interview #1) talked about his comfort with technology, saying, “I’ve always considered myself to be good at learning new technology,” but went on to share his motivations for staying in touch with technology, saying, “I just want to make sure I get it. I don’t want someone to say, ‘Oh, he can’t even develop a test or a quiz. He’s got to do it with paper.’” Trinity (Interview #2) talked about her background, saying, “I’m pretty technologically savvy, I think,” while Lydia (Interview #1) shared her feelings towards technology, saying, “I like it. I’m happy for it.”

Beyond their comfort level and understanding of technology, some participants highlighted the importance and significance of technology acceptance and usage. Meena (Interview #1) shared her technology usage in her classroom, her challenges, and how she had to address them, saying, "I struggled with all the tools and navigation. From that class, I revisited the instructor training materials in the course room to figure it out." Oliver (Interview #1) discussed his experience of being informed by his institution that he would be using Zoom to teach a course, saying, "Okay, we're going to go, and you're going to teach on Zoom." I said, 'What's Zoom?'" Despite his lack of knowledge of Zoom, he continued (Interview #1) to grow and learn the technology, sharing, "When Zoom hit, I was hypnotized, and I use it very commonly in teaching now." Charlie (Interview #2) shared about her journey with technology and embracing the opportunity, saying, "For me, it was learning how to finagle the system because sometimes you can, you know, you could shy away from technology if it doesn't come easy for you. But for me, it was more like, 'Okay, I know I can do this, so let me go,' and I would go and play with it and figure out how to do things…"

Lydia (Interview #2) shared an example of how she embraced the opportunity technology presented and forced herself and students to convert from physical paper to digital media, saying, "When I first started at the community college, I said, you know, no more. I don't want all these paper binders and all that stuff. This is ridiculous. We're gonna try to do this through technology. So, like journals and things. I didn't want to have students carrying around binders. I didn't want to have to read through binders, so I made it as tech, as you know, technology as I could at the time, to what I was able to use." Debbie (Interview #2), like Lydia, talked about the opportunity that technology

presents and why others need to embrace it, saying, “Technology has influenced every aspect of education. Any educator who does not embrace technology does so at their own peril.” Debbie (Interview #2) captured the essence of technology and its impact, saying, “Technology has changed our pedagogy.”

By Institutions

Institutions play a crucial role in identifying and introducing new technologies to students, instructors, and the classroom. Some highlighted opportunities where institutions have or could provide additional bandwidth to make other technologies and support available. Pressley (Interview #2) identified AI as a technology that should be further supported, saying, “Universities should invest in AI, but also in training professors and faculty on how to use it properly. It’s important to show students the appropriate way to use AI to avoid issues like plagiarism.” She (Interview #2) shared that institutions already provide some of this support and resources, saying, “They set up trainings to learn the technology, knowledge, and practices, with reminders and updates about new skills or technologies being implemented in the coursework. This gives plenty of opportunities to learn.” Pressley’s (Interview #2) sentiments capture the idea that institutions have an important role in identifying new and emerging technologies, such as AI, and providing opportunities for learning so that adjunct faculty can be taught best practices for using new technology responsibly.

Summary

This section explored the technological knowledge portion of the TPACK+XK framework. Technology serves a wide range of roles in the teaching and learning of professional adjunct faculty, so there are many elements to explore. All participants

actively teach online, so each has a basic understanding of the essential technologies used to support teaching and learning. The section highlights a basic understanding of the technologies generally available to educators.

One of the most prominent elements of technology is AI, which has had and will continue to have an ever-changing role in the future. Many participants mentioned AI and its impact on them and their students. I will explore the pedagogical implications of AI in more depth later, so this section was limited to the types of technology and how AI integrates into their understanding of these technologies.

Pedagogical Knowledge (PK)

Professional adjunct faculty operate within an evolving teaching environment, frequently assuming instructional roles with limited time and formal pedagogical preparation. However, professional development, lived experiences, and collaborative engagement cultivate their teaching philosophies and methodologies. Participants in this study articulated the complexities associated with developing and refining their pedagogical knowledge.

A central theme among participants was the development of their personal pedagogical expertise through teaching and learning experiences. While some shared experiences from prior academic courses where they learned about pedagogy, others showcased how they have developed their instructional strategies through informal opportunities, such as peer engagement and classroom experiences. Many participants emphasized the importance of prioritizing student engagement over rigid adherence to traditional teaching strategies. The top priority for participants was providing meaningful support to their students while still advocating for critical thinking and career-focused

skills development. Participants shared their experiences of growth and evolution in their personal pedagogies, drawing on the valuable lessons they learned from their first teaching experiences. They also highlight the difficulties of teaching and how negative experiences have contributed to promoting change and resilience.

Participants also shared about their limited exposure to andragogy and adult learning theory. Although not all participants had formal exposure to andragogy, many organically implemented its principles by aligning their teaching approaches with students' professional aspirations and lived experiences. The shared insights explore their growth and evolution as professional adjunct faculty as they experience adult learners and the unique characteristics they bring to the classroom.

The pedagogical knowledge section concludes with a summative list of pedagogical strategies shared by participants. Their strategies serve as a hypothetical guide for working professionals seeking to become adjunct faculty. The shared insights range from the essentials of teaching to the complex perspectives that can only be learned through direct experience in the classroom and working with students.

Despite challenges associated with institutional onboarding, limited support, and the steep learning curve inherent in early teaching experiences, participants demonstrated resilience and adaptability. Their reflections underscore a continual process of pedagogical evolution as they strive to hone their personal pedagogy to find success and comfort. The following section will delve further into the experiences and strategies of professional adjunct faculty members to cultivate pedagogical knowledge in their teaching and learning.

Definition

Pedagogical Knowledge (PK) includes the "deep knowledge" of the range of instructional practices, strategies, and methods for promoting student learning (Mishra & Koehler, 2006, p. 1026; Shulman, 1986).

Pedagogical Knowledge Codes

Table 5 displays the a priori, emergent, sub-codes for pedagogical knowledge.

Table 5

List of A Priori, Emergent Codes, and Sub-Codes for Technological Knowledge

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
Pedagogical Knowledge		**480 Total Codes**
	Educator	5
	● Developing Personal Pedagogy/Teaching Style	49
		51
	● Learning By Doing	32
	● First Time Teaching	14
	● Bad Experience	70
	● Evolving Pedagogy	73
	● Emphasis on Practical Application	
	Practitioner	49
	Andragogy	45
	Pedagogical Strategies	92

Note. This data was pulled directly from Table 3, exploring only the Technological Knowledge component of the TPACK Framework.

Pedagogical Knowledge Emergent and Sub-Codes

Educator

Each participant detailed their experience developing their pedagogy and understanding how they approach teaching and learning. Debbie (Interview #1) noted the evolution of being an educator while highlighting the pressure put on adjuncts, stating, "The basic requirements have remained the same, but there's been a significant cultural shift. Education now has to be more empathetic, inclusive, and diverse." Oliver (Interview #1) described his journey in recognizing the complexities of teaching, explaining, "I came to a quick realization that teaching is not as easy as you would think, but I still wanted to do it. When I went back to teaching college, it was a revelation because it was different." Many adjuncts enter their roles with limited knowledge of pedagogy and effective teaching methods. Lydia (Interview #1) shared about her experience starting, recounting, "So I said to my boss, 'Okay, so where do I start? How do I do this because I want to do it? Well, what do I do?'" Moreover, she (Interview #1) said, "Well, here, here's Bloom's taxonomy." I'm like, 'Okay, and what is this?' When asked how she developed her understanding and knowledge of pedagogy as an adjunct, Meena (Interview #2) said, "This is probably an irresponsible comment, but I don't know that I've consciously studied it and made a shift. Rather, as the university has said, 'Go, do XYZ,' I've shifted and gone to do XYZ." These reflections demonstrate how each participant approaches their role, acknowledging the challenges and opportunities inherent in an adjunct faculty position.

Developing Personal Pedagogy/Teaching Style

Adjunct faculty emphasized the iterative and experiential process of developing their personal pedagogies, often shaped by real-world teaching challenges and evolving student needs. While many participants shared their experiences with formal education, where they learned about pedagogy, others described developing their approach to pedagogy based on their lived experiences of teaching and learning. Barbara (Interview #2) described her journey: "I spent a lot more time than I needed being critical of making sure everything was said perfectly. Now, I see it's more about engaging the student in the class rather than just the terms used." Edna (Interview #2) described her shifting approach: "My pedagogy now is about how students will apply what I've taught them to their lives and how my feedback will help them grow. Putting "great job" on a paper is not enough. I want students to know what they did well and areas for improvement. I want them to grow and be better versions of themselves by the end of my class." Allan (Interview #2) provided a self-assessment of his knowledge and skills of pedagogy, sharing, "On a scale of one to 100, being like a true expert, I probably get a 10 or 15 in my own confidence. I probably know more than I realize, but in my own confidence, it's limited. It was a zero, so we've gone up. But I think there's so much to know and so much to learn, and different learning styles and things of that nature." This evolution of knowledge, skills, and confidence underscores how experience refines the teaching and learning approaches.

Many participants highlighted how collaboration and external resources informed their pedagogical strategies. Barbara (Interview #2) reflected, "I try to stay current with the latest research, reading journals, and literature. I also reach out to friends in the field, asking what tools they're using and finding meaningful." Similarly, Debbie (Interview

#2) shared how curriculum design projects shaped her understanding, noting, “You learn what works and what does not work at all, so you know to never use certain approaches again.” Kellen (Interview #1) highlighted the importance of staying flexible and reevaluating the resources available to improve the experience, describing, “How do you improve pedagogy, you know, based on what’s available, based on technology, but also based on how your students are accepting it. We’re always trying to change it to help them improve their performance.”

The unique contexts of online and adult education further shaped participants’ approaches. Lydia (Interview #1) described the challenges of transitioning to online teaching and sharing, “I found it much more difficult to teach online, but it has advanced my understanding of pedagogy.” Edna (Interview #1) echoed this sentiment, explaining how virtual environments necessitate clear communication, saying, “Online teaching requires careful wording to avoid misinterpretation.” Their experiences highlight the flexibility required of adjuncts as they navigate diverse instructional modalities.

Participants also emphasized the importance of grounding their pedagogy in real-world applications. Greg (Interview #2) focused on fostering intellectual engagement, stating, “I try to create an environment where [students] can elaborate more intellectually rather than just giving a standard answer.” This commitment to creating meaningful learning experiences reflects the central role of applied knowledge in the development of pedagogy. These reflections show that adjunct faculty continually refine their teaching practices and continue to develop their knowledge and skills through lived experiences.

Learning By Doing. The absence of formal teaching education leads many adjunct faculty to rely on self-guided learning and improvisation. Remi (Interview #1)

described her early teaching experiences, stating, “College classes were helpful, but teaching is strange because you’re thrown into a classroom, and you have to learn on your own. Even if you’ve had years of classes, no one can tell you how long it takes to make a lesson and manage grading. You learn it by experiencing it and feeling frustrated.” Kellen (Interview #2) also reflected on his journey, noting, “I learned experientially myself through my experiences with the college.” Some still struggle to know when they are actively learning and growing, like when Lydia (Interview #2) shared, “Well, I’ve learned a lot more about pedagogy, and I don’t always know that that’s what it is I’m learning or doing. But I have learned a lot more.” By engaging directly with the challenges of being an educator, adjuncts cultivate unique approaches to their teaching styles. The experiential process of learning by doing showcases the depth and dedication of adjuncts’ commitment to their growth as educators.

First Time Teaching. Many participants described their first teaching experiences as learning opportunities that helped shape their future approaches to teaching. Edna (Interview #2) noted how her first class shifted her focus as an educator: “I realized there’s so much more to teaching than putting out questions and having students answer them. I’ve learned to focus on what I hope to accomplish and what I hope the students walk away with.” Remi (Interview #2) shared the excitement and challenges of her first session, recounting, “I feel like because it was the first class that I ever taught, and it was the first time teaching adults, it was somehow kind of exciting bringing in all of those different opportunities.” Despite initial uncertainty, these experiences often laid the foundation for developing personal teaching philosophies.

The uncertainty of stepping into the classroom for the first time was a recurring theme. Greg (Interview #1) shared his initial apprehension, recounting, “It was a bit intimidating because I didn’t want to come across as someone who didn’t know the subject matter.” Harrison (Interview #1) shared his fear of stepping in front of the class for the first time, sharing, “Would people be rolling their eyes, or ‘here’s another idiot trying to teach us something?’” Harrison (Interview #1) continued and noted the confidence his expertise provided, saying, “I was nervous but confident because I knew more than they did about the subject.” For others, such as Oliver (Interview #2), the challenge lay in keeping the class engaging, as he recalled, “The first time I taught it, it was pretty much a lecture, and they all fell asleep. I realized we needed to make it more interactive.” Quinn (Interview #1) talked about his first experience, describing, “I just went in, explained what we were doing, and made sure the students understood. It was more hands-on. I didn’t have to talk a lot, which I preferred. I was a bit nervous, but I got through it.” Participants’ reflections underscore how initial teaching experiences often involve navigating a steep learning curve.

Meanwhile, Oliver (Interview #1) described his transition to online teaching during her first assignment, sharing, "After three classes, the COVID pandemic hit, and the class went online. Rather than doing a classroom course, we had to figure out how to do it online.” These experiences demonstrate the adaptability required of adjuncts as they navigate through trial and error, developing the skills and confidence necessary to thrive in their roles.

Bad Experience. Adjunct faculty shared difficult teaching experiences, often rooted in insufficient institutional support, challenging dynamics with students, or the

complexity of their roles. Oliver (Interview #2) recounted a particularly unsettling first session, stating, “It was, without question, the worst session of that course I ever taught because I was going in blind. But I learned a lot about what to do and what not to do. Each successive semester, it’s gotten much better to the point where now I think it’s flying. But it was scary. The school gave me very little guidance—they said, ‘Here’s the course, here’s the description, you teach it.’” Charlie (Interview #1) reflected on her early challenges, noting, “In my beginning job, I didn’t get the preparation I should have. I had been a TA and a graduate assistant, but being an adjunct is different. I didn’t have proper onboarding.” Similarly, Edna (Interview #1) described the difficulty of managing criticism without adequate preparation, sharing, “After my first class, I got a lot of constructive criticism, which was hard to take because I felt I didn’t have adequate support to deserve that level of criticism.” These experiences reflect some of the challenges adjuncts face in their teaching roles.

Despite negative experiences, many participants acknowledged the learning opportunities presented by the adverse situations. Remi (Interview #1) recounted her struggles with student teaching, noting, “It was scary, but I fell back on the writing assignments my professor had taught us and did some journal entries to get to know everyone through that method.” Oliver (Interview #1) shared his learning moment during his first class, recalling, “The first time I taught it, it was pretty much a lecture, and they all fell asleep. I realized we needed to make it more interactive, with students more involved. As the course matured, we started doing exercises and lab work. I added projects, discussions, and lab exercises.” Collectively, these narratives highlight the

resilience and adaptability of adjunct faculty, as well as the pressing need for institutions to address gaps in support and preparation.

Evolving Pedagogy

Adjunct faculty described their pedagogical growth as an evolving process shaped by experience, reflection, and the diverse needs of their students. Kellen (Interview #1) reflected on the importance of critical thinking in his teaching philosophy, explaining, "I don't tell them they are wrong or right. I encourage them to think critically. This is part of my philosophy background: questioning everything and not accepting things at face value." Barbara (Interview #2) recalled her initial focus on content delivery and sharing: "I spent a lot more time than I needed being critical of making sure everything was said perfectly. But now I'm seeing it's the process of engaging the student in the class more so than maybe what was said and the terms used." Similarly, Trinity (Interview #1) described how she discovered her strengths through teaching, stating, "It came through time and trial and error. Humor was my strength in the classroom. Realizing your strengths isn't something you can be taught; you cultivate it." These comments reflect how adjuncts develop confidence and refine their teaching philosophy as they gain experience.

The participants emphasized the importance of flexibility and focusing on relevant skills and knowledge in their teaching. Edna (Interview #2) emphasized the necessity of tailoring lessons to curricular needs, sharing, "Is this going to make the lesson more engaging, more exciting, and help the kids delve deeper into it? Or am I teaching tech instead of language arts?" Oliver (Interview #2) described his evolving approach to teaching, stating, "I'm always a change agent. I always like to mix it up and

change it every semester. Most of it came from me." Quinn (Interview #2) highlighted his desire to provide his students with contemporary knowledge, sharing, "I mean, at my job, I'm not really doing now what I was doing two years ago, as what I do has evolved at my company where I work. So that's the same thing with teaching. I'm not always teaching the same class over and over." Oliver (Interview #2) similarly emphasized his desire to modify his courses to ensure students receive a meaningful curriculum, saying, "I never teach it the same way twice. I vary the course depending on how it went last time. It's very much a dynamic labor of love. I don't just take a course and teach it the same way twice." Debbie (Interview #2) shared her mantra for evolving her pedagogy and staying connected with her students after years in the field, describing, "After 16 years, it has changed significantly. One thing I've realized recently is that we cannot assume the fundamentals that students come into the classroom with." Trinity (Interview #1) describes her evolving approach to grading and accepting that students find her a difficult grader, sharing, "I'm a lot more confident now, engaging with different types of students. Initially, I would get upset when students complained about my grading…Now, I don't take it personally." These comments highlight the importance of dynamic and adaptable teaching practices that align with students' needs and current trends.

Participants also recognized the role of professional development and collaboration in the evolution of their pedagogy. Debbie (Interview #1) reflected on the importance of institutional support, noting, "The [institution's name] had quite a few courses in professional development on pedagogy and understanding your own pedagogy, how you want to bring your instructional tactics to life." Allan (Interview #1) credited professional development sessions with shaping his teaching, stating, "I laugh

because I wouldn't have known what pedagogy was if I hadn't worked at the [institution's name]. They have a Teaching Excellence Program with sessions on various teaching strategies." These opportunities gave adjuncts valuable tools and resources to refine and develop their best practices.

Emphasis on Practical Application

Adjunct faculty underscored the importance of integrating practical application into their teaching practices to prepare students for real-world challenges. Allan (Interview #2) highlighted the significance of incorporating real-world scenarios into his teaching, sharing, "The program is very theoretical, and the students were not having that direct industry experience. So, I really wanted to incorporate real-world problems into the classroom and to bring in more of my business sense." Similarly, Lydia (Interview #1) highlighted her use of practical, real-world examples and hands-on assignments to engage students and equip them with pragmatic skills. She (Interview #1) shared, "I give them assignments through 3M and other software so they actually get hands-on experience with how all the different systems work. For instance, we discuss how to ensure there are no duplicate records when managing a master patient index." Harrison (Interview #1) discussed responding to discussion posts with real-world connections, explaining, "I share my experiences and ask them questions to engage them further." Trinity (Interview #2) noted, "When we're preparing students for the workforce, they need to understand the real-world implications of deadlines and responsibilities." She (Interview #2) added, "If they continue behaviors like turning in late work and expect leniency, they're going to be in for a very rude awakening once they enter the professional sector." Greg (Interview #1) highlighted his mantra for teaching his classes: "I operate from the perspective of

what the industry or businesses need." He (Interview #1) continued, "I remind them that if your boss asks for something, you don't just throw something together. You give them the answer they need." By simulating workplace tasks and integrating their professional knowledge, adjuncts ensure that their students gain relevant and transferable skills that align with industry standards.

Several participants emphasized the importance of fostering critical thinking and collaboration as part of practical application. Kellen (Interview #1) reflected, "I don't tell them they are wrong or right. I encourage them to think critically. This is part of my philosophy background: questioning everything and not accepting things at face value." Edna (Interview #2) echoed this sentiment, noting, "Students need to do the thinking for themselves. They need to understand there's more than a grade associated with why they're doing what they're doing." Debbie (Interview #2) highlighted the need for integrating teamwork, collaboration, and sharing: "Every workplace involves teamwork, and we need to simulate that in the classroom. Despite complaints about team projects, I think it's important to find a better way to make it happen." Lydia (Interview #1) described creating tasks that simulate workplace challenges, such as pairing students with diverse personalities to teach collaboration, saying, "I actually would try to pair people that weren't friends and have them do that kind of thing to give them an idea. That was always pretty interesting. Some people hated it, some people liked it." These strategies help students develop problem-solving skills and foster team building and collaboration.

Practitioner

Adjunct faculty emphasized how their professional and practical experiences shape their teaching methods and pedagogical understanding. Fred (Interview #1)

described the importance of hands-on learning, saying, "The ability to literally taste, touch, and walk in the shoes is an important pedagogical experience for students, especially as you increase the level of understanding and responsibility for the knowledge." This perspective highlights how real-world applications and professional expertise enhance teaching and bridge theoretical concepts with practical relevance, particularly at advanced levels of study. Allan (Interview #2) articulated the value of his professional background, noting, "Because I'm a working professional and bringing in my industry experience, I'm probably a stronger faculty member than tenure-track faculty with pedagogy backgrounds. I look at it through the lens of a business professional." Similarly, Harrison (Interview #1) credited his time in the private sector with providing a strong foundation for his teaching, stating, "I have to give credit to the time I spent all those years working in the private sector with companies that actually spent money on training and development." He (Interview #1) continued, sharing his growth into his role and knowledge acquisition, sharing, "I didn't wake up one day and have it. It's something that I kind of grew into." These reflections highlight how practical experiences enhance their content knowledge and develop their pedagogical ability to connect effectively with their learners.

Several participants highlighted how their roles as practitioners enable them to bring real-world scenarios into the classroom, thereby enriching the learning experience. Harrison (Interview #1) shared, "One of the things I do with discussion posts is respond to their discussions by bringing it into the real world. I share my experiences and ask them questions to engage them further." Lydia (Interview #1) adopted a similar approach, explaining, "I use my own personal life stories from the workplace... almost like a case

study, but we would do it out loud, right there in person. That also got the students to talk more." Oliver (Interview #1) highlighted how his curriculum is informed by workplace realities, sharing, "Listen, this is the way it is in the work world. You can't hide behind anything. So, get ready for the reality of the work world." These comments underscore the dual role adjuncts play as educators and practitioners, integrating their professional expertise to prepare students for the demands of the workforce.

Andragogy

Participants directly and indirectly discussed andragogy and its application in their teaching and learning. Andragogy, as established by Malcolm Knowles (1986), identifies the assumptions and motivators of adult learners, including self-concept, gaining experience, readiness, relevance, orientation, and motivation. Most adjuncts come into their roles with limited exposure to and understanding of andragogy. Four participants directly mentioned andragogy, while others unknowingly referenced components of the learning theory. Greg (Interview #1) discussed his background and knowledge at length, sharing, "I had the class on Andragogy," and his firsthand experience with adult learners. Harrison (Interview #1) also shared his educational journey, recounting, "One of my courses was in andragogy, which is teaching adult learners." Lydia (Interview #1) highlighted having a peer mentor and their role in introducing andragogy, describing, "My friend with the PhD in clinical psychology who gave me the book on andragogy because he said that to me. He said, 'I don't know why everybody talks about pedagogy here. These are adults. It should be andragogy.'" Meena (Interview #1), while not directly using the term Andragogy, identified "the Knowles method." These insights highlight some adjuncts' direct knowledge of andragogy, while

indicating that many adjuncts may not have thorough resources and knowledge of adult learning theories that could better support their teaching and learning.

Real-world application and relevance were recurring themes in participants' discussions about andragogy. Allan (Interview #2) articulated the essence of andragogy and his approach to fostering an authentic experience, saying, "I really wanted to incorporate real-world problems into the classroom and to bring in more of my business sense into what is a... It's global community engagement." Similarly, Lydia (Interview #1) shared her strategy of relating course content to students' current or future jobs, explaining, "Most of them want to become a supervisor or manager... I try to relate this to their work." Harrison (Interview #1) emphasized the value of integrating practical scenarios, stating, "People like stories... when you can interject real-life situations as part of the course, it makes it so much better." Janet (Interview #1) shared a similar sentiment, describing her use of hands-on tasks and group work to simulate workplace environments, which helped students develop skills applicable to the workplace. These reflections demonstrate how participants have adapted their teaching methods to provide meaningful and practical learning opportunities.

Participants also reflected on how understanding andragogy deepened their pedagogical knowledge and improved their teaching practices. Debbie (Interview #2) articulated a balance that requires a nuanced understanding of adult learners' needs, motivations, and barriers, saying, "Understanding the challenges students face—adult learners in my case—makes it clear they all bring something unique to the learning environment." Fred (Interview #2) articulated the commitment needed to fully support adult learners, describing, "we're geared to an adult learning environment. These are

people who have to live life. Life happens all the time. So, our ability to understand that life happens all the time with the audience that we have, our students, and the investment not only that they're making but the investment we're making is that you have to build flexibility into your environment." Greg (Interview #1) shared his drive as an educator and working with adult learners: "It's along the lines of improving the quality of their knowledge, their understanding, and their life when they look at what's going forward." He (Interview #1) continued to share about his learners and their focus, describing, "They have an idea of how they feel their life should be laid out before them and stuff like that, so they have a different motivation than someone who has to sit in the classroom. I try to focus on creating an environment where they can be more intellectual, or can elaborate more intellectually, versus just giving a standard answer on a piece of paper." Collectively, these insights highlight how adjuncts leverage their compassion and enthusiasm to create meaningful and relevant learning experiences for their students that align with the guiding principles outlined by Knowles (1986).

Pedagogical Strategies

Understanding the perspectives and experiences of adjunct faculty provides valuable insights into the strategies that contribute to effective teaching and student engagement. Drawing from their firsthand accounts, participants shared their practical advice and innovative approaches that they would offer to new adjunct faculty. The strategies shared provide a roadmap for new faculty entering the profession. Their insights (Table 6) reveal shared pedagogical strategies, showcasing the collective wisdom of experienced professional adjunct faculty and their recommendations for achieving success in the classroom and beyond.

Table 6

Professional Adjunct Faculty Strategies for Effective Teaching and Learning

Category	Strategy	Participant(s)
Encourage Active Learning and Engagement	Use discussion, assignments, comments, and video chats to encourage learning rather than prescriptive teaching.	Kellen
	Foster engagement by tailoring assignments and interjecting real-life examples into the course.	Harrison, Remi
	Promote peer engagement by encouraging students to connect and discuss course material.	Greg
Provide Updated and Relevant Resources	Integrate the latest research and articles into teaching, ensuring content is current.	Kellen, Remi
	Recommend optional resources to students to keep them informed about the latest trends.	Kellen
Adopt a Personal Approach	Get to know students individually and tailor teaching to their specific challenges.	Allan, Trinity
	Maintain an open-door policy to ensure students feel supported.	Trinity
	Start feedback with positive comments before addressing areas for improvement.	Edna
	Address individual student needs based on their challenges and circumstances.	Debbie, Barbara
Leverage Humor and Storytelling	Use humor and relatable anecdotes to make content more engaging and relatable.	Remi, Harrison
	Incorporate personal stories to make material more engaging and accessible.	Harrison
Adapt to Diverse Learning Needs	Slow down or speed up lessons based on student comprehension and needs.	Remi
	Incorporate hands-on learning experiences, especially in advanced programs.	Fred, Lydia

Category	Strategy	Participant(s)
	Adjust assignments and approaches to accommodate diverse backgrounds and learning styles.	Edna, Greg
Maintain Equity and Clarity	Be equitable in feedback, using tools like spreadsheets to track engagement with all students.	Barbara, Edna
	Provide clear instructions and use rubrics to guide students effectively.	Remi, Kellen
Focus on Professional Growth	Stay informed about new trends in pedagogy through professional development.	Kellen, Debbie
	Learn from observing other instructors and integrating best practices into teaching.	Oliver
	Continuously update teaching practices based on professional development workshops.	Remi, Allan
Encourage Lifelong Learning	Inspire students to become lifelong learners by demonstrating curiosity and adaptability.	Allan
	Lead by example by continuously improving teaching skills and knowledge.	Kellen
Foster Collaboration	Engage with other faculty members to compare notes and align teaching strategies.	Oliver, Allan
	Use mentorship as a way to share insights and support peers.	Pressley, Fred
	Participate in communities of practice for collaborative learning.	Allan
Be Flexible and Understanding	Allow late submissions and adapt to students' life circumstances.	Greg
	Recognize the individuality of students and adjust approaches accordingly.	Allan, Debbie
	Show empathy toward student challenges and support them holistically.	Trinity, Barbara
Utilize Technology	Embrace tools like AI and online platforms to improve teaching efficiency and relevance.	Kellen, Charlie

Category	Strategy	Participant(s)
	Incorporate multimedia, such as YouTube videos, to make content more engaging.	Barbara
	Use video feedback to make interactions more personalized and impactful.	Remi
Confidence and Preparedness	Be confident in teaching expertise and prepared with clear lesson plans and materials.	Barbara, Debbie
	Develop well-structured courses to ensure clarity and organization.	Kellen
Supportive Feedback Practices	Provide detailed, actionable feedback to help students improve and grow.	Edna, Fred
	Incorporate alternative feedback methods, such as video comments, to enhance engagement.	Remi
Enhance Student Motivation	Encourage students to take ownership of their learning journey and goals.	Barbara, Greg
	Celebrate student achievements to foster confidence and continued engagement.	Fred, Debbie

Note: The table reflects participant's strategies for improving student engagement, content delivery, and instructional effectiveness.

Summary

Pedagogical Knowledge (PK) encompasses a deep understanding of instructional practices, strategies, and methodologies that promote student learning (Mishra & Koehler, 2006; Shulman, 1986). This study explores how adjunct faculty develop PK, often through self-directed learning and experiential growth, rather than formal pedagogical training. Participants described their evolving pedagogical approaches, shaped by real-world teaching experiences, professional collaboration, and institutional challenges. Many faculty members initially enter the profession with strong content knowledge but limited instructional expertise, leading them to refine their teaching

practices over time through reflection, trial and error, and engagement with diverse student populations.

A key theme across participants' experiences is the iterative process of pedagogical development. Faculty members described shifting from rigid, content-focused instruction to more student-centered and adaptive approaches. They emphasized the importance of andragogy when working with adult learners, integrating real-world applications to enhance relevance and engagement. Many reported a lack of structured onboarding and professional development opportunities, highlighting the need for institutional support in fostering effective teaching strategies. Additionally, adjunct faculty consistently emphasized the value of flexibility, responsiveness to student needs, and ongoing professional development. These findings suggest that PK is an evolving construct, shaped by contextual experiences and ongoing pedagogical refinement, reinforcing the importance of professional development and collaborative learning in higher education teaching practices.

Content Knowledge (CK)

Participants emphasized the importance of continuously building their content knowledge to ensure relevance and rigor in their teaching. Many described their professional experiences as key sources of knowledge that informed their pedagogy. Quinn (Interview #1) shared, "A lot of what I'm teaching now I do on a daily basis or have done in the past. If it's a new topic, I might have to take a class myself or do some training. For example, when I was assigned a Java class, I hadn't written Java in a long time, so I had to refresh my knowledge." These insights demonstrate how adjuncts utilize their professional expertise to design effective and engaging learning environments.

Many participants reflected on actively seeking new knowledge to enhance their teaching. Kellen (Interview #1) emphasized staying current, explaining, “I have to stay current. When my students link a resource to their discussions, I go to the resource. I read the resource, and I learn a lot by doing that because that’s current.” Oliver (Interview #1) echoed this sentiment, saying, “As far as my knowledge is concerned, every day I learn. Every class I teach, I do continuing education courses. I sit in on other people’s classes so that I can get a feel for what they’re teaching and how they’re teaching.” This underscores adjuncts’ proactive steps to ensure their teaching remains up-to-date and impactful.

