A Phenomenological Study Exploration of Pre-planned Thematic Units in Preschool and Kindergarten

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Abstract

Preschool and kindergarten staff can leverage organized planning strategies to support the use of integrative thematic units. However, early-year teachers state dilemmas in selecting, preparing, and executing integrative thematic units. Challenges surface when the staff tries to follow children's interests and inquiries, deliver lessons, and compile materials to support lesson design. When preschool and kindergarten staff select thematic units beforehand, teachers may feel best equipped to plan, target student objectives, prepare lesson resources, and maintain lesson consistency within grade levels. Pre-selecting and pre-planning can also support diverse learners such as English Language Learners (ELLs), special needs students, or students with multiple intelligences or learning styles. Conversely, selecting thematic units more spontaneously based on the students' current interests could help excel a students' motivation to learn more effectively. This study analyzed 15 preschool and kindergarten teachers' thoughts and lived experiences using pre-planned or unplanned integrative thematic units within one specific, large international early childhood center in Germany. Having gathered and evaluated thoughts, opinions, lived experiences, and planning methods from the 15 participants, the study results may prove transferable and beneficial to other contexts involving integrative thematic units in the early years.

Keywords: children's interests, diverse learning needs, early childhood education, English language learners, integrated curriculum thematic teaching, inquiry, multiple intelligences and learning styles, pre-planned thematic units, unplanned thematic units

Dedication

I would like to dedicate this dissertation to several people without whose support this work would never have blossomed. First, I would like to thank my mother and father, who were my first teachers, who loved children, child development, and play! To my siblings, Jason, Jesse, and Kat, whom I can always count on for deep love and support. To my teachers in Webster, Emerson College, Grand Canyon University, and the American College of Education, who challenged me to ask a lot of questions and dig deeper with inquiry and exploration. Lastly, thank you to my family—Abigail, Josephine, Faust, and Martin- for being my biggest cheerleaders during this doctoral journey.

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Chapter 1: Introduction

The fundamental thoughts and practices of Friedrich Frobel, who coined the term 'kindergarten' in Germany, may still hold essential considerations regarding effective student learning today (Dar, 2018; Tovey, 2020). Germany still treasures the importance of free play and education in the early years (Faas et al., 2017; Hambrett, 2018; Spiewok, 2012). However, finding the differences between child-led and adult-led learning, especially regarding the planning and preparation involved in preschool and kindergarten, is essential for research.

Preschool and kindergarten teachers have claimed the need to better strategize within the scope of integrative thematic planning to enhance effective learning (Nurlaela et al., 2018). Early years teachers have stated difficulties in selecting thematic units and preparing and compiling resources (Demetriou, 2020; Hollingsworth & Vandermaas-Peeler, 2017; Retnawati et al., 2017; Wardani, 2020; Zin et al., 2019). Difficulties also arise when applying children's interests and inquiry as a delivery approach (Birbili, 2019; Pettersson, 2017). When teachers struggle to agree upon shared planning and preparation methods, students across a grade level may not be given equal learning opportunities. Varied instruction among classes within one grade level may hinder students' opportunity to gain similar academic education as their peers. Curriculum coordinators may also find a disconnect between teachers within one grade level and instruction when transitioning from one grade level to the next. A school's scope and sequence may show disorganization.

To better support the planning of effective learning strategies for preschool and kindergarten teachers, the practice of pre-planning thematic units before a school year starts can be considered. There is, however, a question regarding when and how teachers select thematic units. Teachers may pre-select and pre-plan thematic units before a school year begins or spontaneously select units by week or month during the school year to better follow individualized children's interests. Preschool

and kindergarten teachers could benefit from pre-planning themes to support the implementation of instruction and the collection of appropriate resources and materials, for example, with curriculum packages such as the Early Years Curriculum or International Primary Curriculum (Fieldwork Education, 2020). Pre-made curriculum packages such as these may best support diverse preschool and kindergarten students to reach developmentally appropriate learning objectives. Pre-made curriculum packages can offer grade-level teams a unified curriculum structure with learning objectives already weaved within. However, the choice to follow students' interests spontaneously and halt pre-planning thematic units in advance may help students have a more intrinsic motivation to propel their learning initiative (Birbili, 2019; Carlton & Winsler, 1998; Özbey & Dağlıoğlu, 2017). Establishing a play-based learning environment without pre-planning and simply allowing students to explore an enriched learning environment may host rich benefits, for example, self-exploration and student interest (Cheng, 2016). Teachers could then scaffold learning objectives into spontaneous play as the students naturally move into learning engagement (Adbo & Carulla, 2019).

To better understand the dilemma regarding the choice of pre-planning or not pre-planning thematic units in advance, the background of the study on planning thematic units in preschool and kindergarten was explored. The research questions and a theoretical framework of the study are provided. The problem statement is explained along with the purpose and significance of the study. The study's specific terms and concepts are facilitated with definitions for clarification. Moreover, assumptions are provided along with the scope, delimitations, and limitations sections to help explore the study's content. Lastly, a chapter summary summarizes the research study's plan.

Background of the Problem

Comprehensive and systematic planning strategies for preschool and kindergarten teachers can help support students' interests and diverse students' needs for successful learning. Currently, the

research on thematic unit planning pinpoints a critical need to better support teachers by planning effective thematic unit strategies for successful learning attainment (Nurlaela et al., 2018; Saleha & Shakerb, 2021; Xoshimova, 2020). A wide range of planning methods can be applied during the implementation and execution of thematic units in the early years setting (Nurlaela et al., 2018), such as using or not using pre-planned thematic units before a school year begins. Discrepancies between teachers' planning and instructional methods are prevalent among curriculum coordinators and school staff concerning how best to integrate thematic units into the curriculum disseminated in preschool and kindergarten classrooms (Demetriou, 2020; El-Henawy, 2019; Hollingsworth & Vandermaas-Peeler, 2017; Lin, 2018; Pettersson, 2017; Retnawati et al., 2017; Shideler, 2016; Sollome et al., 2018; Szecsi et al., 2017; Wardani, 2020; Zin et al., 2019).

Some teachers may choose one thematic unit and delve into the theme