The importance of professional development was also a recurring theme when discussing content knowledge. Debbie (Interview #2) emphasized that educators must remain lifelong learners, stating, “Educators must remain consummate learners, constantly absorbing and digesting new information. They must continue professional development, read peer-reviewed journals, and stay updated in their fields.” Janet (Interview #2) reinforced this by discussing her engagement with professional organizations, explaining, “Continuing to learn about technology, AI, and how it can enhance our work in HR and in teaching and learning will also be important. I want to make sure I’m always bringing the latest and greatest tools and resources to my students and clients.” These experiences highlight adjuncts’ commitment to professional growth and their efforts to bring contemporary knowledge into the classroom.

Overall, adjunct faculty described their content knowledge as a blend of professional expertise, ongoing learning, and reflective practice. By staying engaged with industry trends and academic research, they ensure that their teaching remains relevant,

effective, and aligned with their students' needs. This commitment to continual learning enhances their teaching and serves as a model of lifelong learning for their students.

Definition

Content Knowledge (CK) refers to knowledge about the subject being taught or learned, or what the instructor knows about a subject they instruct (Mishra & Koehler, 2006; Shulman, 1986).

Content Knowledge Codes

Table 7 displays the a priori, emergent, sub-codes for pedagogical knowledge.

Table 7

List of A Priori, Emergent Codes, and Sub-Codes for Content Knowledge

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
Content Knowledge		**168 Total Codes**
	How Adjuncts Learn Their Craft	2
	● Lifelong Learning	69
	● Learning by doing	45
	Learning As an Educator	28
	● Learning From Students	24

Note. This data was pulled directly from Table 3, exploring only the Content Knowledge component of the TPACK Framework.

Content Knowledge Emergent and Sub-Codes

How Adjuncts Learn Their Craft

Participants described the development of their content knowledge as a continuous journey shaped by mentorship, professional experiences, and self-directed learning. Pressley (Interview #1) emphasized the breadth of opportunities for ongoing learning, reflecting, “There are a million ways you can continue to learn.” Allan (Interview #1) succinctly noted how he acquired his content knowledge, sharing, “My content knowledge comes from my past experience, research, and dissertation. I also learn from students as they progress. Professional development, webinars, and conferences help me stay current in my field.” Edna (Interview #1) shared how she keeps her knowledge sharp for each course she teaches, noting, “Developing content knowledge involved reading every article and chapter before the course started. I needed to be the expert from day one. Even now, I go back and reread materials to stay sharp.” Professional adjuncts actively engage in formal and informal learning opportunities to refine their craft and adapt to the demands of their roles.

Lifelong Learning

Lydia (Interview #2) noted the importance of being a lifelong learner as a professional adjunct faculty, sharing, “I always say, you have to be a lifelong learner. When you’re in healthcare, you have to be a lifelong learner. When you get your degree, you’re not done learning. You’re gonna have to go to continuing education. You’re always gonna have to learn.” Like Lydia, other participants emphasized the importance of lifelong learning as a cornerstone of their professional craft, describing how continuous education and engagement with current trends enable them to remain effective educators.

Kellen (Interview #1) underscored the necessity of staying updated, stating, “I depend on current research to learn what’s new, not just what the book authors say. We’re using a book published in 2020, and so much has changed since then.” Similarly, Fred (Interview #1) highlighted the critical role of ongoing education, explaining, “You can never stop reading. You just have to be connected. If you want to be in a practitioner role or a teaching role in technology, you’ve got to read.” These reflections demonstrate how adjuncts actively engage with new information to ensure their professional knowledge remains relevant.

Many described how their professional networks and organizational memberships support their lifelong learning efforts. Pressley (Interview #2) noted, “I’m a member of the [organization’s name], and they send me news articles and links all the time. Being part of organizations like these constantly gives you new material.” Harrison (Interview #1) also emphasized the value of professional connections and sharing: “Through my connections in HR and LinkedIn, I always read posts because it’s real-life stuff. I still converse with people who are working in the HR field.” By staying connected to professional communities, adjuncts gain access to cutting-edge knowledge and insights that enrich their teaching.

In addition to professional organizations, adjuncts are actively seeking opportunities to expand their knowledge through conferences, peer-reviewed journals, and other educational resources. Janet (Interview #2) highlighted the importance of maintaining credibility, explaining, “Being a member of the local chapter of the Society for Human Resource Management, along with national membership, helps me maintain my credibility as a faculty member.” Oliver (Interview #1) shared his feelings on lifelong

learning with a moment of levity, describing, “I think the day that I stop researching and learning will be the day of my funeral because I just love it.” Ultimately, participants view lifelong learning as essential to their professional and adjunct identity. Adjuncts continuously seek to expand their content knowledge and enhance their effectiveness as educators through personal study, professional networks, or structured development opportunities.

Learning By Doing

Participants highlighted some of the unique characteristics of their careers and how they have, and continue to, learn their craft. Fred (Interview #1) shared, “As director of IT, I do this every day…I fail every day, and then I get up and try something else every day. All of that now goes toward the ability to share that information—good, bad, or ugly—with students.” Similarly, Janet (Interview #2) reflected on the value of her career experience, stating, “The most value I bring is the practical experience of 32 years in different markets around the world, in different experiences.” This active engagement with professional networks allows faculty to bring current, relevant information into the classroom.

Some participants shared specifics about their day-to-day professional roles. Barbara (Interview #1) shared her role: “In my day-to-day job, I definitely have more of a leadership role, more of an admin role. I don’t just facilitate. I actually have to manage.” Kellen (Interview #1) shared his unique background, saying, “My first career was as an executive chef.” While Trinity (Interview #2) said, “My job was to update the training materials that our current staff used and to conduct training courses for incoming employees.” Participants shared about their professional backgrounds and how they have

developed their knowledge. These narratives illustrate the profound impact of experiential learning in shaping the content knowledge of adjuncts.

Learning As an Educator

Learning a professional's craft is primarily done directly within their day-to-day career. However, participants shared their experiences of learning about their craft while serving as educators. Pressley (Interview #2) emphasized the importance of learning through professional organizations and peer-to-peer collaboration, sharing, "I attend conferences, participate in teacher blogs, and exchange strategies with colleagues. It's a back-and-forth sharing that helps me grow as an educator." Overall, adjunct faculty describe their content knowledge as a dynamic aspect of their professional identity, informed by practical experience, research, and engagement with their students. Their reflections reveal a commitment to continuous improvement, ensuring that their teaching remains relevant, impactful, and aligned with the needs of learners.

Learning From Students

Participants frequently highlighted how their students are critical in shaping their content knowledge and pedagogical strategies. Kellen (Interview #1) emphasized this dynamic, stating, "They should keep in mind that their students, who are living these experiences, may have better ideas, different ideas, ideas worth listening to, worth debating over. I encourage them, as I do, to continually learn from my students and the research they provide." Similarly, Pressley (Interview #1) shared how student contributions enrich her teaching materials, describing, "I'll click it and put it in my resource library. I always ask if I can use it, and usually, one student each quarter will

have something exceptional." These reflections highlight how adjuncts value student input as a contemporary and practical knowledge source.

Participants also discussed how interacting with students helps them refine their teaching approaches. Debbie (Interview #1) noted the importance of adapting her methods based on student mindsets, explaining, "Every student and every course will have different mindsets... You have to know who you're teaching and what mindset they have based on the subject matter. It's never static in the classroom." Allan (Interview #1) echoed this sentiment, emphasizing how students challenge him to grow as an educator, sharing, "I love to be taken out of my comfort zone, and I love students to push me there." While Oliver (Interview #1) shared, "Everyone has a story, and I learn from every one of them. I try to tailor their experience, especially at the graduate and Ph.D. levels, to their unique needs and background." Participants emphasized the importance of using their teaching as a two-way learning opportunity to continually engage in and inform their pedagogical development.

Overall, participants described their teaching role as an opportunity for learning where students serve as valuable contributors to their educational growth. By incorporating student insights and resources into their toolkits, adjuncts are committed to fostering collaborative and inclusive learning. This exchange enriches both the educator's and the student's experiences.

Summary

Participants described their development of content knowledge and subject-matter expertise through two main perspectives: learning throughout their careers and as educators. Each style of learning is balanced by professional adjunct faculty who are

lifelong learners. The initial learning and maintenance of such skills and knowledge never truly end. Participants emphasized the importance of staying current in their respective fields, particularly in rapidly evolving industries. They shared their reliance on professional networks, organizational memberships, and digital platforms to access new materials and remain connected with industry trends.

Additionally, participants emphasized the value of experiential learning in shaping their expertise. Many described learning by doing, using their real-world professional experiences to inform their teaching. Their day-to-day work outside academia allows them to integrate practical applications into their pedagogy, providing students with relevant, hands-on learning experiences.

They also shared their experience of learning through their students. Many participants detailed how they closely review resources that students cite and reference throughout their work. Typically, they will take those materials and further explore the content to refresh their knowledge and understanding of the topic discussed. Additionally, some participants shared that they bookmarked those resources to share with future courses, ensuring that other learners may gain exposure to important knowledge. Their structured and informal learning allows them to refine their instructional strategies and subject-matter expertise. These insights indicate the importance of content knowledge and the development of subject-matter expertise for professional adjunct faculty. Institutions must offer ongoing professional development opportunities, both formal and informal, to their professional adjunct faculty. These opportunities offer a rich environment for instructors from diverse academic disciplines

to share their insights and experiences. Acquiring relevant content knowledge ensures that learners receive the most contemporary expertise.

ConteXtual Knowledge (XK)

I integrated XK into the study by providing participants with broad examples during the interviews of what could be considered context within their teaching and learning. A literature review of the TPACK Framework provides limited details on XK; thus, providing a clear definition to participants proved difficult. Although the definition was slightly vague, the participants provided numerous anecdotes and insights into their perceived understanding of contextual factors and how these factors have impacted their teaching and learning as professional adjunct faculty. Some of the emergent codes from the discussions include individuals, challenges facing adjuncts, curriculum, institutional policies, and institutional support.

Definition

Within the TPACK+XK framework, Contextual Knowledge (XK) serves as the encompassing perimeter of the framework, collecting all other influences, such as student characteristics, teacher attitudes, and the availability of technologies (Mishra, 2019; Mishra & Koehler, 2006). Kelly (2010) qualified contextual knowledge as "one of the most complex, important, and least understood components" of the TPACK framework (p. 52).

Generally speaking, this refers to an educator's understanding of the broader environment they teach (including who their students are), encompassing institutional policies, available technological resources, and a broad understanding of social and political influences within education and the community. This form of knowledge is

critical for recognizing the constraints and opportunities that shape their instructional opportunities. The effective integration of XK within the TPACK model highlights teachers' need to develop a nuanced understanding of their teaching contexts. Educators can make informed decisions about implementing technology, pedagogical strategies, and content knowledge appropriately by thoroughly understanding their unique XK.

ConteXtual Knowledge Codes

Table 8 displays the a priori, emergent, sub-codes for contextual knowledge.

Table 8

List of A Priori, Emergent Codes, and Sub-Codes for ConteXtual Knowledge

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
ConteXtual Knowledge		**887 Total Codes**
	Individuals	
	● Professional Adjunct Faculty	11
	○ Identity	39
	■ How They See Themselves	55
	■ Practitioner Mindset	11
	○ Balancing Work & Roles	14
	○ Personal Life	37
	● Students	25
	○ Characteristics of Students	39
	■ Language Barriers	6
	■ Generational Learners	11
	● Adult Learners	49
	○ Personal Life	12
	Challenges Facing Adjuncts	55
	● Role as Adjunct is Tedious and Stressful	18

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
	○ Poor Pay	36
	○ Lack of Benefits	11
	○ Lack of Role Stability	12
	■ Fear of AI Replacement	
	Curriculum	20
	● Role as Educator is Undermined	5
	● No Clarity on Curriculum Alignment	7
	● Lack of Ability to Edit	26
	● Limited Academic Freedom	21
	Policies	21
	● Bureaucratic Change	19
	● Artificial Intelligence	37
	● Cheating/Integrity	34
	● Culture of Care	15
	● Pay	31
	○ Fast Food/McDonald's	24
	● Rubrics/Grading	24
	● Student Engagement	21
	Institutional Support	18
	● Feeling Supported	5
	● Lack of Support	55
	● On Adjuncts to Seek Out Support	18
	● Lack of Belonging	19
	● Lack of Community	26

Note. This data was pulled directly from Table 3, exploring only the ConteXtual Knowledge component of the TPACK Framework.

ConteXtual Knowledge Emergent and Sub-Codes

Individuals

Participants in this study shared insights about themselves and their students. Those insights highlighted the diversity of learners and educators in terms of education, as well as the range of ages, backgrounds, geographic locations, and other unique attributes. Ultimately, no two learners or educators are the same.

Professional Adjunct Faculty

When you strip away the titles and professional experiences, professional adjunct faculty are just like the learners they teach: regular people. Their role as a professional adjunct faculty member is a small part of their identity, and they typically have many responsibilities outside of the classroom.

Identity. The identity of adjunct faculty members is inherently tied to their professional roles and perceptions of their positions within academic institutions. Participants frequently described their identities as being shaped by their contributions to student learning and institutional dynamics, often with a focus on facilitation rather than inclusion in the broader academic mission. Meena (Interview #2) encapsulated this sentiment, sharing, "My role is literally there to facilitate the student learning experience." Similarly, Fred (Interview #2) articulated this point by noting, "I'm considered a contractor, so I am a business entity. They're more concerned with making sure I put my time card in on time than, you know, how good of an instructor am I?" This framing of adjuncts as "business entities" underscores a perceived devaluation of their professional contributions to higher education.

Trinity (Interview #1) shared feelings about particular terminology and how specific titles are used and provided alternative titles, saying, "Changing the title to something like 'associate faculty' sounds better. Show us we are valuable and treat us that way." Similarly, Allan (Interview #2) shared his thoughts: "The term 'adjunct' and being a contract employee is demoralizing. Making them more formal employees would be fantastic." He (Interview #2) continued, "I usually just say I'm a faculty member or a professor. I don't use the term adjunct." Others shared that they felt more closely aligned

with being called a facilitator. Kellen (Interview #1) defines his use of the facilitator term, saying, “I am a facilitator. I don’t write the courses.” Similarly, Meena (Interview #1) shared her perspective about her shift in identity, saying, “It used to be an active facilitator role, but now it’s low-touch. AI could replace adjuncts, and they’d save money.” Greg (Interview #1) also shared his experience and articulated his identity, saying, “They didn’t even call us professors; they called us facilitators,” he continued, “I hated the term ‘facilitator.’”

Rather than venting about his frustration towards the facilitator’s terminology, Greg (Interview #1) promoted an alternative title, sharing, “I like to think of myself as a coach along those lines. I told a student the other day that my job is two things: to get them through the course with the grade they want and the knowledge they need.” Like Greg, others were less concerned about the implications and focused more on the opportunity to highlight their role and the impact they could make on their students. Remi (Interview #1) shared her thoughts on using a completely different terminology, which may be a better indicator, saying, “I don’t even like the term teacher. I feel more like a person who gives knowledge or a motivator. True learning comes from within, so maybe motivator is a better word for an instructor.” Harrison (Interview #1) shared his indifference, saying, “It’s whatever title they give me. I basically say I’m a part-time instructor at the college level for baccalaureate and master’s level courses. I don’t have to say “Professor,” I mean, I’m not hung up on all that, but that’s how I explain myself. I’m an instructor, a part-time instructor.” This focus on the student experience reflects a shared commitment among adjuncts to their pedagogical mission, even when institutional structures may not fully support or recognize their contributions.

How They See Themselves. Participants shared their roles, institutional structures, and personal perceptions, which contribute to how they see themselves. Participants frequently described their work as facilitative rather than feeling integrated into the broader university mission. Many participants noted the stigma and limitations associated with the title "adjunct." Fred (Interview #2) emphasized the nature of the role, stating, "I'm full-time. It just so happens I'm being utilized by this entity called the university on a part-time basis." Similarly, Allan (Interview #2) shared that the term "adjunct" felt demoralizing, adding, "Making [adjuncts] more formal employees would be fantastic. In my undergrad class at [other institution], I was an appointed faculty member. Just the term appointed meant more to me than 'adjunct.'"

Some participants, such as Greg (Interview #1), expressed dissatisfaction with being labeled facilitators rather than educators, stating, "They didn't even call us professors; they called us facilitators," and noted that such terminology diminished their perception of their professional role. Kellen (Interview #1) feels a lack of power and autonomy, sharing, "I am a facilitator. I don't write the courses. The course shell includes discussion rubrics, required readings, and suggested readings." Edna (Interview #1) expressed similar frustrations, sharing, "I still feel like a robot, just grading papers without any autonomy or say in the course content."

Despite the challenges, some participants found meaning in their roles. Barbara (Interview #1) viewed her position as part of a larger academic mission, stating, "I think being an adjunct faculty member is such a meaningful role. We are all a part of this bigger picture." Charlie (Interview #1) echoed this sentiment, describing her role as "to

inspire individuals to want to learn." These shared perspectives highlight the intrinsic value that participants find in their role in supporting student success.

The stigma surrounding adjunct positions also affects how faculty navigate their identities. Barbara (Interview #1) recounted feeling like an outsider early in her career, stating, "I felt like the lone wolf and definitely had what I would call imposter syndrome, like a previous prospective employer told me I didn't really belong there." Similarly, Fred (Interview #1) remarked, "I belong to five committees right now... I am pretty much looked at as a second-class participant."

The identity of adjunct faculty, as reflected in the narratives of these participants, is marked by a tension between their professional aspirations and the systemic constraints of their positions. While many adjuncts take pride in their contributions to their institutions and student success, the lack, or perceived lack, of institutional support and appreciation often diminishes their sense of professional fulfillment. It can negatively impact their self-identification as adjuncts. Addressing these issues and shifting the perceived stigma surrounding adjunct service requires a concerted effort by institutions to reevaluate the roles and classifications of adjuncts and identify meaningful ways to improve support and inclusion.

Practitioner Mindset. The practitioner mindset is a defining aspect of professional adjunct faculty identity, emphasizing the integration of real-world experience into their teaching and learning. Many participants viewed their role as a bridge between theoretical knowledge and practical application. Fred (Interview #2) articulated this perspective, stating, "It's solidified what I consider to be the optimum, which is the scholar-practitioner model. Students aren't particularly dumb, and the type

of student I see is not the 19 to 26-year-old. I'm seeing adults in various walks of life." His observation underscores the importance of leveraging professional expertise, while others highlight the value of bringing industry insights into the classroom. Janet (Interview #2) similarly reflected, "The most value I bring is the practical experience of 32 years in different markets around the world, in different experiences, and having been blessed with the opportunity to work for some very forward-thinking HR people early on in my career." This sentiment was echoed by Harrison (Interview #1), who emphasized the importance of lifelong learning, stating, "When I see things that cross over into the HR world, I read them, make a point of it, and bring them into the classroom." It is a common practice for adjunct faculty to use their professional backgrounds to bring depth and relevance to their teaching.

The practitioner mindset also cultivates critical thinking skills and motivates students to engage actively with their learning. Trinity (Interview #2) emphasized the importance of scholarly rigor, explaining, "I want you to leave this class with a good understanding and grasp of how to maintain a scholarly tone and how to write in a way that you are writing with academic rigor." Charlie (Interview #1) and Trinity (Interview #2) highlight the commitment to teaching and mentoring students, guiding them toward personal and professional growth. The practitioner-driven mindset drives the knowledge of professional adjunct faculty, positioning them as educators who blend academic instruction with experiential insights.

Balancing Work & Roles. Error! Bookmark not defined.Balancing professional responsibilities with personal commitments is a central challenge for all faculty, juggling multiple roles within and beyond academia. Trinity (Interview #2) described the demands

of her schedule, stating, “I don’t want to reinvent the wheel because this is something I’m doing on a part-time basis. I have a full-time job and run two businesses, so I need it to be as streamlined as possible.” Lydia (Interview #2) further emphasized the balancing act inherent in adjunct work, explaining, “Usually people are either working full time, or they’re working at many different schools.” For her, managing both her professional and personal life involves balancing academic responsibilities and family needs, often at a personal cost. Trinity (Interview #1) similarly noted the strain of maintaining multiple roles, stating, “Work all day, write at night, or whatever. And then, you know, I’ve got my courses, emails to answer, or papers to grade. I don’t really have the bandwidth”.

Personal Life. Real life comes with many challenges, and professional adjunct faculty deal with the same issues that anyone else does. Participants encountered relatable moments and shared stories about their personal lives throughout the interviews. Since the interviews were all conducted via Zoom, virtual interviews would not be complete without dealing with computer or internet issues (Allan, Charlie, Edna, Remi). Multiple interviews were put on hold so a participant could move to a different room in their house (Remi), take a phone call from a family member or work (Fred, Lydia), or plug their laptop back in because the battery had died (Edna). There were also wholesome moments when a thunderstorm passed during an interview, and the family dog struggled with the stress from the storm. So, our interview was conducted in the basement, where the dog would be more comfortable and relaxed (Remi). That was not the only dog that appeared during an interview; two other participants referenced their dogs and their presence, either through barking during the interview or the fear that they might bark (Edna,

Kellen). This is a reminder that these are real people with real lives unfolding around them.

Another topic was military participants, former military spouses, partners, or family members associated with the military. Out of respect for their identities, their names will not be shared, but four participants shared their connection to the military. They shared about the lived experiences from their time in the military that contributed to their teaching skills, one sharing about getting their first exposure to teaching when they were told they would be running a training, saying, "Believe it or not. It started in the Navy, right, on my first submarine. They said, "Oh, you need to go to this training course to learn to be a trainer." Another participant shared their first exposure to teaching from their time in the Coast Guard: "I ended up teaching navigation, search and rescue, and communications at the Coast Guard Academy." They went on to say, "I loved it. Actually, if I could have stayed, in fact, if I was older and wiser and maybe not as hot-tempered, I probably would have stayed."

As real people, they face daily struggles, often related to spouses dealing with severe or ongoing health issues. Out of respect for their situation, their names will not be shared, but one participant has a spouse who is dealing with dementia; they shared, "Unfortunately, the situation is finite, but I don't know where the end is." Another participant shared about their battle with cancer and the difficulty of juggling their health, teaching capabilities, and jobs. Others shared about going through a divorce and the strain on them, and how critical it was to find a teaching role to be able to provide for their family. Each issue adds up and can place extra stress on making enough money to

provide for their family, deciding on their next professional move, making decisions around retirement, or simply taking the next steps in life.

Students

Participants described their students as diverse individuals with unique challenges, motivations, and perspectives, necessitating an empathetic and flexible approach to teaching. Allan (Interview #1) emphasized the value of seeing students as individuals with distinct stories, stating, “Each student has a story, and understanding those stories is crucial.” It was reiterated throughout the interviews that the importance of viewing students not just as learners but as individuals with complex lives was emphasized, noting that faculty play a vital role in supporting their educational and personal growth.

Characteristics of Students. Participants frequently noted the importance of understanding students’ backgrounds and individual circumstances. Greg (Interview #2) explained, “We don’t do a good job of understanding students’ backgrounds and experiences. For example, a farm kid has a different understanding than a city kid. How do we present theories or subjects to different students?” Debbie (Interview #2) highlighted this topic, saying, “Another challenge is the diversity of learners, cultures, values, and backgrounds in the classroom.” Janet (Interview #2) expanded on this by acknowledging classroom generational and cultural differences, stating, “We have five generations at work right now. Understanding the dynamic and respecting the diversity of thought processes...is crucial.” Greg (Interview #2) also observed, “Students evolve and change,” illustrating the adaptability and compassion required of adjuncts to foster meaningful learning experiences for students with diverse and complex characteristics.

Generational Learners. The presence of multiple generations in today's classroom was another topic discussed by participants. Debbie (Interview #1) highlighted the diversity of generational learners, stating, "You now have the potential to have at least five age generations in your classroom... Baby Boomers, Gen X, Millennials, Gen Z, and Gen Alpha. Contextually and pedagogically, those are inextricably linked because the way one generation views and values things isn't the same that Gen Alpha does." Janet (Interview #2) emphasized the importance of recognizing and respecting these generational differences, observing, "Dealing with the fact that generations are different and every generation has its own way of thinking... Starting with the principle that we're all uniquely different, we should come together and figure out how to work together." Similarly, Pressley (Interview #1) noted how age can impact learning, particularly for nontraditional students, explaining, "Some students, like stay-at-home moms who raised their babies and now decided to get back and join the career force, struggle a little bit. It just depends on how committed they are to learning it. Age can sometimes be a factor."

Participants all noted the challenge of adapting their teaching to align with the preferences and characteristics of younger generations. Debbie (Interview #2) identified Gen Z as a particularly distinct group, stating, "The biggest challenge will be adapting to the new generation of students, such as Gen Z, coming into the classroom." Harrison (Interview #2) discussed another consideration around first-generation learners, noting, "More people are going to college, including first-generation students and those from different countries with language barriers. There's a diverse student who may not understand our customs or norms. We need to support their differences and be sensitive to their needs." Charlie (Interview #2) echoed these sentiments, describing, "We have a

lot of older people coming back to school. So, you have a generational thing when it comes to technology, where that baby boomer age group may not be as willing to really learn and tap into that technology or find it as valuable as the millennials or the Gen Z students. So, to me, you can have a potential generational issue when it comes to technology." These observations underscore the dynamic nature of generational learners and the ongoing requirement for institutions to guide and support adjunct faculty in acquiring the skills and techniques necessary to deliver meaningful learning experiences.

Language Barrier. Language barriers can pose significant challenges in higher education, particularly for international and multilingual students who must navigate both academic and cultural differences. Greg (Interview #1) shared from his experience, saying, "People raised in Guatemala City, for example, have a different outlook on life. Their brains are wired differently. And I think we lose that in an AI world. It all gets pushed together." Similarly, Charlie (Interview #1) emphasized the challenges of teaching students for whom English is not a primary language, stating, "Teaching someone who doesn't understand aspects of English is challenging. Even with writing and academic integrity, getting students to understand they must credit the original author." Kellen (Interview #2) encapsulated the globalized nature of education, stating, "The world is shrinking. We deal with global issues right here…," going on to note, "The more we understand cultural differences from their perspective, the better prepared we will be for global challenges." These insights reiterate the importance of embracing diversity and fostering an inclusive learning environment, supporting students from diverse linguistic and cultural backgrounds. This further supports the idea that

institutional guidance should be provided to help adjunct faculty identify resources for developing pedagogical skills that enhance equity and accessibility in their classrooms.

Adult Learners

The identity and experiences of adult learners in higher education are distinct and shaped by their life circumstances, responsibilities, and motivations. Participants highlighted the unique challenges and opportunities that come with teaching adult students. Barbara (Interview #1) observed that most of her students are "not fresh out of high school. The majority have families. The majority are really eager and driven to be here." While others emphasized the importance of empathy and flexibility when working with adult learners. Trinity (Interview #2) shared how her approach to teaching has become "much more empathetic and compassionate" as she recognizes that "life doesn't stop when you're in school." Quinn (Interview #2) described his teaching philosophy as one that treats students "as equals, because everybody I have has families, has jobs, and I have to take that in." He (Interview #2) also shared, "I may be the professor, but I'm only the professor because I'm further along in my educational journey. I have a master's. I've worked in the industry. They're working in the industry too." Allan (Interview #1) touched on the differences between younger and adult learners and how he approached working with them, saying, "At the adult level, you teach as a mentor. At the young adult level, you teach as a professor. There's a fine balance between the two." This perspective reflects the mutual respect and understanding that adjunct faculty often foster in classrooms with adult learners.

Participants also highlighted the diverse backgrounds and experiences adult learners bring to the classroom. Allan (Interview #1) noted that "Adult learners,

especially those in their thirties and forties, trying to complete their bachelor's degrees, often have had obstacles and failures in life, and a minor bump in the road can become a huge obstacle." He (Interview #1) emphasized the importance of recognizing these challenges and supporting students as they navigate them. Greg (Interview #2) added, "I teach now predominantly adult students. They have an idea of how they feel their life should be laid out before them and stuff like that, so they have a different motivation than someone who has to sit in the classroom. I try to focus on creating an environment where they can be more intellectual…" Remi (Interview #2) shared about finding success by connecting with her students, saying, "I have found that if you treat students like adults, that's probably the biggest comment I've gotten over the years. 'Thank you for treating me like an adult and not talking down to me.'"

The focus on real-world application and relevance also emerged as a critical theme. Allan (Interview #2) described his role as helping students become "lifelong learners," stating, "Natural curiosity for the student—where do they want to go? How are they incorporating this? How can we make them a better person?" Barbara (Interview #2) echoed this sentiment, sharing how she incorporates practical examples and resources into her teaching to make the material more meaningful for her students. These approaches illustrate how adjunct faculty tailor their teaching to meet the needs of adult learners who seek education as a pathway to personal and professional advancement, revealing the complexity of teaching adult learners. Their insights emphasize that professional adjunct faculty must strike a balance between empathy, flexibility, and rigor while addressing students' diverse needs and aspirations.

Personal Life. Students' personal lives significantly influence their educational experiences, with many balancing family, work, and other responsibilities alongside their studies. Trinity (Interview #2) noted her empathy, saying, "Unfortunately, life doesn't stop when you're in school. And from my personal experience, it seems to be even more stressful because I was in school and then dealing with life challenges." Participants also emphasized the importance of empathy and flexibility in addressing students' personal challenges. Harrison (Interview #2) shared his guidance to students when he told them "To take their time if they're sick or dealing with personal issues. Family is more important. I try to be understanding and supportive because I want them to be successful. I'm much kinder than professors were when I went to school." Similarly, Remi (Interview #1) highlighted the necessity of accommodating students' complex lives, saying, "Many are in the military, have just moved, or are waiting for money to buy a laptop. It's becoming more widespread, with more professional development days focused on flexibility."

Challenges Facing Adjuncts

Professional adjunct faculty face challenges that impact their professional roles. Many describe their positions as tedious and stressful, compounded by uncertainty about securing their next job due to inadequate pay and the absence of benefits. Additionally, some shared that their role as educators is being undermined by their institution's restrictive curricular structures, which limit their ability to align content with their pedagogical goals or make meaningful edits. The lack of academic freedom makes it more difficult for them to exercise creativity and adapt to the diverse needs of their students. This further highlights issues that may necessitate institutional reforms to

enhance the experience for professional adjunct faculty and encourage future leaders to consider teaching in higher education.

Roles as Adjunct is Tedious and Stressful

Participants described their roles as stressful and tedious, primarily due to systemic challenges that undermined their satisfaction and stability. Barbara (Interview #1) highlighted the unpredictability of adjunct work, stating, "It feels like I need to be on the computer every day looking for an offer, which is stressful. I worry if I'm being punished if I'm not given a class, or if it's because they don't have any availability." Barbara (Interview #1) expressed her concerns, saying, "The foundation for me is the concerns about the courses I teach, their frequency, and if I'm meeting the guidelines to continue teaching." Similarly, Fred (Interview #2) expressed frustration with the evaluative focus of institutions, noting, "I think the institution is geared to figure out what I'm doing wrong. There is nothing that I found in my institutions, all of them, that are geared to finding out what I'm doing right."

Time constraints further exacerbate these challenges, as many adjuncts balance multiple roles. Quinn (Interview #1) discussed his challenges, saying, "Time is my biggest challenge. Balancing a day job, family, and grading can be tough." Barbara (Interview #2) shared a similar sentiment: "Like, where do we find the time to really do the work and then do it well? Because I think a lot of times people are like, you know, I want to get this done. I want to do it, but I don't have the time." For some, this balancing act diminishes their capacity to engage meaningfully with their work, contributing to feelings of inadequacy. Lydia (Interview #1) shared her biggest challenge: "It's my feeling of inadequacy that I'm not giving them enough." These reflections highlight the

pressures faced by adjuncts, ranging from managing time to meeting institutional expectations.

Poor Pay. The issue of poor compensation is a well-documented challenge for adjunct faculty, contributing to their feelings of undervaluation and financial instability. Lydia (Interview #2) added her frustrations with flat-rate contracts, stating, "I'm actually making like a penny an hour at this point because it was a contract flat rate." Similarly, Allan (Interview #2) described the pay as "basically minimum wage." Oliver (Interview #2) talked about the disparity between the rising costs of education and the continued low wages, saying, "It's no secret that in-class education is very expensive. People are having trouble paying their bills. I personally don't know where the money is going because it's not going into my pocket."

The lack of financial incentives also influences participants' willingness to invest in their teaching. Allan (Interview #2) explained, "The pay for adjuncts is so low that I'm not willing to invest my own money to incorporate technology because it's not fair to me. Kahoot! is another $300 a year for an academic license. Well, that's not worth it." Edna (Interview #2) articulated the broader systemic issue: "They're not having to pay all of the extras because [adjuncts] are all part-time workers. If the bottom line is prioritized over the quality of education, I think that's something worth examining." Edna (Interview #2) continued, highlighting the risk institutions run by offering poor pay and the lack of incentives for adjuncts to justify their hard work for low compensation, sharing, "I'm going to be one of those teachers who moves on to something better because they aren't paying me what I'm worth. If they don't pay me what my time and education are worth, they won't keep me. Industry professionals stepping into adjunct roles for significantly

less than what they make in their profession is baffling unless they have a love of sharing their expertise."

Some participants shared that teaching is important to them despite the poor pay. Harrison (Interview #1) made it clear the pay is not an issue, sharing, "The money, to me, has always been—I couldn't care less. The money is not important. First of all, adjuncts do not get paid that well anyway." He (Interview #1) doubled down on the sentiment to say, "If it was for money, I wouldn't be doing it." Trinity (Interview #1) shared a similar sentiment, saying, "It's more than the money; it's about giving back in a self-sacrificial way."

Fast Food/McDonald's. Participants starkly contrasted the pay disparities faced by adjunct faculty with wages in the fast-food industry. Barbara (Interview #1) said about fast food wages, "In my state, fast food pays $20 an hour, and I'm making just a bit more than that. It's definitely a labor of love, not a necessity." Meena (Interview #2) echoed a similar comparison, saying, "At McDonald's, I could make almost as much with no responsibilities. So, unless it's a full-time salary comparable to what I could make as a public school teacher, they couldn't keep me." Meena (Interview #1) continued, sharing, "At $20 an hour, I focus on staying out of trouble and meeting requirements." Edna (Interview #2) further emphasized the fast food comparison, noting, "I don't feel valued when you're making a dollar more than someone at McDonald's." These sentiments underscore the longstanding discussion about the pay disparity affecting adjunct faculty and the value of their contributions to higher education.

Lack of Benefits. The lack of clear benefits for adjunct faculty was an additional topic discussed. Without perceived support and benefits, it undermines the motivation of

professional adjunct faculty to stay engaged. Greg (Interview #1) articulated this disparity, stating, “As an associate faculty, feeling like you’re part of something, part of the organization, I felt very much like an adjunct and very much on the outside. When everything was said and done, there was no organizational benefit associated with teaching. I got the benefit from the students but not from the organization.” Edna (Interview #1) summarized her frustration with the lack of benefits and poor pay, saying, “If this is all I’m getting out of my PhD, it isn’t worth it. I don’t plan to stay as an adjunct faculty. I have one more year of education, and then I’m moving to an area with multiple colleges and hoping to find a full-time position.” Meena (Interview #2) shared about the lack of incentive to invest more of her time, “there is no reward for doing more, right?”

Lack of Role Stability. The uncertainty surrounding the lack of stability and not knowing if and when they will receive their next teaching role was another topic discussed by participants. Allan (Interview #1) highlighted the precarious nature of adjunct employment, sharing, “Oftentimes, the first job I ever got was literally the day before classes started. They called and said, ‘Hey, we have this position, please. We need a person,’ and I said, ‘Great, I’ll take it.’” Fred (Interview #2) described the anxiety of relying on course assignments without guarantees, stating, “I have no future. They could choose not to send me a contract next week for a new course.” Such uncertainty places extra pressure on adjuncts to accept roles when offered; Allan (Interview #2) shared, “The fear with adjuncts is that if you take time off, you won’t be invited back, or they will replace you.” Similarly, the situation forces adjuncts to remain on high alert for opportunities; as Barbara (Interview #1) noted, “It feels like I need to be on the computer every day looking for an offer, which is stressful.”

Fear of AI Replacement. Some participants are increasingly apprehensive about the potential of artificial intelligence (AI) to replace their roles. Meena (Interview #1) expressed concern that "AI could replace adjuncts, and they'd save money." Meena (Interview #2) also acknowledged the growing capabilities of AI, explaining, "AI has been able to allow me to cover a lot more material faster, and then all I have to do is take that summary and apply my experience. I can definitely see where AI would replace the adjunct role." Remi (Interview #2) also reflected on the implications of technological shifts, stating, "My biggest fear, to be honest, is the human component of teaching. How much of it can be just given...Are we going to be replaced by YouTube videos?"

Curriculum

Another topic throughout the interviews was the restrictions placed on the curriculum at the participating institution. For context, this institution provides its adjunct faculty with a course shell but does not directly provide access to update, modify, or tailor the curriculum. Faculty are encouraged to use the announcement tool and discussion board forums to communicate with their students. They are given rubrics for all graded activities and have specific criteria for the number of responses they are expected to provide to their learners. However, not all participants voiced concerns about the ability to edit the curriculum, while others shared their experiences designing and developing curricula at both the participating institution and other institutions.

Curriculum Development

Some participants shared their extensive experience in curriculum development, showcasing their expertise to enhance educational programs despite institutional constraints. Kellen (Interview #2) shared his role in developing a curriculum plan for an

entire college, describing, “Immediately, I knew there was a need to set a curriculum plan for the whole college. So, we worked with the faculty, each individual faculty member with the assignments they had already been teaching and got them to write down what they thought their objectives were for their courses.” Kellen (Interview #2) also highlighted the transformative impact of this work, noting, “Prior to me getting there, there was no guarantee that students had the skills required to be successful.” Fred (Interview #1) emphasized the importance of aligning curriculum with clear objectives, reflecting on his experiences working collaboratively with departments to refine courses. Allan (Interview #2) detailed his experience working with an instructional designer at another institution to develop a new course, saying this about the process, “I really enjoyed it. I think that that is something that everybody should have the opportunity to do at some point.”

Some participants discussed their experiences in developing curriculum, specifically at the participating institution. Fred (Interview #2) shared how he became qualified to develop a curriculum, saying, “I’ve been through the formal program review training.” Remi (Interview #2) shared her experience and requested feedback from the institution about the quality of her course and modifications that could be made, describing, “Maybe about once a year, they’ll ask, ‘Hey, what do you think about this assignment? Do you think it was working? Why not? Let’s look at this rubric. How could we improve it?’” Debbie (Interview #2) shared the highlights of her curriculum development experience, saying, “...curriculum development, I can’t speak for all instructors, but I will say for me, it’s probably one of the most exciting parts of what we do. Curriculum development means that you have the opportunity to take a subject

matter, and research that subject matter to the best that you possibly can." Janet (Interview #2) also talked about her role in providing some curriculum support and how she enjoyed the process, recounting, "They actually compensated me for going through each of the chapters and providing them insights and feedback on what they wanted to change, what else I thought they should change that they weren't proposing to change, all of those kinds of things. That was a fun experience. I enjoyed doing that." These insights illustrate the value and desire of involving adjunct faculty in curriculum design. However, institutional structures limit their ability to apply this expertise consistently and provide the flexibility necessary to make even menial modifications to their courses.

Lack Of Ability To Edit

Participants expressed frustration with the institutional policies that prohibit their ability to modify or adapt the curriculum of the courses they teach, undermining their professional autonomy and pedagogical effectiveness. Edna (Interview #2) expressed frustration with the lack of flexibility, noting, "I have no ability to change the assignment to make it fit the students' experiences." Trinity (Interview #1) shared her frustration about a specific example: "It's frustrating when you don't have control over making necessary modifications." Oliver (Interview #2), like many other participants, shared this request to have more ability to make edits, saying, "I would like to see more independence and flexibility in terms of the ability of the instructors to design and teach the course their way rather than to a set curriculum or a set of objectives."

Participants frequently described the process for suggesting curriculum changes as cumbersome and unresponsive. Trinity (Interview #1) shared her experience with a particular quiz not being updated despite submitting her request for assistance, saying,

"I've been waiting for a quiz to be corrected since 2022." Pressley (Interview #2) noted the process to request assistance, sharing, "If we run across something, there's like a form that we fill out and send in," she continued, "If a student complains about it and I look into it, it's legit, then I submit the form, and if I have another student complain about it, then I'll usually go up the chain a little bit more." Allan (Interview #2) highlighted the challenges of relying upon this process, noting, "The challenge is outdated links and things of that nature, and I can't even get that changed. So, they have truly locked it down for faculty members." Oliver (Interview #2) noted how the lack of flexibility makes him feel, sharing, "I'm given a book and a set of guidelines and a standardized spiel, if you will, in terms of this is what you have to say, this is what you have to teach, and you can't vary from it, that is stigmatizing to me."

Participants also emphasized the broader implications of this lack of control. Meena (Interview #2) shared her experience identifying misalignments between the syllabus and assignments, explaining, "I sent it off with screenshots to show the misalignment, and the course developers were receptive, but there seems to be no clear mechanism for actually implementing those changes." Edna (Interview #2) echoed this sentiment, sharing her frustration with outdated templates, saying, "When you bring something to their attention, instead of fixing it, they just say, 'Make sure your students know to adjust,' which is ridiculous."

Allan (Interview #2) noted that this practice does not exist at all in the institutions where he teaches, sharing, "[this institution] has locked down Canvas, so I have no ability at all to make any changes. The other schools, I have the ability to edit. I have to let them know. They have what I think they're calling a sandbox course." Remi (Interview #2)

shared a similar insight from her experience at other institutions, saying, “At my other community college, [other college’s name], we have an English department rubric that is really supposed to be used on all of the major assignments. But they allow me to use my own rubrics… they have allowed me to create my own.” Oliver (Interview #2) also shared his experience at other institutions, noting, “In other schools, I pick the book, design the curriculum, and teach it my way. I’m much more comfortable with that.” Not all institutions have prohibitive curricula, but it is worth noting, as this is a common topic that participants brought up as a challenge.

Despite these frustrations, some adjuncts find ways to navigate these limitations. Harrison (Interview #1) described his approach: “The curriculum is more tightly controlled, but I can still bring in personal experiences and expand on the material. My goal is to fill in the gaps and provide a richer learning experience based on my knowledge.” Trinity (Interview #2) shared that she enjoys not developing or maintaining the curriculum, saying, “That’s what makes it less stressful is that I don’t have to do that. I don’t make up quizzes and come up with content because if that were the case, I wouldn’t do it because it goes into a full-time role.” For some participants balancing multiple responsibilities, the lack of editing ability was seen as a relief, allowing them to focus on delivering content and supporting students within the established framework.

Lack of Curriculum Alignment

Participants expressed concerns about the lack of clarity in curriculum alignment, which impacts their ability to support student learning effectively. Allan (Interview #2) emphasized standardization, stating, “Course content standardization would be the first” step to addressing alignment issues. Allan (Interview #2) shared his rationale: “I want to

ensure consistency in content and delivery. Students talk, and if one teaches one way and another teaches another, that's not good for the university." Similarly, Trinity (Interview #2) highlighted inconsistencies in grading and delivery across instructors, noting, "If we all graded with the same intensity and at the same level... too many professors give a pass on APA and just focus on content." Oliver (Interview #2) underscored the disconnect among faculty teaching the same courses, sharing, "I've never met the guy who teaches the other section of [his course] ... I think that's a shame." Edna (Interview #1) reflected on the broader implications of misalignment, explaining, "It would be helpful to know what my students are taking next," and emphasizing the need for clear communication from academic advisors regarding course objectives and expectations. These perspectives highlight the importance of institutional efforts to enhance collaboration and consistency in curriculum alignment.

Lack of Editing Capabilities Undermines Role

The limitations placed on adjunct faculty regarding curriculum design often undermine their educator role by diminishing their professional judgment. Edna (Interview #1) expressed frustration, stating, "I still feel like a robot, just grading papers without any autonomy or say in the course content." Edna (Interview #1) also described how oversight processes devalue faculty input, sharing, "I spent 45 minutes on the phone with a student, but was told my comments were insufficient. It feels like they don't trust our professional judgment, which is disheartening." These constraints seemingly hinder adjuncts' ability to respond effectively to student needs and create a sense of alienation; as Edna (Interview #1) noted, "I feel like I'm putting more effort into chasing late work than the students are putting into doing it." Such limitations highlight the broader

systemic issue of undervaluing adjunct faculty's expertise, reducing their role to mere facilitators rather than fully empowered educators. Edna (Interview #1) concluded her feelings on the topic, lamenting, "You're hiring us as professionals. We all have master's degrees or PhDs. Give us a little bit of credit that we can adjust things."

Policies

Each participant was asked directly or indirectly about policies that they would identify as impacting their role as an adjunct, whether for better or worse. Additionally, a follow-up scenario was presented, giving each participant a hypothetical magic wand and the opportunity to change institutional policies. This section will explore the topics that arose, including policies surrounding AI, bureaucracy, academic integrity, the Culture of Care, compensation, rubrics/grading, and student engagement.

Policies play a crucial role in shaping the experiences of adjunct faculty, both in terms of their professional autonomy and the quality of education they deliver to students. Trinity (Interview #2) acknowledged the necessity of adhering to institutional procedures, stating, "I get it, and I do what I'm asked, even if I don't always agree, because this is what I signed on to do, to follow their procedures." Similarly, Pressley (Interview #2) recognized the role of policies in maintaining consistency and sharing, "The [program acronym] program revises curriculum design by updating policies and procedures already in place. It keeps the content from getting old." These perspectives emphasize how policies can provide structure and continuity within educational institutions.

Artificial Intelligence

Participants identified both challenges and opportunities in navigating institutional policies related to artificial intelligence (AI). Quinn (Interview #2) reflected

on the inconsistencies across institutions, particularly around tools designed to identify plagiarism, stating, “I’m teaching at a school that has…Turnitin has an AI detection part, and [institution’s name] has it disabled. And we have direction to not go out there and find a different detector like GP Zero or whatever and try to do it on your own.” Quinn (Interview #2) continued, mentioning other institutions that have also not indicated that AI is not reliable and have not nailed down their AI policies, identifying, “You’ve got schools like Vanderbilt, University of Texas, Michigan State that have said the same thing as [institution’s name]: the detection is not reliable.” Kellen (Interview #1) shared about his experience on faculty committees, indicating that AI is being heavily discussed, sharing, “I’m a member of a couple of faculty-based committees where AI has become a big topic of conversation. AI is good. I applaud AI, but it has its challenges, too, especially from academia.” Such variability in AI policies from institution to institution adds complexity to the roles of adjuncts.

Despite these challenges, faculty members see the potential for AI to enhance education when integrated thoughtfully. Greg (Interview #2) suggested that “AI could be part of the solution,” emphasizing the need for institutions to “figure out how to use AI to our advantage.” Similarly, Pressley (Interview #2) advocated for leveraging AI as a resource, stating, “Hopefully, educators don’t get ingrained in their practice and can learn to use AI as a resource, not as a prohibition.” Remi (Interview #2) added that AI could prompt a shift away from outdated assignments, noting, “It’s the end of these old, antiquated assignments. It’s going to force instructors to move into this modern world.” Quinn (Interview #2) highlighted the looming challenge facing institutions, saying, “I think the biggest challenge is getting that happy medium between what I feel like should

be allowed and what the policies of the university allow." Allan (Interview #1) identified another example of how one institution where he teaches "has students go through a course on AI usage," while mentioning that other institutions have "policies and use tools like Turnitin to check for AI-generated content."

Bureaucracy

The bureaucratic policies governing adjunct faculty can impose administrative hurdles that complicate their roles and limit their effectiveness. Lydia (Interview #1) described the challenges of navigating these systems as "the administrative hurdles." Similarly, Greg (Interview #2) emphasized how bureaucracy can slow progress, observing, "Yes, but like every institution, there's a level of bureaucracy. As an individual, I may move quickly and see a vision, but you have to navigate the bureaucracy." Several participants expressed frustration with specific bureaucratic practices. Fred (Interview #2) highlighted the inefficiencies in policy implementation, sharing, "I brought that up to them, and their answer was, 'Just write that in the course room under notes.' Seriously? You want me to spend my time doing that?" These accounts illustrate how bureaucratic policies create hurdles and shift additional burdens onto their roles.

To address these challenges, participants proposed actionable solutions. Greg (Interview #1) suggested streamlining processes in state institutions, noting, "The bureaucracy of state schools that are state-owned is prohibitive. If they could somehow make some of those processes easier to navigate, it would benefit everyone." Similarly, Edna (Interview #1) emphasized the importance of giving faculty more independence,

sharing, “We need more autonomy to design and teach our courses rather than being confined to a set curriculum with rigid objectives.”

Cheating/Integrity

Participants highlighted the complexities of addressing cheating and maintaining academic integrity in their courses, emphasizing structural and cultural challenges. Kellen (Interview #2) described a specific incident involving AI-generated submissions, sharing, “One of his discussion responses at the top of his response actually had ChatGPT as a header... two of his discussions and his first assignment were all AI-generated.” He (Interview #2) reflected that this raised broader concerns about identifying and addressing similar cases, “It made me nervous... How many more high grades have I given to people who had AI generate their own discussions?” Trinity (Interview #2) shared an experience and an instance of catching a student’s plagiarism using a detection tool, describing, “I feel bad, but I’m like, this is a teachable moment because you cannot go through grad school this way. It’s cheating. It’s not your work.” Participants are seeking robust policies to guide the detection and management of academic dishonesty.

Faculty also expressed frustration with the limitations of current tools and policies. Lydia (Interview #1) noted, “Students cheat and find the answers online. So, what I do is go in and switch the questions around. Then I can tell that they’ve cheated because they just pasted in the answers they found, and they’re all out of order.” Edna (Interview #2) shared about a situation where she had identified cheating and raised the concern to her superior, only to be told to reconsider the accusation. Her experience highlighted the administrative burden placed on faculty to address integrity issues.

Cultural differences were identified as a challenge among participants; Charlie (Interview #1) observed, “There are cultural challenges. Students who cheat may think they’re helping each other, but in our minds, they’re cheating... In the U.S., we have intellectual property laws, but in other countries, they might take someone else’s dissertation, remove the name, and make it their own.” Addressing these challenges requires comprehensive and adaptable policies that are responsive to the changing dynamics of academic dishonesty and the diverse student populations served by adjunct faculty.

Culture of Care

As described by participants, the “Culture of Care” initiative reflects efforts to support students and faculty through flexibility and understanding, though the policy’s implementation and outcomes present challenges. Janet (Interview #2) summarized the initiative, describing, “The culture of care at [institution’s name] is focused on ensuring students have a positive experience and providing the support they need to succeed. As a faculty member, I’m encouraged to be sensitive to students’ needs.” Unfortunately, when asked if she felt included in that initiative, Janet (Interview #2) replied, “No, I don’t. I see all the emails about the culture of care, but I don’t feel a sense of belonging or support.” The study further explores this juxtaposition as a challenge adjunct faculty face, as they feel pulled between providing support and leniency to their students while lacking support from the institution.

Trinity (Interview #2) highlighted the positive intent behind this culture, explaining, “One thing that has really been instrumental in how I view this work is constantly going back to [institution’s name] culture of care,” going on to emphasize

further the importance of "Making sure that the students know that you're there for them. You're understanding." Pressley (Interview #2) indicated the Culture of Care policy "has expanded to support both students and faculty, addressing issues like bullying and trauma." Pressley (Interview #1) continued her sentiments, saying, "It's important for students to know we care about them and their well-being, not just see them as numbers." Similarly, Remi (Interview #1) highlighted the initiative's focus as "being more flexible and understanding that students have different challenges." Participants demonstrated a commitment and support for the mission behind the Culture of Care and their students' success.

Some participants highlighted concerns about the Culture of Care, noting that some students occasionally exploit this flexibility and may establish unrealistic expectations. Pressley (Interview #2) shared her experience, describing, "Students take advantage of having additional time and aren't holding themselves accountable for completing their work on time." Additionally, the policy has created additional work for adjuncts. Trinity (Interview #2) shared about guidance she was given if a student misses an assignment; the policy says, "Don't enter in a zero because it could make the student feel defeated. Because a lot of times, one zero plugged into the grade book is gonna bring their grade down." Trinity (Interview #2) also discussed her skepticism about some of the bigger picture benefits, highlighting, "I'm not overly confident that it prepares the students for the real world. Like, they have the opportunity to turn in work late…whereas on a job, if you don't come in and you don't call, you are probably not going to have that job." This tension between supporting students and ensuring accountability reinforces the extra work that enforcing policies on students can put on adjuncts.

Faculty members also called for the Culture of Care to extend equally to instructors. Edna (Interview #1) argued for more inclusivity, she feels "They should treat instructors with the same care and individualization that we provide to students. It would make a big difference." Trinity (Interview #2) pointed out its limitations for faculty and the extra pressure it puts on their personal time, noting, "Here I am, getting ready to start a new class tomorrow, still having to grade work from the last class because of the culture of care. I would have loved to enjoy those weeks off." Allan (Interview #2) shared his skepticism towards the policy, provoking a laugh before saying, "I laugh because every school has their culture of care. But do they live up to it? I don't know." When asked if he felt part of the Culture of Care at the institution, he replied, "No. But that's because I'm a contract employee. I'm not expecting that culture of care. I can't say there's a single institution that really does active outreach and support for adjuncts. It's more contractual." These reflections highlight the dual challenge of fostering a supportive student environment while addressing the workloads and needs of adjunct faculty. To be truly effective, the Culture of Care must strike a balance between its focus on student success and equitable support for educators.

Pay

Participants highlighted systemic issues with compensation policies, emphasizing the inadequacy of pay relative to their qualifications and workload. Meena (Interview #2) criticized the restrictive pay format tied to student enrollment, describing, "If you have 14 students, you're only allowed X number of hours. If you have 13 students, you're only allowed Y number of hours." She (Interview #2) further explained the impact of students dropping courses, sharing, "You're doing all this one-on-one work with the students, but

you're not going to get paid for it because at the end of that week, they may have dropped." Quinn (Interview #2) suggested moving away from pay structures tied to student numbers, arguing, "Another policy I would change is not paying adjuncts based on the number of students." Such policies not only undervalue the labor of adjuncts but also penalize them for factors beyond their control.

The comparison to fast food wages has been a recurring theme among participants and has been well documented. However, it is still important to highlight the policies and their impact within the context of other policies. Edna (Interview #2) reiterated her frustration with pay, remarking, "I don't feel valued when you're making a dollar more than someone at McDonald's." She (Interview #1) continued, "The only reason I'm doing this is to get experience so I can get a better job. So, I'm going to be one of those teachers who moves on to something better because they aren't paying me what I'm worth." Similarly, Allan (Interview #2) described adjunct pay as "basically minimum wage" and noted the need for substantial reform in compensation policies. Edna (Interview #2) summarized the impact of improved wages, emphasizing, "They're going to have better instructors if they make it monetarily worth it for us." These reflections underscore the need for institutions to reassess their adjunct compensation policies to ensure equitable pay.

Rubrics/Grading

Participants identified institutional policies on rubrics and grading, highlighting their impact on teaching and assessment practices. Remi (Interview #2) noted the limitations of rigid rubrics, explaining, "If you really look at it and were to be very literal, holding true to the rubric, someone who just did bullet points and essentially cut and

pasted answers could get the same score as someone who wrote from the heart, and that's not entirely fair." Similarly, Greg (Interview #1) expressed frustration with the grading management, stating, "Grading was painful, taking an hour per paper with 36 students... A student properly cited but cut and pasted 98% of their paper. That's not how it's supposed to work." Oliver (Interview #2) pointed to grading constraints, explaining, "You're constrained by this formula in terms of grades. I would like to be able to grade based upon my relationships with the students. I know who's working and who's not." Adjuncts, when constrained by strict rubrics, often face a conflict between their professional and pedagogical judgment and the nuanced needs of students.

Another common topic was the flexibility and inconsistency in grading policies. Kellen (Interview #2) suggested reforms, stating, "If I had a magic wand, I would make rubrics consistent with the requirements for discussions and assignments, not for the point of telling people what they're doing wrong, but from the point of telling people how they can improve." Meanwhile, Edna (Interview #1) highlighted how grading practices can create additional burdens, noting, "I feel like I'm putting more effort into chasing late work than the students are putting into doing it." Trinity (Interview #2) highlighted her preference for limiting flexibility, sharing, "I would like to change the late policy. I feel like it should stick. We have autonomy to give them leeway, and if someone is a little bit more lax and someone is a little bit more stringent, it's gonna cause friction." She (Interview #2) continued about the problematic situation faculty can be presented with if there is no consistency between their grading and late work policies, describing, "unless they have a doctor's note or whatever, they just can't turn it in. Because then you've put teachers in a perpetual cycle of having to go back and regrade work that they've moved

on from." Misaligned grading policies not only add stress for faculty but also hinder their ability to foster meaningful learning experiences.

To address these challenges, participants called for greater autonomy and more straightforward guidelines. Edna (Interview #1) advocated for instructor flexibility, sharing, "My department chair understands the need for more instructor freedom, like creating assignments tailored to our classes. I hope the university listens and makes changes to give us more autonomy and reduce the feeling of just checking rubric boxes." Greg (Interview #1) shared about his experience and wanting more autonomy after trying to provide adequate feedback to all students; he said he was told, "You're writing too much. You need to stop. It's affecting the way you're interacting with everyone." These perspectives underscore the importance of institutions striking a balance between standardized policies and the professional expertise of faculty, ensuring that rubrics and grading practices support both educators and students in achieving their academic goals.

Student Engagement

Policies surrounding student engagement play a role in shaping the relationship between the participants and their students. Trinity (Interview #2) emphasized the structured expectations at some institutions, noting, "[institution's name] is stricter. I have to respond to more students per discussion, which can be overwhelming with over 20 students." However, she (Interview #2) also appreciated the flexibility, stating, "One really good thing we have at [institution's name] is Waypoint," a tool that facilitates engagement through structured feedback on student work. Despite having opportunities to communicate and engage, Trinity (Interview #2) also indicated that students rarely reach out to her, sharing, "Students have access to my personal cell phone number. I have

never been called in the five years I've been back in the classroom. I think I've only gotten one or two requests to meet by video conferencing." This balance of structure and support illustrates how policies can assist and overwhelm faculty, depending on class size and other institutional demands.

Participants also highlighted gaps in student engagement policies. Greg (Interview #2) shared his frustration, explaining, "The ones that do respond say they've never looked at my emails or my announcements...What bothered me is that they came back and said we can't make them read your announcements." Debbie (Interview #1) echoed concerns about student accountability, stating, "Most students will only give negative critiques if they don't pass the course. If they do well, they take all the glory. If they submit assignments late and face penalties, they become upset with you." Debbie (Interview #1) continued and shared an experience where a "student who was missing for two weeks and didn't understand why I didn't grade her assignments when she finally submitted them. She didn't understand why I was making her fail the class. It's always your fault, never theirs." Kellen (Interview #2) also shared his experience with students unfairly holding him accountable for university policies on discussion boards that he is enforcing, noting, "Some students are complaining that it's too cumbersome and that they think that the faculty are the ones that write these policies. So, some of their criticisms to me in my reviews." Trinity (Interview #2) described how student complaints often escalate unfairly, sharing, "Every time a student doesn't get their way, they tear you up on end-of-course surveys... you sometimes have to answer to those like, why did the student say that?" To address these issues, participants proposed specific solutions to improve policies and foster collaboration. Janet (Interview #2) suggested creating

mentorship programs and providing professional development opportunities to support adjunct faculty in navigating institutional expectations and requirements. Kellen (Interview #2) advocated for improved communication about policy changes, emphasizing the importance of engaging students and faculty in discussions to ensure policies are better understood and accepted.

Institutional Support

Another area of discussion among participants was their perceptions of institutional support and community. While some participants reported positive experiences, others expressed a profound sense of lacking support, belonging, and community. These contrasting experiences highlight the strengths and weaknesses in institutional practices targeting adjunct faculty.

Feeling Supported

Several participants described feeling supported and integrated within their institutions. Trinity (Interview #2) highlighted the encouragement she received, stating, "I have a really great manager who is very supportive and encouraging. So that makes it a worthwhile experience." She (Interview #2) emphasized the value of consistent communication, explaining, "Keeping us informed about what's going on at the actual campuses is great. Making us feel engaged during commencements and inviting us to attend is good. I feel part of the institution and not just a ghost faculty member."

Similarly, Pressley (Interview #2) acknowledged the institution's efforts to provide resources and training, sharing, "They set up trainings to learn the technology, knowledge, and practices, with reminders and updates about new skills or technologies being implemented in the coursework. This gives plenty of opportunities to learn."

Furthermore, she (Interview #2) noted the accessibility of additional opportunities, stating, “They open the door for faculty to join any board, present at conferences, and more. The information is there at your fingertips.” Such access to resources and opportunities supports professional growth and enhances faculty engagement.

Quinn (Interview #1) also appreciated his department chair’s accessibility, noting, “He’s very accessible. We’ve had Zoom calls, just he and I, going over the curriculum and discussing what the class is supposed to be about.” He highlighted the importance of structured onboarding and access to resources through faculty portals, which contributed to his preparedness and confidence.

Barbara (Interview #1) shared her initial experience teaching, saying, “I had a hard time sifting through what was meaningful versus what just came down from the university that I was supposed to potentially read. Like, I didn’t know, how does this apply to me?” When asked if this has improved and if she feels more part of a community with better direction, she responded, “Absolutely, absolutely.”

Lack of Support

Participants reported varying levels of institutional support, with many feeling excluded and undervalued. Meena (Interview #2) described institutional communication as insufficient, stating, “I know they send out the emails, those [institution’s name] emails saying they care about us. But I don’t know that it applies to faculty.” Meena (Interview #2) continued to share her lack of support and isolation, saying, “I think if I didn’t show up, I don’t know that anyone would miss me. Maybe the only person who tries to reach me every now and then is my scheduler. They’re probably the only person.”

This feeling of isolation and lack of support strains the relationship between adjunct faculty and institutions, posing a challenge to the long-term well-being of adjuncts.

Participants described feeling that their voices were unheard, which further exacerbated their isolation. Pressley (Interview #2) suggested, “You need to make sure that you’re constantly reaching out to those faculty... getting that feedback and making sure they don’t feel like they don’t have a voice.” This shared sense of a lack of structured feedback mechanisms and collaborative opportunities has made adjuncts express a feeling of being disconnected and unsupported in their development and contributions.

Institutional policies and practices often emphasize compliance over collaboration, compounding these challenges. Fred (Interview #2) observed, “They’re more worried about my time card... than the quality of my person and my ability to inject into the course.” Similarly, Allan (Interview #2) remarked, “I can’t say there’s a single institution that really does active outreach and support for adjuncts. It’s more contractual.” Fred (Interview #2) also captured the feeling that the institutions are only geared towards finding problems and less on growth and support, saying, “I think the institution is geared to figure out what I’m doing wrong. There is nothing that I found in my institutions, all of them, that are geared to finding out what I’m doing right.”

For some participants, inadequate access to essential tools and resources contributed to their challenges. Allan (Interview #2) pointed to disparities in resource allocation, explaining, “The full-time staff and faculty have [access to resources]. It’s probably not that much more to add us. Little things like that would make a huge difference.” Oliver (Interview #2) shared his frustration with the perceived lack of

preparation, remarking, "It was the worst session of that course I ever taught because I was going in blind... The school gave me very little guidance—they said, 'Here's the course, here's the description, you teach it.'"

On Adjuncts to Seek Out Support

Adjuncts often noted that they were responsible for navigating institutional structures with little guidance. Fred (Interview #1) described his experience of trying to get more involved, sharing, "I volunteered. I said I want to be more involved... In a way, you might say [my supervisor] was kind of an informal mentor for me, but she was also access to the establishment as well, and I leveraged that." His experience highlights how adjuncts often must create opportunities for engagement rather than relying on structured initiatives for support.

Additionally, Pressley (Interview #1) addressed the perceived lack of proactive support, remarking, "...you have to seek it out. The resources and the information are out there for you, but I could see where someone could feel very isolated and alone, just out there doing their own thing if they don't pair them together. People are there, and folks are there to help, but they don't know that you need the help if you don't ask." Oliver (Interview #2) also shared his perspective that his institutions have come up short on promoting the support available, saying, "At all three of my schools, there's very little effort to get the faculty to work together other than, "Here, I'm the department head. This is what I want," you know, pretty much a vertical integration kind of thing as opposed to horizontal."

Oliver (Interview #2) also shared his perceptions and the lack of initiative in the institutions, saying, "Schools make no effort, excuse me, at least [other institution], make

no effort to get the faculty together, to adjust, and compare notes." He (Interview #2) continued, "I've tried to make friends with some of my colleagues and compare notes on what works and what doesn't. I've learned a lot of good stuff. The school doesn't encourage that." Oliver (Interview #2) desires support, structure, and shared solutions, saying, "But I would love to see attempts being more interactive and using, you know, some sort of a sharing approach with their colleagues rather than being in a bubble by themselves. I feel isolated as an adjunct." Oliver (Interview #2) shared his frustration with the apparent lack of opportunities to collaborate or engage with other faculty, saying, "I've never met the guy who teaches the other section of [his course name]. Nobody ever encouraged me to meet him, and he didn't want to meet me, so I just backed off. But I think that's a shame." There is a desire to make those connections. Without more substantial support from the institution, the adjunct faculty feels it is on them to foster connections, even when others may not desire that connection.

Lack of Belonging

A pervasive theme among participants was a sense of disconnection and undervaluation within their institutions, which led many to feel a sense of not belonging. Meena (Interview #2) described her institution's outreach efforts as "almost like it's an empty outreach," emphasizing how such initiatives often fail to engage adjunct faculty meaningfully. Fred (Interview #2) echoed this sentiment, noting, "We're just a business entity. Business entities don't have feelings. Business entities don't have issues. Business entities don't have life that just happens sometimes. You're just a business entity. You either follow the contract, or you don't." Janet (Interview #2) talked about her experience, saying, "I don't feel a sense of belonging or support. There was a time when I

felt more connected, but that has changed. It feels like there's a disconnect between the administration and the faculty, and it would be beneficial to address that to foster a more inclusive and supportive environment." These observations highlight how some institutional priorities may leave adjuncts feeling marginalized, treated as expendable contributors rather than integral members of the academic community.

This disconnection often stemmed from the perception of being excluded from the institution's mission and collaborative processes. Oliver (Interview #2) described the isolation many adjuncts experience, describing, "Adjuncts are basically blind. They come to campus, they teach, and they leave. Nobody approaches them unless you make an effort." He (Interview #2) further elaborated, "Nobody asks for input from adjuncts in my experience... I would love to work with other professors, both full-time and adjuncts, and do some brainstorming." These reflections highlight the perceived lack of institutional efforts to promote collaboration and inclusion among adjunct faculty.

Lack of Community

Participants frequently highlighted logistical challenges and limited opportunities for engagement as barriers to fostering a communal environment. Kellen (Interview #2) described the scheduling issues that excluded adjuncts from institutional discussions, stating, "A lot of their Town Hall meetings, if you will, are based on California time, Pacific time. For adjuncts, I would assume a lot of adjuncts have full-time jobs." Greg (Interview #1) shared a similar sentiment when talking about the town hall meetings, saying, "They happen during the day when associate faculty usually work. There are associate faculty members who are faculty at different universities, but many of us have daytime jobs and pursue this as a second career. It's challenging to figure that out." With

many professional adjunct faculty having full-time roles outside of teaching, being available for university meetings during normal business hours reflects how institutional practices often fail to account for adjunct faculty's diverse schedules and commitments, making community building more difficult.

Many adjuncts expressed feeling invisible within their institutions. Janet (Interview #2) observed, "I see all the emails about the culture of care, but I don't feel a sense of belonging or support." This gap between institutional messaging and lived experiences underscores the disconnect that adjunct faculty often feel. For remote adjuncts, this sense of disconnection is even more pronounced. Lydia (Interview #1) articulated these challenges, saying, "Being remote, you don't have the same interaction with the faculty chairs or academic directors. There's not a phone number you can call, and you can't drop into their office to talk to them." Edna (Interview #2) similarly highlighted the difficulties of online teaching and the apparent lack of direct exposure to colleagues, remarking, "there's no such thing as a break room coffee, you know, where you can go talk to your colleagues." Kellen (Interview #1) also notes the difficulties of facilitating such a community, but still feels isolated, saying, "One of the challenges as an adjunct is feeling part of a larger group. The university has 5,000 adjuncts. How do you create a sense of community? There are communication digests and peer committees, but you still feel isolated." Such reflections underscore the importance of institutions adopting intentional practices to bridge these gaps and foster more inclusive and supportive communities.

Summary

The experiences of adjunct faculty highlight significant disparities in institutional support and integration. While some participants described positive interactions with leadership and access to resources, many shared feelings of exclusion and a perceived lack of belonging. These findings underscore the need for institutions to adopt more proactive, inclusive, and structured approaches to supporting adjunct faculty, fostering both professional growth and a sense of community.

TPACK

TPACK, as a unique code in this study, yielded the smallest number of quotes amongst the a priori codes. None of the participants expressed direct familiarity with the TPACK framework, and even after I shared the definition, they still did not fully grasp the concept. Through follow-up questions and discussion, many participants shared their understanding of TPACK and how their teaching and learning integrate the different knowledge bases of the framework.

Definition

Technological Pedagogical Content Knowledge (TPACK/TPCK) is the "emergent form of knowledge" that transcends the three major knowledge components. It integrates content knowledge with applicable pedagogical methods and the use of emerging technology, enabling learners to grasp the subject matter (Mishra & Koehler, 2006, p. 1028; Voogt et al., 2013).

TPACK Codes

Table 9 displays the a priori, emergent, sub-codes for TPACK.

Table 9

List of A Priori, Emergent Codes, and Sub-Codes for TPACK

A priori codes	Emergent Codes (Sub-Codes)	Number of Times Coded
TPACK		**45 Total Codes**
	TPACK	45

Note. This data was pulled directly from Table 3, exploring only the TPACK Framework.

TPACK Codes

Participants discussed the foundations of their teaching and learning experiences, as well as their TPACK (Technological Pedagogical Content Knowledge). None of the participants were directly familiar with the terminology or definition of TPACK, but understood the concepts of each knowledge base coming together. Through our discussions, they described their understanding of TPACK and how each knowledge base must be co-represented within their approaches. Fred (Interview #1) articulated the importance of balancing the components, explaining, "I'm a full believer in the practicality of technologies, that the only way in many cases that you can get a person to understand how you practically or physically involve yourself or engage yourself in that is by having the components." Pressley (Interview #1) shared a similar perspective, noting how technology and content knowledge intersect for her, saying, "I would say some of the overlap is going to be with the content knowledge and some of the technology pieces. I could see that being an overlap, but definitely content and the technology piece." Janet (Interview #2) highlighted the importance of staying current and

flexible when learning and growing your understanding of TPACK, sharing, “Continuing to learn about technology, AI, and how it can enhance our work in HR and in teaching and learning will also be important. I want to make sure I’m always bringing the latest and greatest tools and resources to my students and clients.”

Several participants emphasized the role of technology in enhancing student engagement and learning outcomes. Barbara (Interview #1) described her efforts to incorporate real-life scenarios into her curriculum. Similarly, Debbie (Interview #1) highlighted the usefulness of interactive tools, sharing, “I’ve developed an interactive syllabus where students can click on links to peer-reviewed articles or directly jump to sections they need. This facilitates learning on demand and makes the content more accessible.”

Other participants discussed the importance of hands-on activities in engaging learners and integrating different aspects of the TPACK framework. Quinn (Interview #1) shared his approach to teaching information technology courses, describing how “Hands-on learning is crucial in IT. Dropping tests in favor of hands-on assignments was a significant change. I believe hands-on experience is the best way to learn in this field.” Lydia (Interview #1) shared a similar perspective, noting how technology and pedagogy intersect in her teaching while using tools like “the HIM virtual lab” and “EHR Go, which has a meta in an electronic health record that has fake patients in there, and they have a ton of exercises.” She (Interview #1) continued, “I have all the exercises to do in there, so the students can get hands-on stuff. They can be a doctor. I say, “Today, you’re Dr. Smith, and you’re going to take care of this patient.” So, they get the perspective of a doctor, a nurse, a pharmacist…It gives them a holistic view of healthcare and how each

role integrates into the system." These examples demonstrate how adjuncts utilize TPACK to design practical, interactive, and engaging learning experiences.

Participants also reflected on the challenges of implementing TPACK, particularly in balancing its components. Greg (Interview #1) shared his perspective, explaining, "It's important for students to understand that they have a toolbox with many tools they can use in different ways to achieve desired objectives. But it's not just about the tool—it's about how you use it to enhance the learning experience." Lydia (Interview #1) echoed this sentiment, noting, "Technology needs to help students see not just their role but how their work contributes to the larger system, especially in fields like healthcare where collaboration is key." Fred (Interview #1) described a situation where an organization he was with overemphasized one element of TPACK and was not purposeful with their decision, sharing, "They did technology for technology's sake. They didn't do it for the business's sake." These reflections underscore the importance of intentionality in ensuring that technology serves pedagogical and content goals, rather than becoming an end in itself.

The iterative nature of TPACK integration was another theme among participants. Remi (Interview #1) explained how she revises her approach annually, stating, "Every year, I make a list of things I felt were failures and try to modify some things. The subject matter will always take precedence, but I also consider how the number of assignments affects my turnaround rate for feedback, which is now more important. Balancing this with making my PowerPoints and using technology is crucial." Similarly, Debbie (Interview #1) emphasized the need for continual adaptation, sharing, "I would like to evolve assessments to be more practical and tangible, moving away from just call-and-

response prompts." These insights reflect how participants can experience elements of TPACK that evolve with their teaching practices.

Overall, participants expressed a strong commitment to integrating technology, pedagogy, content, and contextual knowledge to enhance student learning and engagement. I believe that their reflections demonstrate a general understanding of TPACK, showcasing its potential to create meaningful and dynamic educational experiences. Although there was no direct understanding of TPACK as a framework, it was understood that leveraging technology and contextual factors to support pedagogy and content delivery makes their teaching more relevant and impactful.

Summary

Participants recognized the importance of integrating technology, pedagogy, contextual, and content knowledge in their teaching, even though they were unfamiliar with the specific term TPACK. They understood that balancing these elements is crucial for effective instruction, with many emphasizing the interconnectedness of technology and content delivery. Participants shared examples of how they incorporated technology to enhance student engagement and accessibility, such as interactive syllabi, real-life scenarios, and hands-on activities. They reiterated that technology should support learning objectives, rather than being used for its own sake. They aimed to ensure that technology complements and enhances pedagogical strategies and subject matter expertise. Their insights demonstrate a strong practical understanding of its core principles, emphasizing student-centered, technology-enhanced learning experiences. Despite a described lack of formal recognition of the framework, their attention is focused on best practices and recognizing how to engage with students through

purposeful learning. However, this also highlights the importance of stakeholders and professional adjunct faculty engaging in dialogue around these topics. For the continual growth and development of TPACK amongst professional adjunct faculty, meaningful support and policies must purposefully promote the framework's knowledge bases.

Other Emergent Codes

With 34 total interviews, ranging from 60 to 90 minutes, many conversations explored aspects outside of the a priori codes for the study. Table 10 lists the other emergent codes that emerged throughout the interviews. Some of the other emergent codes explored in this section include Artificial Intelligence (AI), Motivation, Student Experience, and Professional Development.

Other Emergent Codes

Table 10

List of Emergent and Sub-Codes for Other Emergent Codes

	Emergent Codes (Sub-Codes)	Number of Times Coded
Other Emergent Codes*		**635 Total Codes**
	Artificial Intelligence	14
	● Need for Clear Guidance	22
	● Concerns	42
	● Acceptance and Embracing	35
	Motivation	66
	● Student-Center Support	53
	● Desire to See All Students Succeed	32
	● Above and Beyond	11
	Online Learning & Future of Higher Education	24
	Professional Development	92
	● Likes	27
	● Dislikes	26
	● Peer Mentoring	34
	● Community Building	21
	Student Experience	30
	● Feedback	26
	● Engagement	52
	Value of Education	28

Note. This data was pulled directly from Table 3, exploring only the Other Emergent Codes from the study.

Other Emergent and Sub-Codes

Artificial Intelligence

Participants expressed apprehension and optimism about integrating artificial intelligence (AI) into their teaching and learning, underscoring the need for institutional guidance and broader discussions on its implications. Debbie (Interview #2) articulated a common concern about gauging students' understanding when relying on AI-generated work, stating, "As an instructor and an educator, our primary position is that human intelligence can't be replaced. In the classroom, we should be gauging their human intelligence. It's very difficult to do that if we're reading through papers that have been generated by ChatGPT." Similarly, Harrison (Interview #2) noted the risk of AI becoming a shortcut for students, observing, "They're not looking at it as a new frontier; they're looking at it as a way for people to get ahead without putting in the effort." Harrison (Interview #2) went on to neatly summarize the current sentiment across higher education regarding the use of AI: "We're paranoid that students will plagiarize their papers." There are clear ethical and pedagogical challenges AI presents to higher education, which professional adjunct faculty will be on the frontlines to address while maintaining academic integrity and authentic learning experiences.

Looking forward, participants called for increased dialogue and proactive planning to address the evolving role of AI in higher education. Edna (Interview #2) likened the current phase of AI adoption to the early days of the Internet, stating, "We're right on the cusp of this new environment, much like when the Internet first came about... Plagiarism programs started catching up to it." The participants' reflections highlight a need for institutions to lead discussions on AI's role in education, establish clear

guidelines, and equip educators and students with the tools to navigate the technology responsibly.

Need for Clear Guidance

Adjunct faculty emphasized the critical need for clear and consistent guidance from institutions regarding the use of AI. Debbie (Interview #2) highlighted the absence of structured policies: "Many schools shut off access to AI tools because they don't know how to use them properly. Academia has to evolve quickly with new prompts and quizzes every class to prevent cheating." Edna (Interview #2) expressed concerns about the inconsistencies in handling AI, noting, "[institution's name] turned off their AI detectors because they aren't accurate, which raises concerns." Quinn (Interview #2) echoed a similar sentiment and the direction the university has given him, describing, "We have direction to not go out there and find a different detector like GP Zero or whatever and try to do it on your own. Our policy is AI detection is not there yet, for whatever, writing paper or whatever. So don't do it; don't go out there and check because it's not reliable." These reflections illustrate a significant gap in institutional readiness to address the challenges and opportunities presented by AI.

Participants also emphasized the importance of proactive measures to guide educators and students in the ethical use of AI. Janet (Interview #2) suggested a balanced approach, saying, "We need to prepare our educators to accept and help our students understand and learn, and a way to look at AI that's not the enemy." Pressley (Interview #2) emphasized the need for training faculty, remarking, "Universities should invest in AI, but also in training professors and faculty on how to use it properly. It's important to show students the appropriate way to use AI to avoid issues like plagiarism." Meena

(Interview #2) shared a similar feeling when sharing about her desire to see more being done, saying, “I’d really like to see them doing more with AI and integrating that, bringing in some of the faculty practitioners, a stronger buy-in or integration with the course developers so that you get a stronger expertise in there.” Allan (Interview #1) shared about how another institution where he teaches has, “students go through a course on AI usage. Other institutions have policies and use tools like Turnitin to check for AI-generated content.” Allan (Interview #1) continued to say and acknowledge, “It’s a developing area, and each institution handles it differently.” These perspectives underscore a consensus among faculty members for the urgent development of comprehensive policies and educational initiatives to integrate AI responsibly into academic practices.

Concerns

Another topic discussed was the integration of AI in educational settings and the implications for academic integrity and the quality of learning. Remi (Interview #2) reflected on the potential loss of critical thinking skills, noting, “I feel like with AI, the ability to think is going to be lost. There is no logic.” Similarly, Greg (Interview #1) pointed to the difficulty in identifying meaningful student progress when AI-generated work is involved, stating, “It wouldn’t be able to recognize whether or not that person was learning.” Kellen (Interview #1) neatly summarized the overarching concerns around AI, saying, “How do you know that they’re actually writing their own papers?” Then, admitting, “That’s a challenge. And I see that not getting easier in the near future.” Kellen (Interview #1) recounted an instance where a student’s work was revealed to be entirely AI-generated, including obvious errors such as a “ChatGPT header” pasted into a

response. Edna (Interview #2) shared how the presence of AI has altered her approach to curriculum development and teaching, describing, “My decisions are based on curriculum first, time spent, and whether it enhances my objectives and engagement. Nowadays, with AI, I also have to consider if my kids can cheat using the technology and how to make it less likely for them to do so.” Participants raised concerns about the use of AI and the potential for increased cheating, while also discussing how AI can be leveraged to mitigate these issues.

Participants shared that, while learners have used AI to complete assignments, they hesitate to trust what students submit because they cannot use AI in the same way to grade and assess learners. Kellen (Interview #2) raised concerns about the potential for AI-generated work to go undetected, admitting, “It kind of made me nervous and scared me a little bit. How many more high grades have I given to people who had AI generate their own discussions?” Meena (Interview #2) shared her approach to grading and the potential for students using AI, describing, “You can’t blindly rely on it to do everything. You do need to step back a little bit and sniff it and make sure it’s reasonable.”

Some participants advocated for proactive measures and discussions to mitigate the risks of AI misuse while exploring its potential benefits. Edna (Interview #2) suggested that students need more intrinsic motivation, stating, “One of the things is stressing the importance of doing the thinking for themselves, getting more intrinsic buy-in from students.” Janet (Interview #2) shared a similar sentiment, summarizing a recent email she sent to a faculty advisor, saying, “AI will certainly have its share of misuse, but we need to focus on its positive aspects and figure out how to deploy and employ its amazing capability to enhance the experience of the students and our experience as

educators rather than seeing it as the enemy." Participants call for a balanced approach that integrates AI responsibly, supports academic integrity, and provides clear guidance for educators and students.

Participants also expressed concerns about how AI could potentially undermine the profession and learners; Pressley (Interview #2) warned, "You don't want AI to take over the profession." She (Interview #2) added that educators must learn to adapt, noting, "Hopefully, educators don't get ingrained in their practice and can learn to use AI as a resource." Remi (Interview #2) highlighted the concerns over AI hurting good writers, saying, "A student who can write very well could also be flagged as not being." Participants discussed the uncertainties of integrating AI into academia while calling for clear institutional guidance, better tools for detecting misuse, and a purposeful dialogue on maintaining integrity.

Acceptance and Embracing

Many participants openly embrace AI and are excited about its opportunities, while acknowledging the delicate balance between its benefits and potential misuse. Participants highlighted the potential benefits of AI, emphasizing its ability to enhance efficiency and provide new tools for teaching and learning. Meena (Interview #2) discussed the practical applications of AI in her work, noting, "Using tools like AI ChatGPT allows me to locate articles that are more recent, find examples, and summarize data much faster."

Participants also emphasized the need to embrace AI as an inevitable component of the modern educational landscape; Kellen (Interview #1) remarked, "AI is everywhere... it definitely has a lot of pluses. I think the online library of searches, in

some sense, deals with AI. When you put in a search for information, it brings up all these related articles. In a sense, that's AI." Remi (Interview #2) reflected on the importance of adapting to this technological shift, sharing, "The goal is how I'm going to live with this AI situation. It's not going anywhere…the focus of this coming year, actually, is the AI and how to embrace it instead of crucify it." Participants feel that AI has transformative potential and should seek opportunities to integrate it thoughtfully into their teaching practices.

Ultimately, participants called for increased institutional support to maximize the benefits of AI while addressing its challenges. Pressley (Interview #2) proposed that universities invest not only in AI tools but also in faculty training, stating, "Universities should invest in AI, but also in training professors and faculty on how to use it properly. It's important to show students the appropriate way to use AI to avoid issues like plagiarism."

Motivation

Adjunct faculty often find motivation rooted in their passion for teaching and desire to impact students' lives. Fred (Interview #1) described the sense of fulfillment he derives from teaching, sharing, "That opportunity to give back, an opportunity to change somebody's life, is right there in front of you. Sometimes it's one student, sometimes it's all of them. All of a sudden, the light bulb goes on for one person, or it could go on for the whole class, whatever. But there's nothing like that feeling, absolutely nothing." Similarly, Barbara (Interview #1) expressed her commitment to education: "I think being an adjunct faculty member is such a meaningful role. We are all a part of this bigger picture. I really feel that. And just having the ability to utilize technology for these

students to do their degrees and for us to teach remotely is remarkable." Meena (Interview #2) emphasized her joy in engaging with students and supporting their success, stating, "I enjoy the engagement with the students and helping them all have a good experience." Allan (Interview #2), reflecting on the broader purpose of education, noted, "My goal in teaching is simple: I want to help people change for the good. Education is about acquiring knowledge and creating wisdom to do good things in the world." Remi (Interview #2) summarized her motivations, sharing, "The impact a teacher has on someone's life is kind of unbelievable."

For many, the motivation to remain in academia stems from a love of lifelong learning and professional growth; Remi (Interview #2) shared, "I always find something new, either through the educational process or by seeing a change in someone's life." Allan (Interview #2) described teaching as rejuvenating: "This is the most fulfilling career I've ever had. Even though I've taken a significant pay cut from working in corporate America, it's far better for me in many ways." Barbara (Interview #1) also shared, "I feel like I'm making a difference. And, I also feel like I'm continuing to learn and grow as an educator." These insights demonstrate how adjunct faculty find meaning in their impact on students and their personal growth.

Despite the systemic challenges associated with adjunct work, many participants remained driven by their passion for education and their belief in its transformative power for learners. Barbara (Interview #1) articulated this commitment, sharing, "The longer I've been here, the more I love the job. It's less about money and more about the passion for what we do every day." Charlie (Interview #1) echoed her sentiments about being an adjunct, saying, "I would just like to say that being an adjunct faculty member

has been a rewarding experience. It's not always easy, but it's fulfilling to know that you're making a difference in students' lives." Harrison (Interview #1) talked about his passion for teaching, describing, "It's almost like I pay them to teach, with the commuting and everything, but I love it. It has nothing to do with the money for me."

Student-Center Support

Participants also emphasized the critical role of student-centered support in fostering meaningful educational experiences and ensuring student success. Trinity (Interview #2) highlighted her empathetic approach, saying, "It makes me compassionate, based on my undergraduate experience where I didn't do as well. But it also makes me a little bit more stern because I know that the students can do it." Trinity (Interview #2) stressed the importance of accessibility, explaining, "Keeping a virtual open-door policy is very important. Making sure that students know you're there for them, that you're understanding, is key." Harrison (Interview #2) recounted his experience as an adult learner and how he seeks to be a better adjunct, sharing, "Adult learners have jobs and families, and student-athletes have demanding schedules. I try to be understanding and give them more time if needed. I've been in their shoes, and I want to provide a better experience than I had." These reflections demonstrate how adjuncts draw from their personal and professional experiences to create supportive and accommodating learning environments.

Participants also described the relational aspects of their support, emphasizing mentorship and active engagement. Allan (Interview #2) articulated this perspective, sharing, "Our job isn't to lecture; it's to support and mentor and provide them with those resources that we at one point had been given by a faculty member." Janet (Interview #2)

noted the joy she gets from receiving feedback from students after providing them extra support, recounted a kind comment from a student and how meaningful it was to her, saying “Those kinds of comments from the students, even if I spend more time than I’m allotted, it makes it worth it to me to know that I’m really helping them.” Adjuncts see themselves as important to students’ personal and academic growth and find motivation in their ability to support their learners’ lives.

Despite systemic challenges, adjunct faculty are consistently committed to prioritizing student success. Edna (Interview #1) underscored this dedication: "My job as an educator is to find what helps them succeed.” Oliver (Interview #1) shared a similar perspective, emphasizing the tailored nature of his teaching approach, saying, “I think it’s important that instructors be coaches and champions in terms of their success.” Harrison (Interview #1) detailed his role as an educator, recounting, “We do everything to help students persist, partly because of financial motivations but also out of a genuine interest in their success. I want to help students be successful and get good grades.”

Desire to See All Students Succeed

Another area discussed was the commitment to fostering student success, with emphasis on mentoring and providing guidance. Greg (Interview #1) emphasized the dual focus of his teaching philosophy, stating, “My job is two things: to get them through the course with the grade they want and the knowledge they need.” Oliver (Interview #1) reflected on his feelings of responsibility, noting, “That’s a challenge because then I feel like I failed to get through to them. I desperately want them to succeed.”

Participants also shared their experiences with building relationships with their students, often emphasizing the importance of connection and witnessing their students

achieve long-term success. Fred (Interview #1) shared about former students when they "come back and say, yeah, you changed my professional career, and being able to do those things. And I thought, wow, this is something that's really great." Similarly, Trinity (Interview #2) shared, "The impact I made on my students was significant. I'm still connected with many of them on social media, and they still speak highly of me. I know I accomplished what I was supposed to." Building relationships and making a continued impact on the lives of their students underscores the motivation driving the adjunct faculty.

Above and Beyond

Adjunct faculty frequently go beyond their contractual obligations, driven by a deep commitment to their students' success. Fred (Interview #2) illustrated this dedication, sharing, "You don't know how many conversations I've had with students. You don't know, you know, whether I get a 2 a.m. phone call with a student in tears because they just can't write on something, and you sit down with them, and for the next three hours, you help them break through a particular idea." Lydia (Interview #1) echoed this sentiment, describing her commitment to flexibility and availability, sharing, "I would actually be like one o'clock in the morning having a meeting with a student because...that was the first time they could meet." Similarly, Barbara (Interview #1) described how her commitment to grading comes at the expense of her personal and family time, stating, "I'll miss family events because, like I said, five finals came in late, and I feel it's necessary for me to grade them and read them, and not just skim and issue a grade." She (Interview #1) further elaborated on her efforts to connect with students, adding, "In five weeks, I don't have enough time to learn every one of these students'

needs. However, I can take detailed notes on who they are. I could listen to who they are. I could be mindful of their comments. I could reach out."

Participants also highlighted their commitment to professional development as an extension of their dedication to teaching. Barbara (Interview #1) shared her dedication, describing, "I have over 100 graduate hours in various education courses on top of my two master's degrees. [Institution's name] requires one hour of professional development, but I find more value in roundtable discussions and departmental meetings." Edna (Interview #1) echoed this sentiment, noting her participation in optional activities, stating, "I often do more than required, like attending [course name] meetups, because I want to stay informed and connected." The unwavering commitment to supporting student success extends beyond what is formally required and expected of adjunct faculty.

Online Learning & Future of Higher Education

Participants expressed their views about the role of online learning in shaping the future of higher education, particularly its potential to increase accessibility and inclusivity. Greg (Interview #2) highlighted this shift, stating, "The shift towards online learning has also opened up opportunities for more flexible and accessible education. If we can continue to innovate and adapt, I believe we can make higher education more effective and inclusive." Janet (Interview #2) echoed this sentiment, emphasizing the flexibility of online education, sharing, "The flexibility and convenience of online learning can make education more accessible and allow people to continue their studies while balancing work and family responsibilities." Lydia (Interview #2) also shared a similar feeling about online learning, explaining, "It's that this allows anybody from any

state or any part of any country to be an online learner. I think that is really amazing. And I think that needs to continue to go forward." Pressley (Interview #2), when sharing her views on the long-term stability of education, said, "It's a staple, like the medical field. It's not going anywhere. It has made leaps and bounds, especially in special education." Harrison (Interview #2) succinctly summarized his thoughts, saying, "The possibilities are limitless. The technology for online learning is amazing."

However, participants also acknowledged the challenges associated with online learning. Lydia (Interview #1) highlighted the self-discipline required in virtual settings, stating, "In a way, you're teaching yourself. You have to rely on yourself to stay on task and really learn it." Meena (Interview #2) noted the importance of technology in supporting diverse classrooms, explaining, "I like using technology because it brings a diverse classroom to focus on the same topics and bring all their experiences to light so we can all learn by doing that." Allan (Interview #2) shared his experience and concerns about online learning, "I also think the evolution of online education and the increase in online education is really having an impact, especially at the undergrad level, in a not-so-great way. Students, I have a class right now where I put them into breakout groups to do an assignment for my class. They will not talk to each other. They just can't connect. They want to work alone." Despite the concerns, Allan (Interview #2) spotlighted how to address the issues around online learning, saying, "Educate not just the students but also the educators. Provide resources, training, and alternative options." Online teaching and learning environments demand students' and instructors' knowledge and dedication to collaborate successfully.

Looking ahead, participants identified the need for innovation and adaptability in online education. Harrison (Interview #2) suggested integrating synchronous components into asynchronous courses, stating, “Adding a synchronous aspect to asynchronous courses, maybe through Zoom meetings, would bring a personal touch.” Quinn (Interview #2) shared a sense of excitement about the evolution of higher education, remarking, “I’m excited about the opportunity to teach new topics, like AI and cybersecurity, which I find interesting.” Debbie (Interview #2) also advised institutions: “Always look for opportunities to evolve course offerings.”

Professional Development

Professional development emerged as a central topic, with participants emphasizing its importance in maintaining high-quality teaching and staying current with evolving educational practices. Barbara (Interview #2) highlighted the significance of engaging with professional development opportunities, saying, "I try to stay current with the latest research, reading journals and literature. I also reach out to colleagues to discuss what tools or techniques they find meaningful.” Similarly, Debbie (Interview #1) reflected on the variety of professional development options available, sharing, “[institution’s name] had quite a few courses on pedagogy and understanding how you want to bring your instructional tactics to life. There are always discussions about the culture of care and pedagogy.” Janet (Interview #2) described her commitment to ongoing learning, remarking, “Continuing to learn about technology, AI, and how it can enhance our work in teaching will be important. I want to bring the latest tools and resources to my students.” While Edna (Interview #2) noted the importance of workshops and roundtable discussions, stating, “I focus on professional development that helps me

understand post-secondary education, like academic freedom and public versus private education."

Despite the value participants found in professional development, they also called for greater alignment between these programs and their specific teaching contexts. Lydia (Interview #2) suggested, "Professional development should be more personalized and relevant to the faculty's specific needs. There should be more opportunities for hands-on learning and practical application." Similarly, Kellen (Interview #2) critiqued the apparent lack of variety in topics, sharing, "Having taught there now for eight years, I go back to their professional development list, and they're the same topics. It's stale."

Overall, professional development was essential to their roles, enabling them to enhance their teaching effectiveness, stay updated with new developments, and connect with colleagues. Participants also highlighted some of their likes and dislikes and spotlighted two important areas within the broader professional development topic: peer mentoring and the need for more community building.

Likes

Participants highlighted various aspects of professional development that they found valuable, emphasizing the practical application, collaboration, and opportunities for personal growth. Allan (Interview #2) described his favorite professional development experience as a subject matter expert on a new course development at another institution, remarking, "Being a subject matter expert was the best professional development I've ever attended. Developing that course was by far the most profound experience in my own development." Greg (Interview #2) appreciated workshops "on active learning strategies," explaining, "The workshop provided practical tools and

methods that I could implement immediately in my classroom. It made me rethink my approach to teaching and how to create a more interactive and engaging learning environment."

Collaboration and engagement were recurring themes in participants' reflections on impactful professional development. Debbie (Interview #2) praised sessions focusing on interpersonal skills, noting, "The ones that speak to emotional intelligence, working with colleagues, and how to be a formidable team member are the most valuable. Demonstrating leadership within my team and being a formidable teammate is crucial." Trinity (Interview #2) also valued interactive formats, stating, "We had sessions that were very engaging because we would have guest speakers come in and talk to us. It wasn't just me sitting in front of a computer screen going through a session and getting a certificate." When talking about her favorite professional development, Janet (Interview #2) complimented the facilitator of her session, detailing, "[She] did an excellent job of fostering a supportive and engaging environment." Coincidentally, Meena (Interview #2) shared that she had the same facilitator as Janet, further complementing her work, saying, "I think that sense of connection she's able to create, that sense of belonging, is very effective."

The ability to directly translate learning into teaching practices was another highlight for the participants. Remi (Interview #2) shared an example of attending a national conference, where she learned practical assessment techniques. About that experience, she remarked, "I loved that professional development because it was 40 minutes of how-to. Here's the workbook, you can take this back, integrate it immediately." Quinn (Interview #2) also shared a recent professional development

experience he found useful, recounting, “I attended a technical class on Amazon’s cloud. It was a two-day program, with hands-on labs following short lectures. This type of development is beneficial for me because it’s directly related to my daily work. Translating this to an adjunct role, it would be great to have similar hands-on opportunities in teaching practices.” These reflections highlight the importance of professional development programs that prioritize hands-on learning, collaboration, and relevance.

Dislikes

Participants identified professional development programs as formulaic, uninspiring, and disconnected from the realities of their roles. Greg (Interview #2) expressed frustration with specific training, remarking, "It was very generic and not tailored to the specific needs of different disciplines. It felt like a checkbox exercise rather than a meaningful learning experience.” Similarly, Allan (Interview #2) noted his feeling of a lack of real-world applicability in some workshops, sharing, “Attending workshops that are so scripted and not real-world. Demonstrations of technology, where they just don’t have a clue of what it’s really like in the classroom.” These comments highlight a disconnect between institutional training offerings and the practical needs of adjunct faculty.

Mandatory annual training was another frequent source of dissatisfaction. Trinity (Interview #1) described her frustration, explaining, “It’s just the reiteration of information I already know. There’s nothing new. You’re asking me the same modules every time. They don’t revamp it. It’s the same thing.” Oliver (Interview #2) shared a similar perspective: "I hate these online professional courses where they just give you a

paragraph to read and then give you a quiz. There's no feedback. There's no discussion." Like Oliver, Janet (Interview #2) described her perceived lack of inspiration, sharing that "sessions often consist of watching videos and completing quizzes, which feel very flat and uninspiring. It's hard to stay engaged with the material, and I suspect many people just go through the motions to check the box rather than gaining any real value from the experience." Pressley (Interview #2) said about the annual training, "They're just... they're stupid. I mean, I get them, I get why they're there, but I don't know that we have to go through them every year for forty years. I mean, as long as nothing is changed, it's the same." Participants also noted that these trainings often failed to meet their needs and were perceived as a waste of time. Pressley (Interview #2) continued, "Those are a waste of my time, and I don't care for them," emphasizing the inefficiency of standardized content. Despite understanding the necessity of training, participants, who often describe a feeling of a lack of support and community, are asked to invest additional time and energy in professional development without incentives.

Some participants expressed concern about the perceived redundancy and lack of recognition for their expertise. Fred (Interview #1) observed, "As an adjunct professor, I'm required to have a pedagogical enrichment experience for every class I teach. It's like telling a chemist, after you've developed a new compound, to go back and take a test on the periodic table." Edna (Interview #1) echoed this sentiment, suggesting that professional development should come with incentives, stating, "They're going to have better instructors if they make it monetarily worth it for us."

Participants also expressed varying experiences regarding the relevance and effectiveness of professional development initiatives. Edna (Interview #2) lamented the

required training about basic teaching skills that adjuncts are expected to attend despite having years of experience, sharing, “The provided professional development feels more like the basics of teaching, which I don’t need after 28 years in the field.” Fred (Interview #1) also critiqued the redundancy of some offerings, while still acknowledging the value, he added, “Sometimes it’s too much. It leaves you with a guilty feeling if you don’t make it to the 27 seminars they offer each month.” Kellen (Interview #2) shared that he once found the offerings helpful, but said, “I don’t see them expanding the topic list much. Having taught there now for eight years, I go back to their professional development list, and they're the same topics for eight years now.” The tension between mandatory requirements and meaningful engagement highlights the need for professional development tailored to faculty needs and experiences.

Peer Mentoring

Participants highlighted peer mentoring as a benefit, noting its role in sharing resources and building professional relationships. Pressley (Interview #2) reflected on her positive experience, stating, “I was fortunate to have a mentor when I first started with [institution’s name]. I still have a mentor if I want to reach out, along with a department head. They showed me the class I’d be teaching and what was expected of me each week.” Similarly, Edna (Interview #2) emphasized the importance of connection in online teaching, sharing, “I recently met a new adjunct instructor through a session, and she reached out to me for advice. Having that connection and support is crucial, similar to talking to a colleague next door in a brick-and-mortar school.” Harrison (Interview #1) recounted his experience with a mentor, detailing their relationship, retelling, “He’ll come in the morning and ask, ‘What’s the topic?’ He actually developed one of the

courses I'm teaching. He'll say, ‘What did you think about this?’ or ‘How did that work out?’ It's important to have these mentors who have developed and taught these courses over a long period of time and are willing to help you out.” Oliver (Interview #2) emphasized the importance and opportunity to connect with other faculty members within your department, sharing, “I think it’s imperative that comparing notes with other instructors who are teaching the same course is something I’ve really tried to do and have become pretty successful at.”

Several participants emphasized that peer mentoring enables faculty to exchange ideas and teaching strategies, thereby enriching their professional development. Remi (Interview #2) described the value of observing colleagues, stating, “I think the best professional development for me is seeing someone in their actual field, in the moment when it’s natural. You can learn a lot more there than being told what you have to do.” Harrison (Interview #2) shared a similar sentiment, noting, “I think having people come in to evaluate how you’re performing in the classroom and sitting in on other classes to see different teaching styles is beneficial.” Barbara (Interview #2) highlighted a benefit, describing, “I think that they could also provide more opportunities for collaboration with other faculty members, like, you know, working on a project together or sharing ideas and resources.” Lydia (Interview #1) recounted an experience where forging her peer mentor proved helpful when learning about pedagogy; she described, “I’m like, ‘Sit down and talk to me about pedagogy.’ But I said, ‘But it doesn't make sense to me. These are adults. Why are we doing pedagogy? I don’t understand why,’ you know. So, she helps me understand pedagogy better.” These experiences highlight how peer mentoring

enhances individual teaching practices and fosters a sense of community among adjunct faculty.

Some participants had other considerations when accessing mentorship opportunities despite their advantages. Greg (Interview #1) pointed out what he sees as a lack of structured guidance, explaining, “There is no mentor to guide us through academic research in support of our desired topics or to improve student learning and participation.” Fred (Interview #1) stressed the importance of maintaining flexibility in mentorship, stating, “Mentorship is a tool. It works for some, but perhaps not for others. It’s something to be leveraged, not canonized.” Debbie (Interview #1) pointed out the intrinsic benefits of having a mentor early on in an adjunct’s role at an institution, saying, “Having a peer mentor can help you navigate the terrain and indoctrinate you into the organization’s culture. Connect with that person almost immediately to avoid stepping on any landmines.” Janet (Interview #2) spotlighted a challenge facing her as she navigates the world of being an adjunct and realizing she will soon be the mentee, noting, “My next challenge is to be that credible support for new professionals who are coming in, to make sure that I can provide the right kind of guidance and support. The challenge is to continue my purposeful and intentional focus on developing HR expertise, what’s important in HR, what needs to be in HR to make it successful, and how to pass along that critical strategic HR thinking to a new generation of people entering the field.” Overall, participants valued peer mentoring but also emphasized the need for mentorship programs to be adaptable and well-integrated into professional development initiatives.

Community Building (Need For More)

Participants discussed the need for more purposeful community-building opportunities as part of professional development. Trinity (Interview #2) noted the value of consistent faculty interactions, sharing, "We had a meeting on Friday with another institution I'm employed with, and we offered one another tips and strategies on how to circumvent students appealing grades and what types of tools we have in our individual wheelhouses. Encouraging collaboration is key." Similarly, Edna (Interview #1) emphasized the importance of regular department meetings, stating, "The isolation as an adjunct instructor is difficult, so it's nice to come together and have these conversations. The department meets once every two and a half months, but I wish it were once a month." These reflections highlight how collaborative opportunities can combat feelings of isolation and create a sense of belonging among faculty.

Participants also noted the benefits of structured programs that facilitate community engagement. Oliver (Interview #1) praised online seminars, including interaction with colleagues, stating, "I love online seminars because you get to participate. It isn't just a learning thing; it's participation back and forth with some of your colleagues, which I think is a wonderful experience." Allan (Interview #2) underscored the importance of communities of practice, observing, "Continued education, monitoring the environment, listening to students, and talking to other adjuncts. Communities of practice are extremely beneficial. It's about learning and growing continuously."

Despite recognizing the importance of community-building, participants also identified areas where institutions could improve. Oliver (Interview #2) expressed

frustration with his perceived lack of efforts to foster collaboration, stating, “Schools make no effort, at least [other institutions], to get the faculty together, to adjust, and compare notes.” Similarly, Greg (Interview #2) advocated for more personalized and interactive professional development, suggesting, “The institution could also encourage collaboration and sharing of best practices among faculty members. Creating a more supportive and interactive environment would enhance the overall effectiveness of professional development.” Lydia (Interview #1) tied together these concepts, grounding the importance of community building by relating the experience to that of students, saying, “It’s hard to develop relationships with anyone. That, I think, is a hard thing, too, which I imagine is the same thing the students feel.”

Student Experience

Professional adjunct faculty consistently emphasized their role in shaping the student experience by fostering engagement, adaptability, and personal connection. Greg (Interview #2) described how his teaching strategies encouraged high levels of attendance, sharing: “I create an environment where they want to be here, and they don’t want to miss because they never know what we’re going to do in class.” Similarly, Janet (Interview #2) reflected on the impact of her individualized support, stating, “Students often say, ‘I don’t know what I would do without you right now. My life is a mess, and thank you so much. This is a bright spot.’” This feedback, she explained, underscores the value of going beyond basic instructional duties to create a supportive learning environment.

Many participants highlighted the challenges of engaging students in a post-pandemic educational landscape, where distractions and reduced participation have

become more common. Edna (Interview #2) voiced her concerns about declining skills and work ethics, sharing, “I’m amazed at how many people graduated high school without understanding basic grammar. I worry this will be more common.” Fred (Interview #2) recounted his experience with struggles engaging with his students and their lack of connection, sharing, “You know, my phone number’s there, they can call, they can text message, or whatever me, and they do fairly often. I’m surprised. I get very few calls these days. Mostly, it's text. You know, they don’t want to talk to me, but they kind of want to message me. But the quality of the connection with the students is absolutely missed.” Meena (Interview #2) shared her perspective on the changing engagement amongst students, describing, “I remember back in those days where students were actively engaged every day they’d show up. And there’d be some post where today, whether it doesn’t matter if it’s [institution’s names], in both environments, the students are required one discussion post and two peer responses. And that’s what you get: one discussion post and two peer responses. It’s not even a true asynchronous environment.” These reflections suggest that the quality of the student experience is closely tied to institutional standards, pedagogical approaches, and faculty members’ ability to adapt to evolving educational challenges.

Participants also addressed the need to strike a balance between a student-first mentality and maintaining educational quality. Lydia (Interview #2) raised concerns about condensed course timelines, stating, “This five- and six-week condensed time is attractive to students because that’s how they’re going to finish their degree, but it’s overwhelming for everybody involved. I don’t know how that is going to be sustainable with quality.”

Feedback

Adjunct faculty underscored the importance of feedback in fostering student growth, emphasizing how it serves as both a teaching tool and a means of connection. Edna (Interview #2) highlighted her approach to feedback, stating, “My pedagogy now is about how students will apply what I’ve taught them to their lives and how my feedback will help them grow. Putting ‘great job’ on a paper is not enough. I want students to know what they did well and areas for improvement.” Edna’s (Interview #2) commitment to providing meaningful feedback was something she learned through, “a class on how to give quality feedback. This professional development class was offered by my district, and I thought that was phenomenal as well. And I think most educators don’t have a clue how to how to really leave quality feedback that’s going to benefit students.” Similarly, Fred (Interview #1) shared how meaningful feedback has impacted students, noting, “They come back and say, ‘Yeah, you changed my professional career,’ and I thought, ‘Wow, this is something that’s really great.’”

Despite the critical role of feedback, participants noted challenges in ensuring students engage with it meaningfully. Kellen (Interview #2) expressed frustration, stating, “I have evidence they don’t read the comments cause they do the same mistake over and over and over again.” Meena (Interview #2) echoed this concern, observing, “Students show up, do the minimum required by the rubric, and when they get good grades, they don’t read the comments.” Greg (Interview #2) shared some recent feedback from learners, recounting, "The ones that do respond say that they've never looked at my emails or my announcements.”

Some participants have sought innovative ways to enhance the effectiveness of feedback. Remi (Interview #2) described using video feedback to engage students, sharing, “I did it for the first time last summer, and almost within three minutes of sending out the video, I got a response from a student immediately.” Oliver (Interview #1) also emphasized the importance of leveraging technology, explaining, “Using tech to understand where the students are coming from and what they need to succeed is critical, as opposed to just correcting papers and throwing them back at them.”

Engagement

Professional adjunct faculty emphasized their dedication to fostering student engagement through creative and personal approaches. Barbara (Interview #2) described her efforts to make content engaging, sharing, "I use a lot of YouTube videos, and I try to find things that are engaging for students.” Harrison (Interview #1) echoed this sentiment, emphasizing the importance of real-life examples in teaching, recounting, “People like stories. When you can interject real-life situations as part of the course, it makes it so much better. You’ll get more engagement out of the students.” Debbie (Interview #1) shared her experience leveraging social media accounts to share classroom resources, saying, “You just do everything you can, all in the hopes of increasing engagement in the classroom.”

Participants also expressed concerns about the reduced depth of engagement in asynchronous learning environments. Meena (Interview #2) shared her experience with minimal participation requirements, stating, “Students show up on day two, post their discussion question response, post two peer responses, and then they’re done. You don’t see them again until the following week.” Greg (Interview #1) shared a similar sentiment,

lamenting about the diminished engagement, sharing, “I would like to see that with students, where a discussion continues beyond the initial question, allowing for more learning and contrasting opinions.” Fred (Interview #2) reflected on the impact of shifting student habits, observing, “The quality of connection with students is absolutely missed. They don’t want to talk to me, but they’ll text message instead. The depth of engagement is just not there.” Edna (Interview #1) talked about her experience working with college students and the poor engagement and motivation, sharing, “Sometimes I feel like I'm teaching the same study skills to college students that I teach to sixth graders. There’s also frustration with students not completing work and the lack of follow-through, similar to public school. I assumed college students would be more motivated.” Lydia (Interview #1) highlighted one of the underlying things to remember when working with online learners, sharing, “The one drawback I think about online learning is, in a way, you're teaching yourself. You have to rely on yourself to stay on task and really learn it and be proactive in asking your instructor.” These insights highlight the evolving dynamics of student-instructor interactions, with faculty adjusting to new norms in communication and participation.

Value of Education

The value of education emerged as a recurring theme in participants’ reflections, particularly in discussions about the concerns of cost, relevance, and the shifting expectations of students and society. Meena (Interview #2) emphasized the importance of rethinking the value proposition in higher education, stating, “The cost of education at all schools, not just [institution’s name], but all schools, they need to rethink that value proposition. I know it’s hard to put a price tag on education, but that’s going to be the

reality, right?" Allan (Interview #2) highlighted the shift from traditional degree pathways to skill-based learning, observing, "The future of education isn't necessarily a formal degree; it's more about skills along the way, along the lifetime." Pressley (Interview #2) echoed the sentiments, adding, "Many students can now make good money without a college degree, so the traditional path might not appeal to them as much."

Participants also discussed the importance of preserving the intrinsic value of education in the face of evolving technological and cultural landscapes. Debbie (Interview #2) raised concerns about the quality of education, remarking, "We have to have the courage to say, 'This is the level of what we accept... We're going to find a way to align, making sure students are demonstrating the skills, hard and soft, that employers are looking for.'" Debbie (Interview #2) also shared her challenge to education, asking, "So how do we preserve the value of education and the value of having to be the ability to learn from someone else and not just, you know, they can click through the videos…" Debbie (Interview #1) underscored the distinction between obtaining a degree and acquiring a meaningful education, asking, "You can get a degree, but did you get an education? Did you acquire those soft and hard skills?"

The participants also reflected on the shifting attitudes of students toward education. Remi (Interview #2) noted a "shift in students who are deciding to take the venture of higher education. Instead of it being, 'Oh, well, I have to,' it's becoming more of a conscious decision because of the increasing cost and gambling." She (Interview #2) continued, saying, "A lot of students aren't even wanting to go into college. So, I have that worry foremost." Lydia (Interview #2) echoed these sentiments, pointing to a "loss

of values in society as a whole" and the role education can play in rebuilding them. Collectively, these insights highlight the participants' pivotal role in fostering personal growth and professional readiness.

Summary

Participants expressed a mix of apprehension and enthusiasm regarding the role of AI in education. Many expressed concerns about academic integrity, as AI-generated work makes it difficult to assess student learning and critical thinking. They called for clear institutional policies to guide ethical AI use, comparing the current uncertainty to the early days of the Internet when plagiarism detection tools were still evolving. Some participants, however, see AI as a valuable tool for research and efficiency, but stress the need for training and structured integration rather than outright bans or inconsistent enforcement. These discussions highlight the broader challenge of embracing AI's benefits while preserving academic integrity and maintaining student accountability and engagement.

Beyond AI, concerns were raised about student engagement, particularly in online learning environments, where participation is often minimal. They noted that self-discipline is a challenge for many students in online learning, leading to disengagement and minimal participation. To address this, participants suggested more interactive and synchronous elements to foster deeper connections. Additionally, they highlighted that many training programs are seen as redundant or disconnected from their actual teaching needs. Many shared that they have a favorable view of professional development and seek opportunities to engage and learn within their institutions. Nevertheless, they

advocated for more relevant training and structured peer mentoring to enhance faculty effectiveness and build a sense of community.

Despite these challenges, adjunct faculty members remain deeply committed to student success, frequently going above and beyond their required duties. Many find motivation in mentoring, providing detailed feedback, and fostering meaningful connections with students. They also acknowledged the shifting perceptions of higher education, as rising tuition costs and alternative career pathways make students question the traditional degree model. Participants reiterated that institutions must adapt by focusing on skills-based learning, clear value propositions, and innovative teaching strategies. Universities must develop effective policies, enhance faculty support, and modernize their online learning platforms to maintain academic quality and relevance in an evolving educational landscape.

Chapter 5: Discussion

This chapter presents my interpretation of the study's findings, supported by participants' voices and relevant literature. I distinguish between participant insight, scholarly literature, and my analytic conclusions throughout the discussion.

The current study examined the teaching and learning experiences of professional adjunct faculty and explored how they learn and evolve as educators throughout their careers. Through two 60- to 90-minute interviews, participants shared insights into their personal and professional journeys, as well as how they have developed their skills and knowledge to become educators. I asked participants about their abilities and aptitudes in the TPACK+XK framework and how they developed their understanding of their technological, pedagogical, content, and contextual knowledge. In addition, this study examined how professional development factors into the TPACK and skills of professional adjunct faculty. Specifically, the study aimed to identify the needs and challenges faced by professional adjuncts and to determine the most effective ways to provide support and resources.

The previous chapter presented results and findings from the qualitative data analysis. The present chapter offers an interpretation of the results are organized as follows: (a) a summary of the findings; (b) a discussion of findings and a comparison of this study's results to that of the literature review; (c) study-specific summary of professional adjunct faculty (d) reflecting on how TPACK+XK was explored; (e) overview of what this study adds to the literature; (f) a discussion of this study's methodological limitations; (g) implications of the study's findings, and recommendations for future research.

The following research questions guided this study:

1. How do professional adjunct faculty members experience integrating technology, pedagogy, content knowledge (TPACK), and contextual knowledge (XK) within the experience of their teaching and learning?
2. What are the professional development needs and challenges that professional adjunct faculty face when incorporating technology, pedagogy, content, and contextual knowledge in their teaching within the proposed TPACK and contextual knowledge (XK) framework?

In response to these questions, I initiated this project by defining the role of professional adjunct faculty and their essential yet unique contributions to higher education. Using the TPACK+XK framework provided a foundationally strong model that clearly articulated each knowledge component to serve as a priori codes. As identified in the literature review, the contextual element of the TPACK+XK framework has historically received less attention, with the focus largely on technology, pedagogy, and content knowledge. This study emphasized the inclusion of contextual knowledge and sought to demonstrate the depth of information that is equally important to faculty as they develop their teaching and learning strategies.

Summary of Findings

This study's findings focus on the experiences of professional adjunct faculty integrating the TPACK framework (Technological, Pedagogical, and Content Knowledge), including contextual knowledge (XK), within their teaching practices. As a result, I dove deeper into the contextual knowledge and understanding of professional adjunct faculty. Additionally, the study revealed that although none of the participants

were directly familiar with TPACK terminology, they indicated through their insights that they naturally applied its principles. Participants shared that they navigated their roles through formal education, self-directed learning, peer mentoring, and experiential growth. Another central theme that I took away from this study was the iterative nature of pedagogical development, where adjunct faculty refine their "personal pedagogy" and instructional strategies over time by adapting to student needs, technological advancements, and evolving institutional expectations.

Some key challenges identified include an appraised lack of structured onboarding, limited institutional support, and unclear expectations for curriculum design and academic freedom. Participants expressed equal enthusiasm and concerns about the role of artificial intelligence (AI) in education. Highlighting its potential to enhance teaching efficiency while balancing the fears of their roles being replaced by AI and the risks of academic integrity misuse. Additionally, my findings underscore the critical need for professional development opportunities tailored to professional adjunct faculty, particularly in the adoption of technology and the refinement of pedagogical strategies. I discuss these findings in more detail in the sections below.

Discussion of Findings

This study highlighted the subpopulation of professional adjunct faculty and their teaching and learning practices. The TPACK+XK framework served as a foundation for exploring how educators and experts in their fields have acquired their knowledge and skills. My discussion will review both research questions, provide key takeaways, and highlight cross-cutting themes.

How Professional Adjunct Faculty Experience TPACK

The TPACK framework has not often been applied to specifically to both higher education and professional adjunct faculty. This establishes a new pathway in the literature by applying the TPACK+XK framework to support educators' growth and development. None of the participants in the study indicated they had previous experience or knowledge of the TPACK framework, which provided a unique opportunity to explore their thoughts, insights, and experiences around the four knowledge bases of the framework: Technology, Pedagogy, Content, and Contextual knowledge, while also discussing other themes within their teaching and learning. Previous studies have focused on the three main knowledge bases of the framework (Technology, Pedagogy, and Content) and working towards TPACK itself, which is located at the center of the framework (See Appendix B). However, many of those studies minimize or exclude their exploration of contextual knowledge, making it understudied and allowing this study to fill a gap. Despite Mishra (2019) formally adding contextual knowledge to the framework, a gap remains where additional literature can be beneficial. The cross-cutting themes from the study that address the first research question include self-regulated educators, the vastness of contextual knowledge, identity, personal pedagogy, and lifelong learning.

Self-Regulated

Participants shared pride in their work and the importance of their roles in delivering opportunities for their students to succeed. However, I perceived that many participants' backgrounds lacked a clear foundational understanding of the different elements of the TPACK framework or the fundamentals of being an educator. Some

participants shared that they entered their role as adjunct faculty without a formal educational background. They have not formally learned about the best practices of being an educator. Instead, as they described their experiences, they developed their insights and expertise through classroom engagement, professional development, and collaboration with colleagues. All of which contribute to their self-efficacy in teaching and learning. The literature defined self-efficacy as the belief or confidence in one's ability to apply knowledge (pedagogical, technological, and content knowledge) and skills necessary to achieve a specific educational outcome (Horan & Kim, 2020; Horvitz et al., 2014; Joshi, 2023; Semiz & Ince, 2012; Yazu & Erten, 2014). The notion of self-regulation I discuss in this study adds to the literature as a clear growth in the participants self-efficacy as they learn and grow within their role as an adjunct. These findings also align with core principles of constructivism, which emphasize that learners, like the participants in this study, construct knowledge through direct experience and problem-solving (Yuan et al., 2025). In the absence of formal pedagogical training, participants developed their approaches by actively engaging with their teaching environments and adapting through trial and error.

Furthermore, the educational compass that guides their decision-making demonstrates a level of self-regulation that has enabled them to find success. Despite not having had formal training to become educators, they have learned how to learn, work with individuals, and listen throughout their professional careers. Most importantly, participants indicated they have developed a compassion and understanding to view students as individuals and recognize the unique contextual factors that impact their ability to be successful students.

Through their experiences as educators and professionals, participants articulated an ability to acquire and refine knowledge and skills to become impactful educators. Much of their focus as educators' centers on their desire to see their students succeed, despite their limited skills and knowledge. Throughout Chapter 4, participants repeatedly emphasized the importance of student-centered support, recognizing that many learners, particularly adult and online students, may struggle with self-motivation, engagement, or foundational academic skills. To acquire the skills necessary to support their learners, participants shared their methodologies for developing practical skills throughout their careers and engaged in mentorship opportunities to foster their growth and extend these opportunities to their learners. Through these mentorship-type roles, participants described offering flexible office hours, sometimes in the middle of the night, to accommodate work schedules and customizing their feedback to provide meaningful insights. Their grace, empathy, and flexibility underscore their commitment to helping find success in learning while balancing the competing demands of work, school, and family responsibilities.

Participants also shared that their role as educators does not end when the class concludes; instead, they emphasized their desire to build a lasting relationship with their students. Many participants shared their tendency to offer guidance that goes beyond the classroom. Some discussed former students contacting them to express gratitude for the commitment and dedication they provided to ensure their long-term success. These participants demonstrate their self-regulation in finding the balance between the "by the books" way of being an educator and their strategy for bringing their lived experiences and a deep sense of responsibility to see their students succeed (Yuan et al., 2025). The

insights shared in Chapter 4 highlight the resilience and dedication that professional adjunct faculty bring to their role. Despite institutional restrictions or standard best practices, their ability to find balance amongst all the noise demonstrates their importance to the success of students and higher education.

Vastness of Contextual Knowledge

It was evident from the literature review that contextual knowledge was an element that required further exploration. Kelly (2010) identified contextual knowledge as "one of the most complex, important, and least understood components" of the TPACK framework (p. 52), and this study further supports that complexity. Mishra (2019 defined contextual knowledge as the portion of the TPACK framework that encompasses all other influences on the teaching and learning experience, including student characteristics, teacher attitudes, and the availability of technologies (Mishra & Koehler, 2006). Brianza et al. (2024) previously detailed the importance of contextual knowledge and this study extends their work in exploring the breadth of factors impacting professional adjunct faculty. This study also adds to the literature by highlighting additional elements of contextual knowledge that should be recognized.

As discussed in the literature review and Chapter 4, contextual knowledge encompasses a wide range of topics and considerations within the TPACK framework and beyond. That recognition of its wide range of topics presents an opportunity to distinguish between the contextual knowledge of learners and the contextual knowledge of being in the field of education. Within the contextual knowledge of learners, there are clear pockets of information that the literature indicates are critical attributes that someone can develop and understand that are not mutually exclusive to being an educator

(Brianza et al., 2024). I interpret this to mean that professional adjunct faculty can develop empathy and compassion towards adults with families and careers. Developing a contextual understanding of individuals who happen to be students is a practical skill that can be beneficial to both working professionals and professional adjunct faculty.

However, on the other side of the contextual knowledge discussion is the contextual knowledge of being in the field of education. This contextual knowledge focuses on elements such as institutional policies, technology availability, and curriculum development. These two sides of contextual knowledge come together; I argue they should not be viewed as conflicting, but it must be recognized that they are distinct bases of knowledge that can be addressed individually or collectively. Bringing together these elements is what made the TPACK+XK framework an ideal fit for this study. Through TPACK+XK, a professional adjunct faculty member can develop an understanding of adult learners while balancing that knowledge with pedagogical knowledge to develop an understanding of how to teach adult learners (andragogy).

Identity

The identity of professional adjunct faculty manifests in several key ways throughout the discussion. I interpreted that participants have a complex relationship with their professional identities, often shaped by their roles within academic institutions and self-perception. There is an apparent tension between their aspirations as professionals and educators and the institutional realities restricting those plans. Many participants expressed great pride in their students' learning and contributions to higher education. However, the perceived lack of institutional support, benefits, and professional recognition has a negative impact on their self-perception. The perceived stigma

exacerbates their struggle for validation in their role as adjunct faculty. Some participants expressed concerns that their role is undervalued or even replaceable by artificial intelligence. Several participants noted that they are often treated as "second-class participants" and contract workers rather than integral faculty members.

Another aspect of identity in this study was the presence of the practitioner mindset that many discussed. Participants described their role as educators, incorporating theoretical and pedagogical elements, as well as real-world applications. They positioned themselves as "scholar-practitioners," contributing to their self-efficacy in bringing valuable industry experience into the classroom. This identity provides them with a sense of purpose in their work, even when facing barriers, whether institutional or professional. Some participants suggested alternative titles, such as "associate faculty" or "coach," to more accurately reflect their contributions, with some resisting the "adjunct" label, which they find limiting or demoralizing.

Additionally, the balancing act between professional commitments, teaching responsibilities, and personal life further shapes their identities. These factors contribute to their struggle with being overworked and the feeling of lacking stability in their roles; yet, they are driven by their passion for mentoring and teaching, with the hope of helping their students succeed. While sometimes marginalized by institutional policies, professional adjunct faculty demonstrate a strong commitment to their roles despite the challenges of establishing and maintaining a respected professional identity. This exploration of identity compliments what the literature shares about adjunct faculty (Anderson, 2007; Levin & Hernandez, 2014; Masri, 2018) while nicely adding a deeper layer of how they have experiences isolation.

Personal Pedagogy

The theme of developing a personal pedagogy is another takeaway from this study, highlighting the evolving and experiential process by which professional adjunct faculty develop and refine their instructional strategies. The terminology "personal pedagogy" does not exist in other studies and may seem redundant, but my takeaway from this study was the true sense of individuality that participants shared in their journeys' to become adjunct faculty. As a term I have focused, this idea adds to the literature around adjunct faculty and how they approach their roles and evolve within them. Many participants shared that they entered their roles without formal pedagogical training, leading them to develop their teaching styles through trial and error, professional development, peer networking, and self-reflection. Through their stories, I interpreted the participants' evolution as educators, initially investing significant effort into achieving perfection, and gradually shifting their focus toward meaningful student engagement over flawless execution. This strategy for building and refining teaching and learning skills transitions from rigid, by-the-book pedagogical strategies toward more student-centered teaching, emphasizing engagement and practical application.

Another element of developing a personal pedagogy is the action of learning by doing. Since a few participants had a formal background in learning about pedagogy prior to their role, their knowledge of the theory was developed through exposure to knowledge and an iterative cycle of on-the-job learning. One participant noted that her perspective shifted after gaining teaching experience, and she now focuses on how her feedback can support students' growth. Similarly, another participant acknowledged their lack of confidence in pedagogy and their expertise as an educator. Their insights

demonstrate how their teaching experiences have refined their strategies for delivering knowledge to their students.

Lastly, participants shared how feedback from their institutions, students, and self-reflections has shaped their teaching strategies. Participants shared how feedback on curriculum design projects shaped their understanding of what works in the classroom, while others emphasized the importance of remaining flexible to students' needs. Participants insights reinforce that developing a personal pedagogy is an ongoing and dynamic process that will continue to evolve.

In Chapter 4, participants shared practical strategies for evolving their personal pedagogies. These strategies ranged from maintaining equity and clarity in their feedback to enhancing student motivation and engagement. While not innovative, their insights demonstrate an apparent growth in their knowledge and strategies, which they have found successful and seek to share with other adjunct faculty entering higher education.

Lifelong Learning

The theme of lifelong learning is a defining characteristic of participants in this study, emphasizing their commitment to continuous professional growth, staying current in their fields, and adapting to new educational challenges. Many participants view ongoing learning as essential to their roles, both in terms of professional development and subject matter expertise. Many emphasize the necessity of staying updated with research and industry developments. The concept of lifelong learning, particularly within the professional adjunct faculty population, adds to the literature as an area that has previously been explored. Participants demonstrated their commitment to lifelong learning and expanding their knowledge as educators and practitioners in their careers.

Another asset that emerged as a resource for their lifelong learning was the invaluable insights of their students. Many participants view their ability to learn and grow as a symbiotic balance between their professional learning and their ability to listen and learn from the students they teach. There is a clear recognition that the knowledge, resources, and thoughts being shared by students through their assignments and discussions help refine their expertise. Participants shared their experiences and insights for new adjunct faculty entering their roles. Many emphasized the importance of listening to students and sharing what can be learned to improve each course and then implementing that knowledge in practice.

Leveraging professional networks, attending conferences and webinars, and maintaining memberships to industry organizations all play a crucial role in being a lifelong learner. Participants shared their methods for staying up to date with their industry knowledge, whether through their day-to-day work or the countless opportunities to gain knowledge; they recognized the importance of being informed. Participants shared that being a member of a professional organization provides ongoing access to new research and educational strategies. At the same time, other participants described utilizing their professional skills to stay informed about real-world industry trends. Some participants discussed the importance of continuous learning, the merits of being a lifelong learner, and how much they enjoy learning and growing in their roles. They showcased how they view lifelong learning as integral to their identity and professional development. All of this knowledge contributes to their ability to be lifelong learners, but one element not discussed is the importance of professional development and the intricacies of the tools. Some inherent needs and challenges emerge as institutions

strive to enhance the production and dissemination of resources and support to their professional adjunct faculty.

Professional Development Needs and Challenges

This section explores the second research question from the study and highlights the prominent cross-cutting themes that emerged throughout Chapter 4 and the subsequent discussion. In addition, this section briefly revisits the literature review from Chapter 2, aligning key insights with the themes presented here. As introduced in Chapter 2, the literature outlines how institutions can focus their efforts on supporting and retaining adjunct faculty. These takeaways are revisited and compared with the findings presented in Chapter 4. Key themes from the literature include the need for improved communication, expanded professional development opportunities, inclusive faculty engagement, mentoring programs, and supportive institutional policies. These elements will be considered alongside the cross-cutting themes that emerged in this study, which address professional development needs and challenges, practical skill development, the importance of community, and the role of institutional support. Notably, participants' calls for more relevant and discipline-specific professional development reflect a constructivist perspective, one that values learning as contextual, connected to practice, and built upon prior knowledge and experience.

An important consideration that emerged from this study is the content-specific nature of the TPACK framework. Building on Shulman's (1986) foundational work on pedagogical content knowledge, Ball, Thames, and Phelps (2008) emphasize that instructional decisions are shaped not only by who is being taught but also by the unique demands of the subject area. Participants in this study reflected this idea through content-

responsive uses of technology, leveraging simulation tools in healthcare or data visualization software in applied business and design contexts. These choices demonstrate that technology integration is not simply about tool proficiency but about aligning digital strategies with both disciplinary goals and learner needs. However, professional development opportunities offered to adjunct faculty do not always reflect this complexity. As described in Chapter 4, many adjunct faculty seek meaningful, growth-oriented opportunities to improve their teaching, but often perceive a lack of institutional support or access to resources that feel relevant to their subject matter and teaching context (A et al., 2022; Butters & Gann, 2022; Layou et al., 2022; Wallin, 2007).

To better support instructional effectiveness and engagement among adjunct faculty, professional development must intentionally address the content-dependent nature of TPACK. Institutions should prioritize training and resources that connect pedagogy, technology, and discipline-specific needs, enabling professional adjuncts to make informed decisions that enhance student learning across educational settings.

Practical Skills

The importance of practical skills was a recurring theme throughout Chapter 4, with many participants emphasizing the necessity of hands-on learning and real-world application. With professional adjunct faculty coming from industries where knowledge was learned on the job, there is little surprise that they value the skills acquired and seek to impart them to learners accordingly. Many participants emphasized the importance of professional development that is directly relevant to their teaching and aligns with industry practices. This also aligns with findings from the literature review, reinforcing

their hope to improve their teaching and learning (Butters & Gann, 2022; Danaei, 2019b; Joshi, 2023; Nīmante et al., 2025; Siliņa-Jasjukeviča et al., 2025). For example, some participants argued that professional development should be more personalized to their needs and practical skills. They underscore the value of practical experiences that seamlessly integrate into the classroom and beyond (A et al., 2022; Danaei, 2019b; Siliņa-Jasjukeviča et al., 2025).

Some participants shared their experience of attending external professional development opportunities to refine their subject matter knowledge and teaching strategies. Participants focused on their skill development and learning practical knowledge that is transferable to their classroom, but outside the offerings of the institution. Institutions should not be expected to be the sole providers of all professional development. However, it reinforces the need for professional development that mirrors real-world industry expectations (Siliņa-Jasjukeviča et al., 2025). It also invites discussion about providing opportunities for adjunct faculty to seek external training that enhances their professional knowledge, benefiting their teaching and learning in the classroom. Ultimately, students would benefit from their instructors being better informed about the latest insights and knowledge in the field, without the entire onus being on adjuncts to either procure training through their full-time employer or bear the financial burden themselves. With low pay, minimal benefits, and pervasive issues among higher education and adjunct faculty, this benefit would be a welcome incentive to invest in their knowledge, which benefits their students while making them feel valued for their work.

Chapter 4 also critiques the shared insights of participants and the perception of a lack of innovation and engagement in institutional professional development. Participants noted that the training topics often felt stale with little variety or updates over the years. Some expressed frustration with workshops that were generic and not designed for their specific disciplines. The offerings discussed by participants in Chapter 4 did provide praise for the institution's offerings and recognized that they focus on pedagogical development, but that they are typically the same offerings over and over with little change over time. If an adjunct stayed around the institution for a few cycles, they would quickly saturate the offerings and find themselves with no new options for learning and growth. The expressed lack of variety and strict adherence to essential pedagogical topics reinforce the gap between the theoretical training offered and the practical skill-building that professional adjuncts need and seek.

This discussion presents practical skill development as an essential yet often overlooked component of adjunct faculty professional development. Both participants and this discussion suggest that effective professional development should be adaptive, hands-on, and closely aligned with industry standards, while still introducing and reinforcing technological, content, and pedagogical principles that are equally essential for adjunct success (Mishra & Koehler, 2006). Furthermore, institutions should be willing to provide additional opportunities for adjunct faculty to develop their skills in areas important to their growth and interests (Dolan, 2011; Joshi, 2023). If institutions cannot deliver those opportunities directly, professional development funds should be available to encourage continued growth, promoting better outcomes for faculty and students. This professional development benefit would also demonstrate a commitment to professional

adjunct faculty and reiterate the institution's support for their development and importance.

Need For Community

Another theme from Chapter 4 was the need for more purposeful community building within higher education. This form of professional development satisfies participants' desire for collaboration, mentorship, and structured engagement opportunities, addressing feelings of isolation and the perception of lack of support. Many participants shared the benefits they gained from peer mentoring and how it helped them navigate their roles as adjuncts, particularly when they first started. They also emphasized how mentoring supported the development of their personal pedagogy and informed the formulation of their teaching and learning strategies, which were discussed in the literature review (Layou et al., 2022; Wallin, 2007). Some participants highlighted the opportunity for mentoring programs to support and develop the research skills that adjunct faculty may not possess. These clear expectations of how mentorship can be beneficial are crucial elements from the literature, which discusses how clear expectations and guidance must be established for these programs to succeed (Danaei, 2019a). Furthermore, this mentorship support bodes well for their continued success, as the literature reiterates that careful planning and execution are essential to ensure that adjuncts are familiar with the programs and their goals (Danaei, 2019a). If institutions can capitalize on and champion adjuncts who have found this type of success, it can lay a strong foundation for mentorship programs to have longevity and deliver on their goals.

Within the topic of community building is the idea of fostering a more inclusive community that assimilates adjuncts into the culture and makes them feel welcomed. The

literature review discussed building an inclusive community for institutions to demonstrate their commitment to supporting and advocating for adjunct faculty populations (AuCoin & Vah Seliskar, 2024; Layou et al., 2022). Other ways that full-time faculty can be supportive and promote an inclusive community are by nominating adjuncts for awards, recommending them for committees, or volunteering to serve in a mentor role (Layou et al., 2022; Meixner et al., 2010; Mueller et al., 2013; Wallin, 2007).

Beyond getting full-time faculty involved, institutions should seek to deliver more purposeful opportunities that are inviting to adjunct faculty and promote the community to help combat issues like isolation. Many participants felt that there was little opportunity for community and expressed sentiments of not feeling a sense of belonging, as well as feelings of isolation. These experiences highlight the challenges that professional adjunct faculty face, as well as the feelings of isolation and disconnection they often experience (Ashton, 2012). However, this discussion also identifies where institutions can focus their efforts to improve the experiences of their adjunct faculty.

Participants also shared ideas on addressing some of these issues related to isolation and how building a more purposeful community can be beneficial. Some highlighted the scheduling issues with faculty meetings that were scheduled during inconvenient times. Through discussion, they offered the hope that meeting times could be adjusted to later in the day and outside of regular business hours when they, as professional adjunct faculty, are not working their full-time jobs. These modifications could indicate that institutions are making a concerted effort to recognize adjuncts' contributions to higher education and provide them with opportunities to grow and acquire new skills. These factors contribute to a broader sense of community, increase the

likelihood of improved faculty retention, and further empower adjunct faculty to excel in their roles (Danaei, 2019a; Danaei, 2019b; Layou et al., 2022; Parker et al., 2018; Wallin, 2007).

Institutional Support

The final cross-cutting theme of this study is institutional support within the context of professional development. This topic presented itself in both positive and negative experiences shared by participants. While some described their experiences as positive and felt supported and part of a community, most expressed frustration. Much of their frustration stemmed from their shared insights about poor pay, limited access to resources, lack of engagement, lack of variety, and inadequate professional development opportunities. Participants also shared their sentiments on artificial intelligence, emphasizing the need for more precise guidance on policies and expectations for the technology, which is supported by the literature (Lakhe Shrestha et al., 2025; Oved & Alt, 2025). Some participants even highlighted the disparity among institutions, with some providing guidance and flexibility to use the technology, while others have been coy or requested that it not be utilized. This shared feeling of a lack of directness has left participants at a loss as they struggle to work with learners seeking guidance on how to use such technology for their assignments.

Several participants highlighted their positive view of institutional support, particularly in structured training and access to professional development resources. Some shared how their managers were very supportive and would regularly hop on phone and Zoom calls to answer questions and navigate the complexities of their roles. There are clear examples of some participants' positive experiences within their institution,

where particular departments effectively deliver resources and support. It is worth noting how these particular departments and managers have achieved success. Institutions should collect feedback from these success stories to identify ways to replicate the support and positive experiences in other departments.

However, many participants expressed dissatisfaction with the institution's support, with a focus on poor communication. Some participants criticized their feeling of a lack of personalized communication. The literature review also discussed improving communication, which is a pervasive issue identified by other studies (Butters & Gann, 2022). Communication in this context goes beyond just sending emails, creating a new listserv, or posting signs on corkboards to inform people about upcoming events (Meixner et al., 2010). Participants in this study, and the literature, indicated their desire to see communications that address topics such as departmental points of contact, an overview of courses they teach, and how they align with the broader programs, also ensuring the inclusion in campus-wide communications, such as faculty events, institution, and department-specific strategic initiatives (Burleigh et al., 2021; Green, 2007; Layou et al., 2022; Meixner et al., 2010; Mueller et al., 2013; Wallin, 2007).

If institutions wish to enhance the experience of their professional adjunct faculty, specific institutional policies will need to be revised. Not all policy changes must be financially related, either, as some could be basic, such as providing travel funds for adjuncts that have not been utilized by full-time faculty, providing opportunities to receive grant-related projects, or protecting committee roles exclusively for adjunct faculty (Danaei, 2019b; Layou et al., 2022). However, some policies would be financially related and require an additional lift. Many of the policies discussed in Chapter 2, such as

poor pay, presented themselves in this study. This is a common issue amongst adjunct faculty and likely an ongoing issue. Multiple participants shared that they could make more money working at a local McDonald's than serving as adjunct faculty. The level of compensation shared during the interviews aligns with the data discussed in the literature, with the average adjunct receiving $3,000 for each course they teach, with more than 60% of adjunct faculty receiving less (Yakoboski, 2018). Not all institutions will be able to resolve the compensation issues within higher education, but that does not mean there are no other options to consider in demonstrating a commitment to their adjunct faculty. Other solutions proposed in the literature include providing tickets to campus events, such as sports competitions and performance arts, or granting access to the university gym facilities or the campus library (Green, 2007; Wallin, 2007). I argue that any additional effort could make a significant difference in how institutions present themselves and their commitment to promoting change.

Participants also voiced their demand for improved access to resources. Some shared their experiences with institutional accounts, specifically regarding Zoom, and being told to sign up for a free account. Meanwhile, participants reported that their managers had instructed them to use their Zoom accounts from other institutions. I perceive it to be unreasonable to burden professional adjunct faculty to utilize resources from other institutions when the institution already has access to the platform. Many felt that there are resources already available for the full-time staff and faculty, and that all instructors should have access to the same resources.

Changing institutional policies can symbolize a commitment to professional adjuncts. Institutions must decide if boosting their professional adjunct faculty's skills,

knowledge, and dedication is worth the investment. Any changes must be carefully considered and effectively communicated to faculty. There must be a concerted effort to include adjuncts from all subpopulations in institutional committees and ensure their voices are heard and valued. The greater the investment institutions make in their professional adjunct faculty, the more likely they are to attract and retain highly qualified and motivated educators. This investment could lead to an enhanced student experience, improved performance outcomes among students and faculty, and enhance the institution's reputation. If properly communicated, any investment will be appreciated by professional adjunct faculty, but they must be included in the discussions to help voice the needs of their faculty subpopulation.

Study-Specific Summary of Professional Adjunct Faculty

Various names refer to the subpopulations of adjunct faculty, but this study used the title "professional adjunct faculty." I chose this to focus on professional knowledge, skills, and application to their teaching and learning strategies. Different titles also come with different definitions. While this section will not finalize a definition of the professional adjunct faculty subpopulation, it will provide a detailed summary of this study and paraphrase their role, as described throughout Chapter 4.

The professional adjunct faculty in this study demonstrated a deep commitment to student success, often acting as mentors who go beyond their role to support and engage learners. Participants described their teaching strategies, emphasizing their focus on accessibility and compassion. Some highlighted the importance of maintaining and promoting an open-door policy, ensuring they are available to their students and that students feel supported. Some also promoted the grace and flexibility they extend to

students, knowing they balance work, school, and personal responsibilities. Despite not possessing formal training in teaching, many participants developed their pedagogical strategies through experience and self-regulation, tailoring their instruction to meet the real-world needs of their students. To fulfill their commitment, some shared how their teaching evolved by focusing on fostering engagement and critical thinking while promoting real-world application.

A defining characteristic of the professional adjunct faculty is their commitment to lifelong learning and passion for education. Many professionals actively seek opportunities for professional development and collaborate with peers to stay current in their fields. Through their collaboration, professional development, and work experience, they strive to keep instructional materials current with the latest research and trends in the field. Despite sharing a feeling of limited institutional support, low pay, and a lack of professional recognition, they continue teaching because of their desire to see students succeed, prepare the next generation of professionals in their field, and their passion for teaching. Some shared their lifelong desire to teach, and despite taking other paths through their careers to learn new crafts, they found their way into the classroom. Participants also shared stories of former students expressing gratitude for their commitment and compassion, reinforcing their sense of purpose and long-term impact.

Despite challenges, many participants remain optimistic about the future of online learning and higher education. They see opportunities for greater accessibility to learning and the integration and growth of technologies, such as artificial intelligence (Göltl et al., 2024; Lakhe Shrestha et al., 2025; Oved & Alt, 2025). They also want to see new and innovative teaching methods. However, participants also stressed the importance of

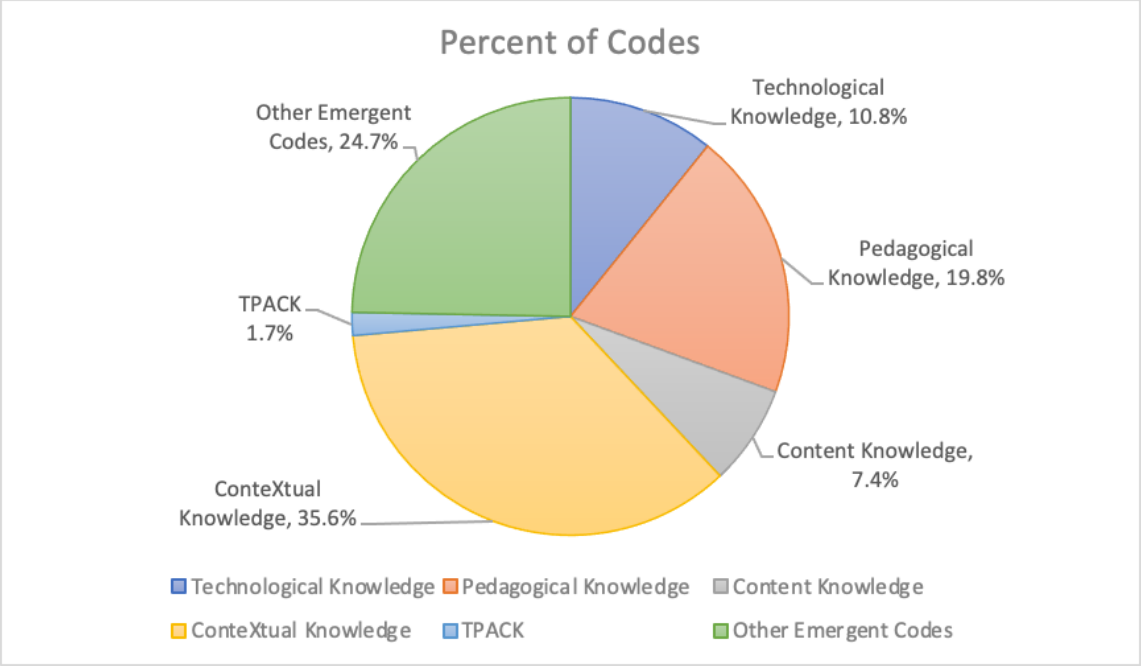
preserving the human element in education by promoting the development and application of critical thinking and practical skills. Ultimately, professional adjunct faculty demonstrate their resilience and dedication as they continually refine their teaching to serve students better and encourage them toward achieving success.

Reflecting on TPACK

The TPACK+XK framework provided four clear knowledge buckets for this study to explore (technology, pedagogy, content, and contextual). Each knowledge component contributes its unique attributes to the growth and development of educators. The four knowledge components served as the four a priori codes for the study, but also outlined clear boundaries to reflect upon for this chapter. In total, 2,196 items were coded throughout the study (Table 3). In that breakdown, the four main knowledge components of TPACK served as the a priori codes and thus were the primary names for the main buckets to funnel in all subsequent codes. TPACK itself also served as an a priori code, but was less frequently used, in large part because participants in the study possessed the less-developed skills and specific knowledge of the TPACK framework. That statement is not an indictment of their teaching and learning skills, but rather a recognition that they have limited knowledge of how best to balance all the elements of the TPACK framework. The overall distribution of codes and the overall percentage of each code relative to the study have been broken down (Figure 5). This chart highlights the significant influence of contextual knowledge, emphasizing its importance in the TPACK+XK framework and underscoring the need for further investigation into the topic.

Figure 5

Frequency Breakdown of Each Code.



Note. This pie chart shows the distribution of the codes: Other Emergent Codes, TPACK, Contextual Knowledge, Content Knowledge, Pedagogical Knowledge, and Technological Knowledge, as identified in this study.

Adding To TPACK Literature

This study contributes to the TPACK literature in several distinct ways. The first is the application of the TPACK framework to the population of professional adjunct faculty. While the framework has rarely been applied to adjunct faculty, Brianza et al. (2024) and the results of this study suggest that, at a foundational level, new adjuncts share key similarities with both preservice and in-service teachers. The former population of preservice and in-service teachers has been the primary focus of many TPACK-related

studies in the past. Both preservice and in-service teachers, as well as adjuncts, are seeking to enter the world of education and need to develop a fundamental understanding of teaching and learning. There is no doubt that there are differences between them that prohibit a universal application of the types of courses and professional development needs. However, the basic needs are generally the same, applying the TPACK+XK framework to provide a foundation for designing and delivering resources, learning, and insights that promote technological, pedagogical, content, and contextual knowledge. Furthermore, this study highlights the importance of including contextual knowledge, which can be equally important for preservice or in-service educators as it is for professional adjunct faculty.

A second contribution to TPACK literature is the intentional focus on contextual knowledge that follows the revised framework from Mishra (2019). With the inclusion of XK, this study adds to an expanding set of data that focuses on contextual elements that have previously not been directly studied (Brianza et al., 2024). Since Mishra (2019) introduced the revised framework, there has been a steady increase in the number of studies that have included XK, and this study supports that trend (Brianza et al., 2024).

This study's final contribution to the TPACK literature is through its application of a constructivist perspective. The study situates the learning and development of professional adjunct faculty within a constructivist framework. Using a constructive framework, the study adds a theoretical contribution to how TPACK is taught and constructed through lived professional and teaching experiences (Amineh & Asl, 2015; Dewey, 1938). The literature review introduced these elements, and I explained how TPACK breaks down into forms of knowledge, curriculum, and assessment. This study

explores each of these constructivist perspectives through a discussion where participants shared their unique experiences and described how they developed their knowledge and understanding.

Limitations

The design of this study had limitations, which were carefully considered and discussed throughout the process. The first limitation is the generalizability of the study, a common consideration in any qualitative research. The data collected in this study were collected from only one primary institution, while many participants worked as adjuncts at other institutions. Their common denominator was that they all worked at the same institution. With only one institution serving as the host, the data and results may not be generalizable to all professional adjunct faculty. The sample size of 17 individuals does not represent the diversity of all professional adjunct faculty. A second limitation was the sheer volume of data collected, which presented a challenge in including every detail from the participants, thereby leaving the final interpretation to my analysis of what to include. This is an inherent limitation of the biases inherent in using a basic interpretive design (Schwartz-Shea & Yanow, 2012).

A third limitation of the study was the collection of only one data stream through the two interview protocols. The reliance on self-reported data through interviews may be subject to recall or social desirability bias (van de Mortel, 2008). Participants may have framed their experiences in ways that align with perceived expectations rather than providing objective insights into their teaching and the institution. The fourth limitation was the usage of Zoom video conferencing software as the sole means for conducting the interviews. Using Zoom exclusively was a strategic decision to increase the likelihood

that more individuals would be able to participate with the increased flexibility of being online. This made conducting interviews at early morning, late night, and on weekends possible. However, the usage of such technology could also present a deterrent for participants who consider themselves technology-adverse and would prefer not to engage in such a study design.

The fifth and final limitation was the recruitment process of the 17 participants. This process relied upon voluntary participation, which may have introduced self-selection bias, as those who agreed to participate in the study may have had stronger opinions or experiences related to teaching or the institution than those who chose not to participate. Future research could build on this study by expanding the sample size, incorporating multiple institutions, and employing mixed-method approaches to validate qualitative insights with broader statistical analysis.

Recommendations

To translate the findings of this study into actionable strategies, the following recommendations are organized by stakeholder group: higher education administrators, professional adjunct faculty, and researchers. Each group plays a distinct role in shaping the instructional landscape and supporting the professional growth of adjunct faculty. These recommendations reflect both the immediate needs and long-term opportunities identified through participant experiences and the broader literature. By addressing policy, practice, and future research directions, this section offers a pathway for strengthening institutional support structures, empowering faculty practice, and deepening scholarly inquiry into the teaching and learning experiences of professional adjunct faculty.

Higher Education Administrators

Colleges and universities continue turning to professional adjuncts to deliver career-relevant and skills-based instruction. Still these instructors often receive limited support, especially when it comes to instructional technology and pedagogical preparation. As participants shared in this study, many began their journey as an educator with little formal training and end up learning through trial and error. When institutions overlook their needs, it can negatively affect both teaching quality and faculty morale, and those gaps inevitably ripple down to students' engagement and learning outcomes.

Artificial intelligence (AI) introduces another layer of complexity. While AI has potential, it also raises challenges around ethics and access. Institutions have a responsibility to provide guidance and training to help faculty and students integrate AI in responsible ways (Göltl et al., 2024; Lakhe Shrestha et al., 2025; Oved & Alt, 2025). Recommendations for administrators:

- Develop professional development programs built on the TPACK+XK framework that speak directly to the unique challenges facing adjuncts (Joshi, 2023). Make sure these offerings are flexible and available asynchronously.
- Ensure adjuncts have access to essential tools, like LMS platforms, and offer introductory AI literacy workshops to ease the onboarding process (Göltl et al., 2024).
- Create peer mentoring programs and Communities of Practice that help adjuncts feel connected, confident, and supported.
- Where internal resources are limited, provide funding for high-quality external PD opportunities.

- Establish clear, transparent guidelines on the ethical and instructional use of AI in the classroom so both faculty and students can navigate this evolving space with confidence.

Professional Adjunct Faculty

Professional adjuncts bring rich industry experience to the classroom and often rely on self-directed learning to grow as educators. However, many share that they feel isolated or underprepared, especially when it comes to online instruction and instructional design. Participants in this study repeatedly emphasized how much they valued opportunities for connection with other faculty and access to practical teaching resources. Professional adjuncts skillfully deliver real-world expertise through a blend of their personal pedagogy and self-developed teaching practices. This mixture of informal and formal learning styles can be transformative for students.

Recommendations for adjunct faculty:

- Take initiative to pursue PD related to online teaching, ed tech tools, and principles of adult learning; these areas can directly enhance teaching confidence and effectiveness (Joshi, 2023).
- Use industry knowledge to design learning experiences that are hands-on and aligned with students' professional goals.
- Try out AI tools in teaching where appropriate, but be thoughtful about their use and follow any institutional policies or norms.
- Develop a reflective teaching practice. Whether it is through journaling, peer feedback, or building a teaching portfolio, regular reflection promotes growth as an educator.

- Get involved in Communities of Practice or informal networks. Connecting with other faculty can reduce feelings of isolation and spark new ideas in the classroom.

Researchers

Despite their growing presence in higher education, professional adjunct faculty remain underrepresented in the academic literature. This study highlights how much we still have to learn about their professional identities, development pathways, and the conditions that support (or hinder) their instructional success. In particular, as AI becomes more embedded in teaching and learning, it deserves careful scholarly attention and not just as a tool, but as a force shaping pedagogy, ethics, and academic culture. Recommendations for researchers:

- Distinguish between different types of adjuncts in research. Professional adjuncts face unique challenges that may be overlooked when grouped with other contingent faculty.
- Conduct longitudinal studies that track how adjuncts build pedagogical and technological expertise over time, especially in online and hybrid settings.
- Examine the long-term effects of PD programs on teaching quality, student outcomes, and adjunct retention.
- Examine how TPACK varies not just by context but by content domain, even within related fields.
- Explore how faculty are using AI in their teaching. Exploring what works, what raises ethical questions, and how it intersects with curriculum goals.

- Investigate how adjunct faculty form professional identities, experience inclusion (or exclusion), and find, or fail to find, belonging in institutional culture.
- Look at the role of lifelong learning practices, including mentorship and self-directed PD, in improving instructional outcomes and faculty satisfaction.

Conclusion

As higher education adapts to the evolving landscape of digital learning, the role of professional adjuncts continues to play a crucial role. Meeting the needs of this population requires more than one-off trainings or policy updates; there is a need for a coordinated and thoughtful approach across institutions. A purposeful investment in the pedagogical growth, professional belonging, and technological capacity of professional adjunct faculty not only supports the instructors themselves but may also elevate the learning experience for students. By addressing persistent barriers and leveraging the unique skills of professional adjuncts, higher education can create more inclusive and effective learning environments for all stakeholders.

References

A, G., Xie, J., & Korkmaz, N. (2022). Factors influencing faculty's online teaching decisions. *Distance Education*, *43*(3), 426–443. https://doi.org/10.1080/01587919.2022.2088474

Aguilar, S. J. (2020). Guidelines and tools for promoting digital equity. *Information and Learning Sciences*, *121*(5/6), 285–299. https://doi.org/10.1108/ILS-04-2020-0084

Ajani, O. A. (2024). Teachers' competencies in digital integration of learning contents in dynamic classroom practices: A review of teacher professional development needs. *Acta Educationis Generalis*, *14*(3), 18–40. https://doi.org/10.2478/atd-2024-0016

Alexander, B., Ashford-Rowe, K., Barajas-Murph, N., Dobbin, G., Knott, J., McCormack, M., Pomerantz, J., Seilhamer, R. & Weber, N. (2019). Horizon Report 2019 Higher Education Edition. *EDU19*. Retrieved August 14, 2023 from https://www.learntechlib.org/p/208644/.

Alghasab, M., & Handley, Z. (2025). PaCKed with technology: Pedagogically-driven technology professional development for language teaching. *CALICO Journal*, *42*(2), 236–257. https://doi.org/10.3138/calico-2024-0011

Allan, W., Erickson, J., Brookhouse, P., & Johnson, J. (2010). Teacher professional development through a collaborative curriculum project—An example of TPACK in Maine. *TechTrends: Linking Research and Practice to Improve Learning*, *54*(6), 36–43.

Allen, I. E., & Seaman, J. (2013). Changing course: Ten years of tracking online education in the United States. Wellesley, MA: Babson Survey Research Group.

Al-Naabi, I., Kelder, J.-A., & Carr, A. (2021). Preparing teachers for emergency remote teaching: A professional development framework for teachers in higher education. *Journal of University Teaching & Learning Practice*, *18*(5), 4–20. https://doi.org/10.53761/1.18.5.4

American Association of University Professors. (2023). *Data snapshot: Tenure and contingency in U.S. higher education*. Retrieved from https://www.aaup.org/article/data-snapshot-tenure-and-contingency-us-higher-education

Amineh, R. J., & Asl, H. D. (2015). Review of constructivism and social constructivism. *Journal of Social Sciences, Literature, and Languages, 1*(1), 9-16.

Anderson, V. (2007). Contingent and marginalised? Academic development and part-time teachers. *International Journal for Academic Development*, *12*(2), 111–121.

https://doi.org/10.1080/13601440701604914

Andzenge, S. (2018). *Developing TPACK in practice: A multiple case study of higher education instructors*. http://conservancy.umn.edu/handle/11299/201716

Angeli, C., & Valanides, N. (2013). Technology mapping: An approach for developing technological pedagogical content knowledge. *Journal of Educational Computing Research*, 48, 199–221. doi:10.2190/ec.48.2.e

Archambault, L., & Crippen, K. (2009). Examining TPACK among k-12 online distance educators in the United States. *Contemporary Issues in Technology and Teacher Education*, 9, 71-88. http://www.citejournal.org/vol9/iss1/general/article2.cfm

Ashton, J. (2012). Using teaching circles amongst online adjunct faculty. *Journal of Instructional Research, 1*(1), 13–19.

AuCoin, D., & Vah Seliskar, H. (2024). Professional learning communities and adjunct faculty professional well-being in online higher education. *Journal of Faculty Development, 38*(3), 11–20.

Ball, D., & Cohen, D. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession* (pp. 3-32). San Francisco, CA: Jossey-Bass.

Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education, 59*(5), 389–407. https://doi.org/10.1177/0022487108324554

Banasik, M. J. D., & Dean, J. L. (2016). Non-tenure track faculty and learning communities: Bridging the divide to enhance teaching quality. *Innovative Higher Education*, 41(4), 333–342. https://doi.org/10.1007/s10755-015-9351-6

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Baran, U., Canbazoglu-Bilici S., & Uygun, E. (2016). TPACK-based professional development programs in in-service science teacher education. In *Handbook of Technological Pedagogical Content Knowledge (TPACK) for Educators* (2nd ed.). Routledge.

Barnes, A., & Fredericks, E. (2021). A diamond in the rough: Adjunct faculty opportunities and challenges in higher learning institutions. *Journal of Higher Education Theory and Practice*, *21*(7), 83-102.

Belt, E., & Lowenthal, P. (2020). Developing faculty to teach with technology: Themes from the literature. *TechTrends: Linking research & practice to improve learning*, *64*(2), 248–259. https://doi.org/10.1007/s11528-019-00447-6

Benjamin, E., Hollinger, D. A., & Knight, J. (2015, April 7). *Professors of practice*. AAUP. Retrieved May 15, 2022, from https://www.aaup.org/report/professors-practice

Bettinger, E. P., & Long, B. T. (2010). Does cheaper mean better? The impact of using adjunct instructors on student outcomes. *The Review of Economics and Statistics*, *92*(3), 598–613. https://doi.org/10.1162/REST_a_00014

Beyea, S., & Nicoll, L. H. (1998). Writing an integrative review. *AORN Journal*, 67(4), 877–880. https://doi.org/10.1016/s0001-2092(06)62653-7

Bharadwaj, P., Shaw, C., NeJame, L., Martin, S., Janson, N., & Fox, K. (2023, June). *Time for class - 2023.* Tyton Partners.

Bickerstaff, S., & Cormier, M. S. (2015). Examining faculty questions to facilitate instructional improvement in higher education. *Studies in Educational Evaluation*, 46,74–80. https://doi.org/10.1016/j. stueduc.2014.11.004

Blackwell, C. K., Lauricella, A. R., & Wartella, E. (2016). The influence of TPACK contextual factors on early childhood educators' tablet computer use. *Computers & Education*, 98, 57–69. https://doi.org/10.1016/j.compedu.2016.02.010

Bose, D., & Lowenthal, P. R. (2018). E-portfolios, course design, and student learning: A case study of a faculty learning community. *The Online Journal of New Horizons in Education*, 8(4), 50–62.

Bosley, T., & Custer, H. R. (2021). Community colleges and COVID-19: An exploration of challenges and inequities. *Journal of Communication Pedagogy*, *5*(1), 3.

Brianza, E., Schmid, M., Tondeur, J., & Petko, D. (2024). Is contextual knowledge a key component of expertise for teaching with technology? A systematic literature review. *Computers and Education Open, 5*, 100201. https://doi.org/10.1016/j.caeo.2024.100201

Brien, E. O. (2025). Professional learning to support digital transformation and change in education: An integrated, systematic literature review. *Journal of E-Learning & Knowledge Society*, *21*(1), 148–158. https://doi.org/10.20368/1971-8829/1136121

Britten, J., & Cassady, J. (2005). The technology integration assessment instrument. *Computers in the Schools*, 22(3–4), 49–61. https://doi.org/10.1300/J025v22n03_05

Broome, M. E. (2000). Integrative literature reviews for the development of concepts. In B. L. Rodgers, & K. A. Knafl (Eds.), *Concept development in nursing: Foundations, techniques and applications* (2nd ed., pp. 231–250).

Brownlee, M. I. (2023, October 23). Colleges must respond to America's skill-based economy. *EdSurge.* https://www.edsurge.com/news/2023-10-23-colleges-must-respond-to-america-s-skill-based-economy

Burleigh, C., Steele, P. B., & Gwitira, G. (2021). Online adjunct faculty perceptions of professional development to support personal and professional academic growth during COVID-19. *Higher Learning Research Communications*, *11*(2), 68–91.

Butters, D., & Gann, C. (2022). Towards professionalism in higher education: An exploratory case study of struggles and needs of online adjunct professors. *Online Learning*, *26*(3), 259–273. https://doi.org/10.24059/olj.v26i3.2801

Cameron-Standerford, A., Menard, K., Edge, C., Bergh, B., Shayter, A., Smith, K., & VandenAvond, L. (2020). The phenomenon of moving to online/distance delivery as a result of COVID-19: Exploring initial perceptions of higher education faculty at a rural midwestern university. *Frontiers in Education*, *5*. https://www.frontiersin.org/articles/10.3389/feduc.2020.583881

Camilleri, M. A., & Camilleri, A. (2021). *The acceptance of learning management systems and video conferencing technologies: Lessons learned from COVID-19* (SSRN Scholarly Paper 3905093). https://doi.org/10.2139/ssrn.3905093

Capranos, D., Dyers, L., & Magda, A. J. (2022). Voice of the online learner 2022: Shifting preferences in post-pandemic online learning. *Wiley University Services*. https://universityservices.wiley.com/voice-of-the-online-learner-2022

Castleberry, A. N., Haines, S. L., Stein, S. M., Van Amburgh, J. A., & Persky, A. M. (2018). 5-minute university: A description and discussion of 5-minute faculty teaching training videos. *The Journal of Faculty Development*, 32(2), 67–74.

Cavanaugh, J. (2005). Teaching online—A time comparison. *Online Journal of Distance Learning Administration*, 8(1). http://www.westga.edu/~distance/ojdla/spring81/cavanaugh81.htm

Cesco, S., Zara, V., De Toni, A. F., Lugli, P., Betta, G., Evans, A. C. O., & Orzes, G. (2021). Higher education in the first year of COVID-19: Thoughts and perspectives for the future. *International Journal of Higher Education*, *10*(3), 285–294.

Chai, C. S., Koh, J. H. L., & Tsai, C.-C. (2013). A review of technological pedagogical content knowledge. *Educational Technology & Society*, *16*(2), 31–51.

Chandra, P., Tomitsch, M., & Large, M. (2021). Innovation education programs: A review of definitions, pedagogy, frameworks, and evaluation measures. *European Journal of Innovation Management, 24*(4), 1268-1291. https://doi.org/10.1108/EJIM-02-2020-0043

Cherry, J., & Wiles, J. A. (2010). Revisiting professional development: Reconciling the needs and responsibilities of faculty, researchers, and administrators with the new realities in higher education. *Journal for Advancement of Marketing Education*, 16, 43-51.

Chugh, R., & Ruhi, U. (2018). Social media in higher education: A literature review of Facebook. *Education and Information Technologies*, *23*(2), 605–616. https://doi.org/10.1007/s10639-017-9621-2

Clayton, D. & Torpey-Saboe, N. (2021). (rep.). *Student outcomes beyond completion: National findings from the 2021 strada alumni survey*. Strada Education Network. Retrieved from https://cci.stradaeducation.org/pv-release-oct-27-2021/.

Conole, G., de Laat, M., Dillon, T., & Darby, J. (2008). 'Disruptive technologies,' 'pedagogical innovation': What's new? Findings from an in-depth study of students' use and perception of technology. *Computers & Education*, 50(2), 511524. doi:10.1016/j.compedu.2007.09.009

Contreras-Mendez, S., & Cruse, L. R. (2021). Busy with purpose: Lessons for education and policy leaders from returning student parents. *Institute for Women's Policy Research*.

Cook, D. A., & Steinert, Y. (2013). Online learning for faculty development: A review of the literature. *Medical teacher*, 35(11), 930–937. https://doi.org/10.3109/0142159X.2013.827328

Cooper, H. M. (1989). *Integrating research: A guide for literature reviews* (2nd ed.). Sage Publications Inc.

Cooper, L. J. (2021). Incentivizing adjunct faculty participation in professional development. In *Handbook of Research on Inclusive Development for Remote Adjunct Faculty in Higher Education* (pp. 162-175). IGI Global.

Cottom, C., Atwell, A., & Ombres, S. (2018). New adjunct faculty outreach: Making a connection. *Journal on Centers for Teaching and Learning, 9*(). Retrieved from https://commons.erau.edu/publication/771

Cox, S., & Graham, C. R. (2009). Diagramming TPACK in practice: Using and elaborated model of the TPACK framework to analyze and depict teacher knowledge. *TechTrends, 53*, Article No. 60.

https://doi.org/10.1007/s11528-009-0327-1

Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.

Cutri, R. M., & Mena, J. (2020). A critical reconceptualization of faculty readiness for online teaching. *Distance Education*, *41*(3), 361-380.

da Silva, R. N., Brandao, M. A. G., & Ferreira, M. D. (2020). Integrative review as a method to generate or to test nursing theory. *Nursing Science Quarterly*, 33(3), 258–263. https://doi.org/10.1177/0894318420920602

Danaei, K. (2019). Case study: Adjunct's perspectives of a mentoring program at a community college. *Mentoring & Tutoring: Partnership in Learning*, 27(4), 458–482. https://doi.org/10.1080/13611267.2019.1649923

Danaei, K. (2019). Literature review of adjunct faculty. *Educational Research: Theory and Practice*, 30(2), 17–33.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

de Oliveira, J. M., Henriksen, D., Castañeda, L., Marimon, M., Barberà, E., Monereo, C., Coll, C., Mahiri, J., & Mishra, P. (2015). The educational landscape of the digital age: Communication practices pushing (us) forward. RUSC. *Universities and Knowledge Society Journal, 12*(2). pp. 14-29. http://dx.doi.org/10.7238/rusc.v12i2.2440

Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher, 38*(3), 181–199. https://doi.org/10.3102/0013189X08331140

Dewey, J. (1938). Experience and education. New York: Macmillan.

Doering, A., Veletsianos, G., Scharber, C., & Miller, C. (2009). Using the technological, pedagogical, and content knowledge framework to design online learning environments and professional development. *Journal of Educational Computing Research*, 41, 319–346. doi:10.2190/ec.41.3.d

Dolan, V. L. B. (2023). '…but if you tell anyone, I'll deny we ever met:' the experiences of academics with invisible disabilities in the neoliberal university. *International Journal of Qualitative Studies in Education*, *36*(4), 689–706. https://doi.org/10.1080/09518398.2021.1885075

Donnelly, D. (2018) Surviving, and indeed thriving in faculty development: A reflective commentary on values informing professional practice. *The Learning, Teaching and Technology Centre Technological University Dublin*, 2018.

Donovan, J. (2022). Building resilience in pre-sessional EAP courses through professional development: A perspective from the UK. In *International Perspectives on Teaching and Learning Academic English in Turbulent Times*. Routledge.

Drummond, A., & Sweeney, T. (2017). Can an objective measure of technological pedagogical content knowledge (TPACK) supplement existing TPACK measures? *British Journal of Educational Technology*, *48*(4), 928–939. https://doi.org/10.1111/bjet.12473

Duquesne University. (2021, April 18). Duquesne University/LibGuides/Gumberg Library research guides/integrative review/systematic vs. scoping vs. integrative. https://guides.library.duq.edu/c.php?g=1055475&p=7725920

Ehrenberg, R. G., & Zhang, L. (2005). Do tenured and tenure-track faculty matter? *Journal of Human Resources*, *XL*(3), 647–659. https://doi.org/10.3368/jhr.XL.3.647

Eichelberger, A., & Leong, P. (2019). Using TPACK as a framework to study the influence of college faculty's beliefs on online teaching. *Educational Media International*, *56*(2), 116–133. https://doi.org/10.1080/09523987.2019.1614246

Elçiçek, M. (2021). An investigation into the technology integration levels of pre-service teachers in compulsory distance education (covid-19 pandemic). *International Online Journal of Education & Teaching*, *8*(3), 2060–2080.

Englund, C., Olofsson, A. D., & Price, L. (2017). Teaching with technology in higher education: Understanding conceptual change and development in practice. *Higher Education Research and Development*, 36(1), 73–87.

Espinoza, B. D., & Neal, M. (2018). Incorporating contextual knowledge in faculty professional development for online teaching. *Journal on Centers for Teaching & Learning*, *10*(1), 24–44.

Etzkowitz, H., & Dzisah, J. (2007). Professors of practice and the entrepreneurial university. *International Higher Education*, (49).

Fairchild, J. L., Meiners, E. B., & Violette, J. L. (2016). "I tolerate technology-I don't embrace it": Instructor surprise and sensemaking in a technology-rich learning environment. *Journal of the Scholarship of Teaching and Learning,* 16(4), 92–108.

Fedock, B., McCartney, M., & Neeley, D. (2019). Online adjunct higher education teachers' perceptions of using social media sites as instructional approaches. *Journal of Research in Innovative Teaching & Learning*, *12*. https://doi.org/10.1108/JRIT-02-2018-0005

Flannery, M. E. (2022). *State funding for higher education still lagging. NEA*. Retrieved September 19, 2023, from https://www.nea.org/nea-today/all-news-articles/state-funding-higher-education-still-lagging

Gappa, J, Austin, A., & Trice, A. (2007). *Rethinking faculty work: Higher education's strategic imperative*. San Francisco: John Wiley and Sons.

Godsk, M., & Nielsen, B. L. (2024). Online teacher professional development (oTPD) for digital competencies in higher education: A systematic review of the literature. *Nordic Journal of Systematic Reviews in Education*, *2*(1), 16–57.

Göltl, K., Ambros, R., Dolezal, D., & Motschnig, R. (2024). Pre-service teachers' perceptions of their digital competencies and ways to acquire those through their studies and self-organized learning. *Education Sciences*, *14*(9), 951. https://doi.org/10.3390/educsci14090951

Graça, V., Quadros-Flores, P., & Ramos, A. (2021). The challenges of initial teacher training. *International Journal of Emerging Technologies in Learning*, *16*(18), 85–96. https://doi.org/10.3991/ijet.v16i18.24237

Graham, C. (2011). Theoretical considerations for understanding technological pedagogical content knowledge (TPACK). *Computers & Education,* 57, 1953-1960. http://dx.doi.org/10.1016/j.compedu.2011.04.010

Grammarly. (n.d.). *Grammarly: Free AI writing assistance*. https://www.grammarly.com/

Green, D. W. (2007). Adjunct faculty and the continuing quest for quality. *New Directions for Community Colleges*, *2007*(140), 29–39. https://doi.org/10.1002/cc.302

Gregory, J. & Salmon, G. (2013). Professional development for online university teaching. *Distance Education*, *34*(3), 256-270. Retrieved October 4, 2023 from https://www.learntechlib.org/p/157413/.

Grisham, D. L., & Wolsey, T. D. (2012). Creating podcasts: 21st century literacy tools for secondary teacher candidates. *Journal of School Connections*, *4*(1), 53–79.

Halvorson, W., Crittenden, V. L., & Pitt, L. (2011). Teaching cases in a virtual environment: When the traditional case classroom is problematic. *Decision Sciences Journal of Innovative Education*, 9(3), 485–492.

Harris, J., Grandgenett, N., & Hofer, M. (2012a). Testing an instrument using structured interviews to assess experienced teachers' TPACK. *Teacher Education Faculty Proceedings & Presentations*. https://digitalcommons.unomaha.edu/tedfacproc/15

Harris, J., Grandgenett, N., & Hofer, M. (2012b). Using structured interviews to assess experienced teachers' TPACK. In P. Resta (Ed.), *Proceedings of SITE 2012—Society for Information Technology & Teacher Education International Conference* (pp. 4696-4703). Austin, Texas, USA: Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/primary/p/40351/

Harris, J., Grandgenett, N., & Hofer, M. (2015). Testing a TPACK-based technology integration assessment rubric [dataset]. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2010*.

Harris, J., & Hofer, M. (2014). "TPACK stories": Schools and school districts repurposing a theoretical construct for technology-related professional development. Paper presented at the *American Education Research Association Annual Meeting*, Philadelphia, PA.

Harris, J., Mishra, P., & Koehler, M. (2009). Teachers' technological pedagogical content knowledge and learning activity types: Curriculum-based technology integration reframed. *Journal of Research on Technology in Education*, 41(4), 393-416.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, M. (2020). The difference between emergency remote teaching and online learning.

Hofer, M. & Grandgenett, N. (2012). TPACK development in teacher education: A longitudinal study of preservice teachers in a secondary M.A.Ed. program. *Journal of Research on Technology in Education*, 45(1), 83-106. Retrieved October 5, 2023 from https://www.learntechlib.org/p/54946/.

Hofer, M., Grandgenett, N., Harris, J., & Swan, K. (2011). Testing a TPACK-based technology integration observation instrument. *Teacher Education Faculty Proceedings & Presentations*. https://digitalcommons.unomaha.edu/tedfacproc/19

Hofman, L., Nummela-Hanel, B., & Lippert, K. (2024). Perceptions of university culture and community among online adjuncts. *Christian Higher Education, 23*(3), 171–187. https://doi.org/10.1080/15363759.2024.2342073

Hoffmann, F., & Oreopoulos, P. (2009). Professor qualities and student achievement. *The Review of Economics and Statistics*, *91*(1), 83–92. https://doi.org/10.1162/rest.91.1.83

Hopia, H., Latvala, E., & Liimatainen, L. (2016). Reviewing the methodology of an integrative review. *Scandinavian Journal of Caring Sciences,* 30(4), 662–669.

https://doi.org/10.1111/scs.12327

Horan, E. M., & Kim, K. (2020). Faculty perceptions of the Spring 2020 transition from face-to-face to online instruction: A case study of American university with takeaways and lessons learned. *Journal on Centers for Teaching & Learning*, *12*(1), 169–188.

Horvitz, B., Beach, A., Anderson, M., & Xia, J. (2015). Examination of faculty self-efficacy related to online teaching. *Innovative Higher Education*, *40*(4), 305–316. https://doi.org/10.1007/s10755-014-9316-1

Hoyle, E., & John, P. D. (1995). Professional knowledge and professional practice.

Hoyt, J. E. (2012). Predicting the satisfaction and loyalty of adjunct faculty. *The Journal of Continuing Higher Education*, *60*(3), 132–142. https://doi.org/10.1080/07377363.2013.722417

Ibrahim, J. (2020). From survive to thrive: Using professional development to advance online teaching. *Journal of Literacy & Technology*, *21*(3), 44–58.

Iqbal, S., & Bhatti, Z. A. (2020). A qualitative exploration of teachers' perspective on smartphones usage in higher education in developing countries. International Journal of Educational Technology in Higher Education, 17(1), 29.

Jaeger, A. J., & Eagan, M. K. (2009). Unintended consequences: Examining the effect of part-time faculty members on associate's degree completion. *Community College Review,* 36(3), 167-194. https://doi.org/10.1177/0091552108327070

Jaipal, K. & Figg, C. (2010). Unpacking the "Total PACKage": Emergent TPACK characteristics from a study of preservice teachers teaching with technology. *Journal of Technology and Teacher Education*, 18(3), 415-441. Waynesville, NC USA: Society for Information Technology & Teacher Education. Retrieved October 1, 2023 from https://www.learntechlib.org/primary/p/28335/.

Jaschik, S., & Lederman, D. (2018). *2018 Survey of Faculty Attitudes on Technology*. https://mediasite.com/wpcontent/uploads/2018/11/2018-FacultySurvey-Mediasite.pdf

Jimoyiannis, A. (2010). Designing and implementing an integrated technological pedagogical science knowledge framework for science teachers professional development. *Computers & Education*, *55*(3), 1259–1269. https://doi.org/10.1016/j.compedu.2010.05.022

Jolley, M. R., Cross, E., & Bryant, M. (2014). A critical challenge: The engagement and assessment of contingent, part-time adjunct faculty professors in United States community colleges. *Community College Journal of Research and Practice*,

38(2–3), 218–230. https://doi.org/10.1080/10668926.2014.851969

Joshi, S. C. (2023). *TPACK and teachers' self-efficacy: A systematic review*. *Canadian Journal of Learning & Technology, 49*(2), 1–23. https://doi.org/10.21432/cjlt28280

Juszkiewicz, J. (2019). Trends in community college enrollment and completion data. Washington, DC. Retrieved from https://www.aacc.nche.edu/wp-content/uploads/2019/05/CCEnrollmentMarch2019Final.pdf

Kaaki, W. (2020). Adjunct online faculty and online student grades. *Distance Learning*, *17*(1), 35–43.

Kacetl, J., & Klimova, B. (2019). Use of smartphone applications in English language learning—A challenge for foreign language education. *Education Sciences*, *9*, 179. https://doi.org/10.3390/educsci9030179

Kahoot! (n.d.). *Kahoot! | Learning games | Make learning awesome!*. https://kahoot.com/

Kafyulilo, A., Fisser, P., Pieters, J., & Voogt, J. (2015). ICT use in science and mathematics teacher education in Tanzania: Developing technological pedagogical content knowledge. *Australasian Journal of Educational Technology*, *31*(4), Article 4. https://doi.org/10.14742/ajet.1240

Kazu, I. Y., & Erten, P. (2014). Teachers' technological pedagogical content knowledge self-efficacies. *Journal of Education and Training Studies*, *2*(2), 126–144.

Kelly, M. A. (2007). Culturally sensitive teaching with technology: Implementing TPCK in culturally mixed contexts. In R. Carlsen, K. McFerrin, J. Price, R. Weber, & D. Willis (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2007* (pp. 2199–2202). Chesapeake, VA: AACE.

Kelly, M. A. (2008a). Bridging digital and cultural divides: TPCK for equity of access to technology. In AACTE Committee on Innovation and Technology (Eds.), *Handbook of technological pedagogical content knowledge (TPCK) for educators* (pp. 30–60). New York, NY: Routledge.

Kelly, M. A. (2008b). Incorporating context into technological pedagogical content knowledge-based instructional designs. In K. McFerrin, R. Weber, R. Carlsen, & D. A. Willis (Eds.), *Proceedings of the Society for Information Technology & Teacher Education International Conference 2008* (pp. 5257–5262). Chesapeake, VA: AACE.

Kelly, M. A. (2010). Technological Pedagogical Content Knowledge (TPACK): A

Content analysis of 2006–2009 print journal articles. In D. Gibson, & B. Dodge (Eds.), *Proceedings of the Society for Information Technology & Teacher Education International Conference 2010* (pp. 3880–3888). Chesapeake, VA: AACE.

Kereluik, K., Mishra, P., Fahnoe, C., & Terry, L. (2013). What knowledge is of most worth: Teacher knowledge for 21st century learning. *Journal of Digital Learning in Teacher Education*, *29*(4), 127–140.

Kezar, A., & Maxey, D. (2014, July). *Student outcomes assessment among the new non-tenure-track faculty majority* (Occasional Paper No. 21). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA).

Klykken, F. H. (2021). Implementing continuous consent in qualitative research. *Qualitative Research, 22*(5), 795–810. https://doi.org/10.1177/14687941211014366

Knott, K. (n.d.). *Oversight coming for online program providers*. Inside Higher Ed. Retrieved October 1, 2023, from https://www.insidehighered.com/news/2023/02/16/education-department-review-rules-online-program-providers

Knudsen, E. S., & Lien, L. B. (2023). The half-life of knowledge and strategic human capital. *Human Resource Management Review*, *33*(4), 100989. https://doi.org/10.1016/j.hrmr.2023.100989

Koehler, M., & Mishra, P. (2008). Introducing TPCK. In AACTE Committee on Technology and Innovation (Eds.), Handbook of technological pedagogical content knowledge (TPCK) for educators (pp. 3–29). New York, NY: Routledge.

Koehler, M. J., Mishra, P., & Cain, W. (2013). What is technological pedagogical content knowledge (TPACK)? *Journal of Education*, *193*(3), 13–19. https://doi.org/10.1177/002205741319300303

Koehler, M., Mishra, P., Kereluik, K., Seob, S., & Graham, C. (2014). The technological pedagogical content knowledge framework. *Handbook of Research on Educational Communications and Technology*, 101–111. https://doi.org/10.1007/978-1-4614-3185-5_9

Koh, J, Chai, C., & Tay, L. (2014). TPACK-in-action: Unpacking the contextual influences of teachers' construction of technological pedagogical content knowledge (TPACK). Computers & Education, 78,20–29. doi:10.1016/j. compedu.2014.04.022

Koh, J. H. L., & Chai, C. S. (2014). Teacher clusters and their perceptions of

technological pedagogical content knowledge (TPACK) development through ICT lesson design. *Computers & Education*, *70*, 222–232. https://doi.org/10.1016/j.compedu.2013.08.017

Koksal, I. (2020). *The rise of online learning*. Forbes. https://www.forbes.com/sites/ilkerkoksal/2020/05/02/the-rise-of-online-learning/?sh=4f62bdff72f3

Korthagen, F. A. (2010). Situated learning theory and the pedagogy of teacher education: towards an integrative view of teacher behavior and teacher learning. Teaching and Teacher Education, 26(1), 98-106.

Kutcher, A. M., & LeBaron, V. T. (2022). A simple guide for completing an integrative review using an example article. *Journal of Professional Nursing*, *40*, 13–19. https://doi.org/10.1016/j.profnurs.2022.02.004

Lakhe Shrestha, B. L., Dahal, N., Hasan, Md. K., Paudel, S., & Kapar, H. (2025). Generative AI on professional development: A narrative inquiry using TPACK framework. *Frontiers in Education*, 1–9. https://doi.org/10.3389/feduc.2025.1550773

Layou, K. M., Goering, A. E., James, B. R., Morales, M., Nagy, R., Rosas Alquicira, E. F., & Macdonald, R. H. (2022). Power and potential: Engaging adjunct faculty as leaders and agents of change. *New Directions for Community Colleges*, *2022*(199), 133–147. https://doi.org/10.1002/cc.20529

Leary, H., Dopp, C., Turley, C., Cheney, M., Simmons, Z., Graham, C. R., & Hatch, R. (2020). Professional development for online teaching: A literature review. *Online Learning*, *24*(4), 254–275. https://doi.org/10.24059/olj.v24i4.2198

Lee, J., & Jung, I. (2021). Instructional changes instigated by university faculty during the COVID-19 pandemic: the effect of individual, course and institutional factors. *International Journal of Educational Technology in Higher Education*, *18*(1), 1-19.

Letzmann, P., Nickels, A., & Stockdale, J. (2010). Engaging students to connect beyond the text: A reflection on the value of professionals as adjuncts. *Journal of Public Affairs Education*, *16*(1), 67-76.

Levin, J. S., & Hernandez, V. M. (2014). Divided identity: Part-time faculty in public colleges and universities. *The Review of Higher Education*, *37*(4), 531–557. https://doi.org/10.1353/rhe.2014.0033

Lowenthal, P. R., Wray, M. L., Bates, B., Switzer, T., & Stevens, E. (2013). Examining faculty motivation to participate in faculty development. *International Journal of University Teaching and Faculty Development*, 3(3), 149–164.

Magda, A. J., Capranos, D., & Aslanian, C. B., (2020). *Online college students 2020: Comprehensive data on demands and preferences*. Louisville, KY: Wiley Education Services.

Mahlo, L., Waghid, Z., & Chigona, A. (2024). Hybrid communities of practice towards developing educators' TPACK: Implications for teacher education. *South African Journal of Higher Education*, *38*(5), 103–122. https://doi.org/10.20853/38-5-6416

Mandernach, J., Register, L., & O'Donnell, C. (2015). Characteristics of adjunct faculty teaching online: Institutional implications. *Online Journal of Distance Learning Administration*, 18(1). https://eric.ed.gov/?id=EJ1055073

Marbán, J. M., & Mulenga, E. M. (2019). Pre-service primary teachers' teaching styles and attitudes towards the use of technology in mathematics classrooms. *International Electronic Journal of Mathematics Education*, *14*(2), 253–263.

Margerum-Lays J. & Marx R.W. (2003) Teacher knowledge of educational technology: a case study of student/mentor teacher pairs. *In What Should Teachers Know About Technology? Perspectives and Practices* (ed. Y. Zhao), pp. 123–159. Information Age Publishing, Greenwich, CO.

Martin, B. (2018). Faculty technology beliefs and practices in teacher preparation through a TPACK lens. *Education and Information Technologies*, *23*(5), 1775–1788. https://doi.org/10.1007/s10639-017-9680-4

Martin, F., Polly, D., Coles, S., & Chuang Wang. (2020). Examining higher education faculty use of current digital technologies: Importance, competence, and motivation. *International Journal of Teaching & Learning in Higher Education*, *32*(1), 73–86.

Masri, T. I. (2018). The professional identity of adjunct faculty: Exploratory study at a private university in the UAE. *English Language Teaching*, *11*(10), 16-29.

Maxwell, J.A. (2013) *Qualitative research design: An interactive approach.* Sage, Thousand Oaks.

McGreal, R., & Olcott, D. (2022). A strategic reset: Micro-credentials for higher education leaders. *Smart Learning Environments*, *9*(1), 1-23.

McKenzie, L. (2021). *Students Want Online Learning Options Post-Pandemic*. Inside Higher Ed. Retrieved October 1, 2023, from

https://www.insidehighered.com/news/2021/04/27/survey-reveals-positive-outlook-online-instruction-post-pandemic

Meixner, C., Kruck, S. E., & Madden, L. T. (2010). Inclusion of part-time faculty for the benefit of faculty and students. *College Teaching*, *58*(4), 141–147. https://doi.org/10.1080/87567555.2010.484032

Meletiou-Mavrotheris, M., & Paparistodemou, E. (2024). Sustaining teacher professional learning in STEM: Lessons learned from an 18-year-long journey into TPACK-guided professional development. *Education Sciences*, *14*(4), 402. https://doi.org/10.3390/educsci14040402

Meyer, K.A. (2012). The influence of online teaching on faculty productivity. Innovative Higher Education, 37, 37-52.

Microsoft. (n.d.). *Copilot*. Microsoft. https://copilot.microsoft.com/

Milman, N. (2020, March 30). This is emergency remote teaching, not just online teaching. *Education Week*. Retrieved from https://www.edweek.org/leadership/opinion-this-is-emergency-remote-teaching-not-just-online-teaching/2020/03

Mishra, P. (2019). Considering contextual knowledge: The TPACK diagram gets an upgrade. *Journal of Digital Learning in Teacher Education, 35*(2), 76–78. https://doi.org/10.1080/21532974.2019.1588611

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for integrating technology in teachers' knowledge. Teachers College Record, 108 (6), 1017–1054

Moessenlechner, C., Obexer, R., Pammer, M., & Waldegger, J. (2021). Switching gears: Online teaching in higher education in the first wave of the COVID-19 pandemic. *International Journal of Advanced Corporate Learning* (iJAC), 14(2), pp. 27–43. https://doi.org/10.3991/ijac.v14i2.24085

Mölgen, L., Asshoff, R., & Heuckmann, B. (2024). Development and application of a domain-specific TPACK questionnaire—Findings from a longitudinal study on teaching human biology using digital tools. *Journal of Science Education & Technology*, *33*(4), 607–620. https://doi.org/10.1007/s10956-024-10108-w

Morgan, H. (2022). Conducting a qualitative document analysis. *The Qualitative Report*, 27(1), 64-77. https://doi.org/10.46743/2160-3715/2022.5044

Mueller, B., Mandernach, B. J., & Sanderson, K. (2013). Adjunct versus full-time faculty: Comparison of student Outcomes in the online classroom. *Journal of Online Learning and Teaching*, *9*(3), 341.

National Center for Education Statistics. (2024). *Postsecondary faculty*. U.S. Department of Education, Institute of Education Sciences. Retrieved from https://nces.ed.gov/programs/coe/indicator/csc/postsecondary-faculty

National Student Clearinghouse Research Center. (2022). (rep.). *Overview: Spring 2022 Enrollment Estimates*. Retrieved from https://nscresearchcenter.org/current-term-enrollment-estimates/.

Nica, E. (2018). Has the shift to overworked and underpaid adjunct faculty helped education outcomes? *Educational Philosophy and Theory, 50*(3), 213–216. https://doi.org/10.1080/00131857.2017.1300026

Nicolle, P. S., & Lou, Y. (2008). Technology adoption into teaching and learning by mainstream university faculty: A mixed methodology study revealing the "how, when, why, and why not". *Journal of Educational Computing Research*, 39(3), 235-265. https://doi.org/10.2190/EC.39.3.c

Nīmante, D., Kokare, M., Baranova, S., & Surikova, S. (2025). Transferring results of professional development into practice: A scoping review. *Education Sciences*, *15*(1), 95. https://doi.org/10.3390/educsci15010095

Olcott Jr., D. (2022). Micro-Credentials: A catalyst for strategic reset and change in US higher education. *American Journal of Distance Education*, *36*(1), 19-35.

Olmos-Vega, F. M., Stalmeijer, R. E., Varpio, L., & Kahlke, R. (2023). A practical guide to reflexivity in qualitative research: AMEE Guide No. 149. *Medical Teacher, 45*(3), 241–251. https://doi.org/10.1080/0142159X.2022.2057287

OpenAI. (2023). *ChatGPT* (Mar 14 version) [Large language model]. https://chat.openai.com/chat

Otrel-Cass, K., Khoo, E. & Cowie, B. (2012). Scaffolding with and through videos: An example of ICT-TPACK. *Contemporary Issues in Technology and Teacher Education*, 12(4), 369-390. Waynesville, NC USA: Society for Information Technology & Teacher Education. Retrieved October 1, 2023 from https://www.learntechlib.org/primary/p/40416/.

Oved, O., & Alt, D. (2025). Teachers' technological pedagogical content knowledge (TPACK) as a precursor to their perceived adopting of educational AI tools for teaching purposes. *Education & Information Technologies*, *30*(10), 14095–14121. https://doi.org/10.1007/s10639-025-13371-5

Ozgun-Koca, S. A., Meagher, M., & Edwards, M. T. (2010). Preservice teachers' emerging TPACK in a technology-rich methods class. *Mathematics Educator*, *19*(2), 10–20.

Özmantar M. F., Akkoç, H., Bingölbali, E., Demir S. & Ergene B. (2010). Pre-service mathematics teachers' use of multiple representations in technology-rich environments, *Eurasia Journal of Mathematics, Science & Technology Education*, 6(1), 19-36.

Palenque, S. M. (2016). The power of podcasting: Perspectives on pedagogy. *Journal of Instructional Research*, *5*, 4–7.

Palloff, R., & Pratt, K. (2011). The excellent online instructor: Strategies for professional development. San Francisco, CA: Jossey-Bass.

Parker, C., Morrell, C., Morrell, C., & Chang, L. (2016). Shifting understandings of community college faculty members: Results of an equity-focused professional development experience. The Journal of Faculty Development, 30(3), 41–48.

Parker, D. M., Brown, L. T. M., & Holmes, B. D. (2019). Preparing university adjunct faculty to teach. *Journal of Higher Education Theory & Practice*, *18*(7), 115–120.

Pehlevan, İ., & Ünal, B. (2023). Digital literacy and TPACK levels of pre-service EFL teachers. *International Journal of Field Education*, *10*(1), Article 1.

Pelletier, K., Brown, M., Brooks, D. C., McCormack, M., Reeves, J., Arbino, N., Bozkurt, A., Crawford, S., Czerniewicz, L., Gibson, R., Linder, K., Mason, J., & Mondelli, V. (2021). 2021 *EDUCAUSE Horizon Report: Teaching and Learning Edition*.

Pelletier, K., McCormack, M., Reeves, J., Robert, J., Arbino, N., Al-Freih, w.M., Dickson-Deane, C., Guevara, C., Koster, L., Sanchez-Mendiola, M., Skallerup Bessette, L. & Stine, J. (2022). 2022 *EDUCAUSE Horizon Report: Teaching and Learning Edition*.

Phan, T., Zhu, M., & Paul, M. (2021). The effects of technological professional development training on faculty's perceptions and actual use of technology. *Educational Media International*, *58*(4), 335–354. https://doi.org/10.1080/09523987.2021.1989767

Phillips, M., Koehler, M., Rosenberg, J., & Zunica, B. (2017). *Unpacking TPACK: Reconsidering knowledge and context in teacher practice.* 2422–2429. https://www.learntechlib.org/primary/p/177538/

Porras-Hernandez, L., & Salinas-Amescua, B. (2013). Strengthening TPACK: A broader notion of context and the use of teacher's narratives to reveal knowledge construction. *Journal of Educational Computing Research*, 48, 223–244. doi:10.2190/ec.48.2.f

Powell, K. (2015). Adjunct teaching: For love of the lecture. *Nature*, *521*(7551), 247-249.

Prezi. (n.d.). *Presentations and videos with engaging visuals for hybrid teams*. https://prezi.com/

Professor of the practice. Professor of the Practice | Policy Library. (2009, August 28). Retrieved May 15, 2022, from https://policy.ku.edu/provost/professor-of-practice

Quezada, R. L., Talbot, C., & Quezada-Parker, K. B. (2020, August 02). *From bricks and Mortar to remote teaching: A teacher education program's response to COVID 19*. Journal of Education for Teaching. 46 (4), 472-483. https://doi.org/10.1080/02607476.2020.1801330

Ramsay, C. M., & Brua, C. (2017). Understanding professors of practice: Leveraging expertise, empowering potential. *The Journal of Faculty Development*, *31*(3), 25-30.

Ran, F. X., & Sanders, J. (2020). Instruction quality or working condition? The effects of part-time faculty on student academic outcomes in community college introductory courses. *AERA Open*, *6*(1), 233285842090149-. https://doi.org/10.1177/2332858420901495

Ran, F. X., & Xu, D. (2018). Does contractual form matter? The impact of different types of non-tenure track faculty on college students' academic outcomes. *Journal of Human Resources*. https://doi.org/10.3368/jhr.54.4.0117.8505R

Reyes, V., Reading, C., Doyle, H., & Gregory, S. (2017). Integrating ICT into teacher education programs from a TPACK perspective: Exploring perceptions of university lecturers. *Computers & Education*, *115*, 1–19. https://doi.org/10.1016/j.compedu.2017.07.009

Rios, J. A., Ling, G., Pugh, R., Becker, D., & Bacall, A. (2020). Identifying critical 21st-century skills for workplace success: A content analysis of job advertisements. *Educational Researcher*, 49(2), 80-89.

Rosenberg, J., & Koehler, M. (2015). Context and technological pedagogical content knowledge (TPACK): A systematic review. *Journal of Research on Technology in Education*, *47*(3), 186–210. https://doi.org/10.1080/15391523.2015.1052663

Rovai, A. P. (2000) Building and sustaining community in asynchronous learning networks. *Internet and Higher Education*, 3(4), 285–297.

Runge, I., Hebibi, F., & Lazarides, R. (2025). Acceptance of pre-service teachers towards artificial intelligence (AI): The role of AI-related teacher training courses and AI-TPACK within the technology acceptance model. *Education Sciences*, *15*(2), 167. https://doi.org/10.3390/educsci15020167

Rutgers University Libraries. (2023). *Popular literature vs. scholarly peer-reviewed literature: What's the difference?* Retrieved October 4, 2023, from https://www.libraries.rutgers.edu/research-support/tutorials-information-literacy-and-critical-thinking/sources-information/popular-literature-vs-scholarly-peer-reviewed-literature-whats-difference

Saad, M., Barbar, A.M. & Abourjeili, S. (2012). Introduction of TPACK-XL, a transformative view of ICT-TPCK for building pre-service teacher knowledge base. *Turkish Journal of Teacher Education*, 1(2): 41-60.

Sablić, M., Mirosavljević, A., & Škugor, A. (2020). Video-based learning (VBL)—past, present and future: An overview of the research published from 2008 to 2019. *Technology, Knowledge and Learning, 1–17.* https://doi.org/10.1007/s10758-020-09455-5

Scherer, R., Howard, S. K., Tondeur, J., & Siddiq, F. (2021). Profiling teachers' readiness for online teaching and learning in higher education: Who's ready? *Computers in Human Behavior*, *118*, 106675. https://doi.org/10.1016/j.chb.2020.106675

Schmidt, S. W., Tschida, C. M., & Hodge, E. M. (2016). How faculty learn to teach online: What administrators need to know. *Online Journal of Distance Learning Administration*, *19*(1).

Schwartz-Shea, P., & Yanow, Dvora. (2012). *Interpretive research design: Concepts and processes*. Routledge.

Semiz, K., & Ince, M. L. (2012). Pre-service physical education teachers' technological pedagogical content knowledge, technology integration self-efficacy and instructional technology outcome expectations. *Australasian Journal of Educational Technology*, *28*(7), 7. https://doi.org/10.14742/ajet.800

Shiu, W. H. C. (2025). Conceptualising the pedagogical purposes of technologies by technological, pedagogical content knowledge and substitution, augmentation, modification and redefinition in English as a second language classrooms. *Education Sciences*, *15*(4), 411. https://doi.org/10.3390/educsci15040411

Shulman, L. (1986). Those who understand knowledge growth in teaching. *Educational Researcher*, 15, 4-14.

Siliņa-Jasjukeviča, G., Lūsēna-Ezera, I., Iliško, D., & Surikova, S. (2025). Promoting effective vocational education and training teacher's professional development and its transfer to practice: A systematic review. *Education Sciences*, *15*(5), 596. https://doi.org/10.3390/educsci15050596

Smart, V., Finger, G., & Sim, C. (2016). Developing TPACK: Envisioning technological

pedagogical reasoning. In M. C. Herring, M. J. Koehler, & P. Mishra (Eds.), Handbook of technological pedagogical content knowledge (TPACK) for educators (2nd ed., pp. 53–62). New York: Routledge.

Smith, J. A. (2017). Interpretive phenomenological analysis: Getting at lived experience. *The Journal of Positive Psychology*, 12, 303–304.

Smith, J. K. (1992). Interpretive Inquiry: A Practical and Moral Activity. *Theory Into Practice*, *31*(2), 100–106. http://www.jstor.org/stable/1476395

Smith, M. (2019). Characterizing adjunct faculty members' call to teach in higher education. *Curriculum and Teaching Dialogue*, *21*(1–2), 65–80.

Snyder, T.D., de Brey, C., and Dillow, S.A. (2019). Digest of Education Statistics 2018 (NCES 2020-009). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Staub, F. C., & Stern, E. (2002). The nature of teachers' pedagogical content beliefs matters for students' achievement gains: Quasi-experimental evidence from elementary mathematics. *Journal of Educational Psychology,* 94(2), 344–355. https://doi.org/10.1037/0022-0663.94.2.344

Stemler, S. (2001). An overview of content analysis. *Practical Assessment, Research, and Evaluation,* 7(17). https://doi.org/10.7275/z6fm-2e34

Taylor, P. (1999). *Making sense of academic life: Academics, universities and change.* Milton Keynes: SRHE and the Open University Press.

Toner, J., Reyes, M., Schwartz, S. L., Parga, J., & Ryan, T. (2021). Emerging issues with remote faculty. *Journal of Social Work Education*, 1-11.

Toronto, C. E., & Remington, R. (2020). Discussion and conclusion. In C. E. Toronto, & R. Remington (Eds.), *A step-by-step guide to conducting an integrative review* (pp. 71–83). Springer. https://doi.org/10.1007/978-3-030-37504-1.

Tournaki, N., & Lyublinskaya, I. (2014). Preparing special education teachers for teaching mathematics and science with technology by integrating the TPACK framework into the curriculum: A study of teachers' perceptions. *Journal of Technology and Teacher Education*, *22*(2), 243–259.

Tucker, L. (2022). Faculty PLCs for maintaining community and online teaching during remote work. *Online Journal of Distance Learning Administration*, *25*(1), 1–15.

van de Mortel, T. F. (2008). Faking it: social desirability response bias in self-report research. *Australian Journal of Advanced Nursing*, 25(4), 40–48. https://researchportal.scu.edu.au/esploro/outputs/journalArticle/Faking-it-social-

desirability-response-bias/991012821838002368

Van de Vord, R. & Pogue, K. (2012). Teaching time investment: does online really take more time than face-to-face? *The International Review of Research in Open and Distance Learning*. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/1190/2212

Vandeyar, T. (2020). The academic turn: Social media in higher education. *Education and Information Technologies*, *25*(6), 5617–5635. https://doi.org/10.1007/s10639-020-10240-1

VERBI Software. (n.d.). *Homepage of MAXQDA Software*. Retrieved July 15, 2024, from https://www.maxqda.com/

Voogt, J., Fisser, P., Pareja Roblin, N., Tondeur, J., & van Braak, J. (2013). Technological pedagogical content knowledge – a review of the literature. *Journal of Computer Assisted Learning*, *29*(2), 109–121. https://doi.org/10.1111/j.1365-2729.2012.00487.x

Voogt, J., Fisser, P., Tondeur, J., & van Braak, J. (2016). *Using theoretical perspectives in developing understanding of TPACK* (pp. 33–53). https://doi.org/10.4324/9781315771328

Wagner, M., Ley, T., Kammerer, L., & Helm, C. (2024). Exploring teacher educators' challenges in the context of digital transformation and their self-reported TPACK: A mixed methods study. *European Journal of Teacher Education*, *0*(0), 1–19. https://doi.org/10.1080/02619768.2024.2340689

Wallin, D. L., (2004). Valuing professional colleagues: Adjunct faculty in community and technical colleges. *Community College Journal of Research and Practice*. 28 (4), 373-391. https://doi.org/10.1080/10668920490424087

Wallis, L. (2020, August 11). *Growth in distance learning outpaces total enrollment growth*. State of Oregon: Employment Department. https://www.qualityinfo.org/-/growth-in-distance-learning-outpaces-total-enrollment-growth

Wang, C.-J. (2019). Facilitating the emotional intelligence development of students: Use of technological pedagogical content knowledge (TPACK). *Journal of Hospitality, Leisure, Sport & Tourism Education*, *25*, 100198. https://doi.org/10.1016/j.jhlste.2019.100198

Ward, C. L., & Benson, S. K. (2010). Developing new schemas for online teaching and learning: TPACK. *MERLOT Journal of Online Learning and Teaching, 6*(2), 482–490.

Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology.

Journal of Advanced Nursing, 52(5), 546–553. https://doi.org/10.1111/j.1365-2648.2005.03621.x

Willermark, S. (2018). Technological pedagogical and content knowledge: A review of empirical studies published From 2011 to 2016. *Journal of Educational Computing Research*, *56*(3), 315–343. https://doi.org/10.1177/0735633117713114

Wu, B., Hu, Y., Gu, X., & Lim, C. P. (2016). Professional development of new higher education teachers with information and communication technology in Shanghai: a Kirkpatrick's evaluation approach. *Journal of Educational Computing Research,* 54(4), 531–562.

Wynants, S., & Dennis, J. (2018). Professional development in an online context: Opportunities and challenges from the voices of college faculty. *Journal of Educators Online*, *15*(1). https://eric.ed.gov/?id=EJ1168955

Yakoboski, P. (2018, November). *Adjunct faculty: Who they are and what is their experience?* TIAA Institute.

Yeager-Okosi, S. D., Hall, A. I., & Quaicoe, N. G. (2024). Enhancing effectiveness through faculty development focused on online adjunct faculty: A comprehensive investigation. *InSight: A Journal of Scholarly Teaching, 19*, 34–52.

Yeh, Y.-F., Hsu, Y.-S., Wu, H.-K., Hwang, F.-K., & Lin, T.-C. (2013). Developing and validating technological pedagogical content knowledge—Practical (TPACK-Practical) through the Delphi Survey Technique. *British Journal of Educational Technology*. https://doi.org/10.1111/bjet.12078

Yi, S., Park, H., & Lee, Y. (2016). *Development of the TPACK-based curriculum with 3D printer for pre-service teachers*. 522–526. https://www.learntechlib.org/primary/p/173978/

Young, J. R. (2012). Campuses look to digital tools for savings, and reinvention. *The Chronicle of Higher Education: Almanac of Higher Education*. Retrieved from http://chronicle.com/article/Leaders-Look-toTechnology-for/133932/

Younger, K. (2018). *Scholarly Research*. https://opentext.ku.edu/becredible/chapter/scholarly-research/

Yuan, R., Wang, Z., Liao, W., Wu, W., & Fang, S. (2025). Probing university teachers' self-study experiences: Insights from a systematic review spanning two decades. *Studies in Higher Education*, *50*(4), 896–916. https://doi.org/10.1080/03075079.2024.2360546

Yurdakul, I.K., Odabasi, H. F., Kilicer, K., Coklar, A. N., Birinci, G., & Kurt, A. A.

(2012). The development, validity and reliability of TPACK-deep: A technological pedagogical content knowledge scale. *Computers & Education*, *58*(3), 964–977. https://doi.org/10.1016/j.compedu.2011.10.012

Zhang, S. (2014). An evidence-based practical guide to designing and developing chinese-as-a-foreign-language (CFL) courses online. *International Journal of Technology in Teaching & Learning*, *10*(1), 52–71.

Zitko, P. A., & Schultz, K. (2020). The adjunct model as an equity crisis in higher education: A qualitative inquiry into the lived experience of "part-time" community college faculty in northern California. *Education Leadership Review of Doctoral Research*, *8*, 1-19.

Appendix A

Terms Searched[1]*, Date Ranges, Hits*[2]*, and Notes on Each Search for Literature Search*

Terms Searched	*Date Range*	*Hits*	*Notes*
Adjunct Faculty **AND** Professional Development	2006-Present	15,221	*Good general insights on adjunct faculty*
Adjunct Faculty **AND** Professional Development	2018-Present	7,139	*Good general insights on adjunct faculty*

1 All searches were conducted using 'Education Source'

2 Search result updated in 2025 prior to final submission.

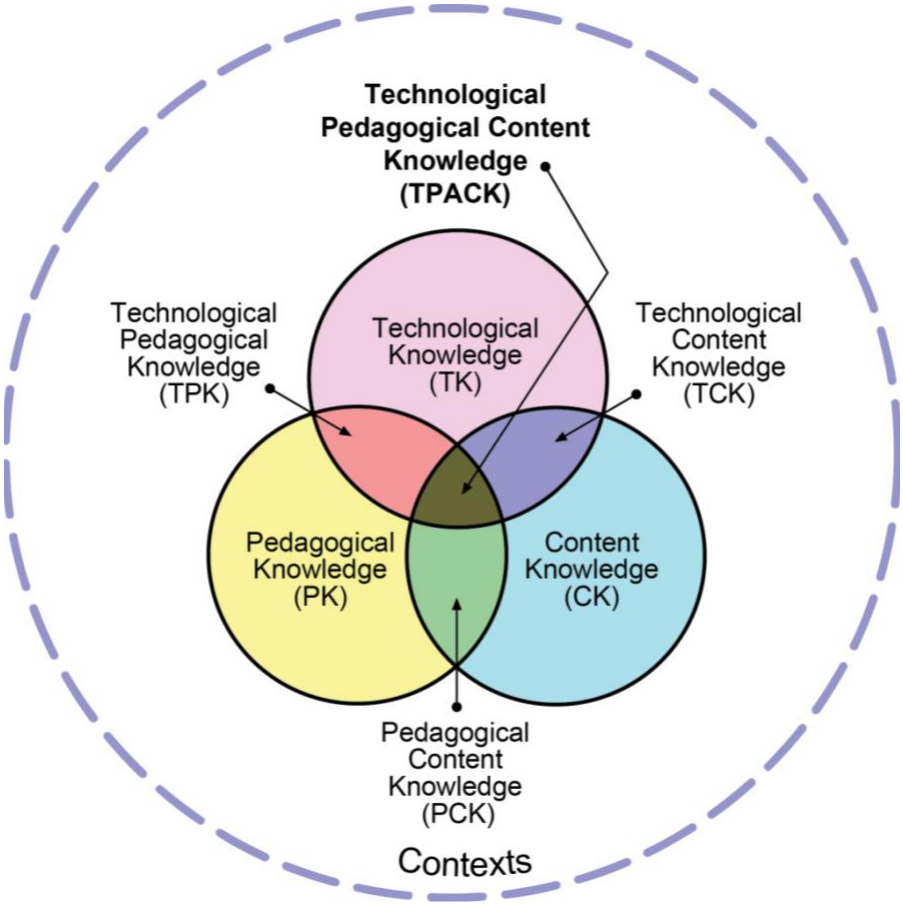
Terms Searched	*Date Range*	*Hits*	*Notes*
Adjunct Faculty **AND** TPACK	2006-Present	109	*Noticeably fewer results than the other search terms*
Adjunct Faculty **AND** TPACK	2018-Present	75	*Noticeably fewer results than the other search terms*
TPACK **AND** Professional Development	2006-Present	5,664	*Few mentions of adjunct faculty*
TPACK **AND** Professional Development	2018-Present	4,118	*Few mentions of adjunct faculty*
Adjunct Faculty	2006-Present	82,791	*Great insights on adjunct faculty*
Adjunct Faculty	2018-Present	36,092	*Contemporary insights on adjunct faculty*
TPACK	2006-Present	10,7789	*Historical context on TPACK*
TPACK	2018-Present	7,554	*Contemporary and Historical context on TPACK*
Professional Development	2006-Present	972,902	*Largest return but little filtering*

Terms Searched	*Date Range*	*Hits*	*Notes*
Professional Development	2018-Present	471,552	*Large return but little filtering*

Appendix B

TPACK Framework

The TPACK Framework



Note: Used with permission from http://tpack.org

TPACK Definitions

Definitions of each TPACK section, first as the three main knowledge components and then addressing how those components interact with each other:

- Content Knowledge (CK) refers to knowledge about the subject being taught or learned or what the instructor knows about a subject they instruct (Mishra & Koehler, 2006; Shulman, 1986).
- Pedagogical Knowledge (PK) includes the "deep knowledge" of the range of instructional practices, strategies, and methods for promoting student learning (Mishra & Koehler, 2006, p. 1026; Shulman, 1986).
- Technological Knowledge (TK) refers to the knowledge of traditional and new technologies integrated into the educational experience (Mishra & Koehler, 2006).

The interaction of the three main knowledge components:

- Technological Content Knowledge (TCK) refers to knowledge of the relationship between technology and content (Mishra & Koehler, 2006).
- Technological Pedagogical Knowledge (TPK) is the use of technological knowledge to enhance the pedagogical effectiveness of instruction and the recognition of how teaching may change through technology use (Mishra & Koehler, 2006).
- Pedagogical Content Knowledge (PCK) is "knowing what teaching approaches fit the content, and likewise, knowing how elements of the content can be arranged for better teaching" (Mishra & Koehler, 2006, p. 1027).
- Technological Pedagogical Content Knowledge (TPACK/TPCK) is the "emergent form of knowledge" that transcends the three main knowledge components. It incorporates content knowledge with applicable pedagogical methods and the use

of developing technology so that learners can learn and grasp the subject matter (Mishra & Koehler, 2006, p. 1028; Voogt et al., 2013).

- Context serves as the encompassing perimeter of the framework that collects all other influences, such as student characteristics, teacher attitudes, and availability of technologies, amongst other attributes. (Mishra, 2019; Mishra & Koehler, 2006). Kelly (2010) qualified context as “one of the most complex, important, and least understood components” of the TPACK framework (p. 52).

Appendix C

Interview Protocol

Interview #1
IRB Reference #: NCR245535
Study Title: An In-Depth Examination of Professional Adjunct Faculty's Integration of Technology, Pedagogy, Content Knowledge, and Contextual Factors in Higher Education
PI: Dr. Curtis Pyke

Participant Pseudonym:	**Date:**	**Interviewer:** Cody House	**Recording#:** **1 of 2**

Thank you for agreeing to participate in this study. The purpose of this interview is to investigate how you have developed your skills and understanding of technology, pedagogy, content, and contextual knowledge within your teaching and learning as an educator. I will be recording our interview. Today is _____. I am Cody House, interviewing <Participant Pseudonym >.

Semi-Structured Questions for Interview One

Background and Experience:

1. Tell me about your background as a professional adjunct faculty member, your discipline, and your years of teaching experience.
   ***Note*:** According to this study, I am defining a professional adjunct faculty as an individual whom educational institutions hire on a temporary or part-time basis to teach courses, who possess expertise in specific subjects or fields, and their primary employment is a career outside of higher education
2. Tell me about the first class you taught. How did you come to this role?
   Potential Probe (PP): What made you interested in being an adjunct?

Technology Knowledge:

3. Could you talk about and example of how you use technology in your teaching?
   PP: How do you use technology in your career?
   PP: Could you tell me about how the use of technology makes you feel?

4. What specific tools or platforms do you use?
   PP: Could you explain why you use those tools or platforms?

Pedagogical Knowledge:

5. Could you talk about pedagogy and how you have developed your understanding?
   Note: Pedagogy is defined as the art, science, or profession of teaching.
6. Could you share your three most important or useful strategies that you feel illustrate your pedagogical approach?

Content Knowledge:

7. What does it look like in your area of expertise to develop your content area knowledge?
   PP: (If not mentioned) Do you participate in professional development or other opportunities to refine or sharpen your knowledge and skillset?
   PP: Walk me through a recent or particularly useful professional development opportunity.

Contextual Knowledge:

8. How would you describe your role as an adjunct faculty member to someone outside of academia?
   Note: this can include anything from who your students are, university policies that directly impact you, availability of technologies, or other university resources.
   PP: How would you say your role has changed since you began?
9. Could you talk about the contextual challenges you face as an educator?
   PP: What strategies do you use to address those challenges?

Technological, Pedagogical, Content, and Contextual (TPACK+XK) Knowledge:

10. As a teacher, where do you see overlap between Technology, Pedagogy, Content, and Contextual Knowledge in your teaching?
11. How do you continue to develop and refine your skills and understanding of technology, pedagogy, content, and contextual knowledge?

Interview #2
IRB Reference #: NCR245535
Study Title: An In-Depth Examination of Professional Adjunct Faculty's Integration of Technology, Pedagogy, Content Knowledge, and Contextual Factors in Higher Education
PI: Dr. Curtis Pyke

Participant Pseudonym:	**Date:**	**Interviewer:** Cody House	**Recording#:** **2 of 2**

Thank you for agreeing to participate in this study. This interview aims to continue our investigation of how you have developed your skills and understanding of technology, pedagogy, content, and contextual knowledge within your teaching and learning as an educator. We will also revisit some discussions from our first interview and reflect upon any documents you have shared. I will be recording our interview. Today is _____. I am Cody House, interviewing <Participant Pseudonym >.

Semi-Structured Questions for Session Two:

Technology Knowledge:

1. How has your usage of technology changed since you started teaching?
   Potential Probe (PP): Tell me from where and how you have been exposed to those new technologies that you use?
2. Tell me about the challenges you anticipate in incorporating technology into your teaching in the future.
   PP: What strategies will you use to overcome the challenges?

Pedagogical Knowledge:

3. How has your understanding of pedagogy changed since you started teaching?
   Note: Pedagogy is defined as the art, science, or profession of teaching.
   PP: Tell me about how your institution informs and supports your understanding of pedagogy.

Content Knowledge:

4. What have been the biggest challenges in developing your content knowledge in your career?
   PP: What resources or support would be helpful to support those challenges?

5. What do you anticipate will be the biggest challenges for developing your content knowledge in the future?

    PP: What resources or support would be helpful to support those challenges?

Contextual Knowledge:

6. Could you share with me the top 3 challenges you will face as an educator in the future?

    PP: What strategies could institutions use to mitigate or support those challenges?

    Note: This can include anything from who your students are, university policies that directly impact you, availability of technologies, or other university resources.

Technological, Pedagogical, Content, and Contextual (TPACK+XK) Knowledge:

7. Could you share some of your long-term goals regarding technology integration, pedagogy, content, and contextual knowledge in your teaching?

    PP: What are some potential hurdles to you accomplishing your goals?

    PP: What could your institution do to better support you in accomplishing your goals?

Professional Development and Support:

8. Tell me about the BEST professional development you've ever attended/participated in.

    PP: Tell me about the WORST professional development you've ever attended/participated in.
9. What are 3 institutional policies that you would like to change?
10. What recommendations would you offer for enhancing support and professional development for professional adjunct faculty?

Participant-Specific Questions (Dependent upon analysis, follow-up, and clarification questions from the previous interview):

1. TBD

Appendix D

Distribution of Number of Times Coded by Participants

List of Participant Pseudonyms with Number of Times Codes

Allan (169)	Barbara (118)	Charlie (153)	Debbie (158)
Edna (144)	Fred (132)	Greg (131)	Harrison (127)
Janet (138)	Kellen (197)	Lydia (149)	Meena (124)
Oliver (165)	Pressley (120)	Quinn (93)	Remi (108)
Trinity (152)		**TOTAL CODES 2,378**	

Note. List of Participant Pseudonyms. The number of times codes throughout the analysis is indicated in the paratheses.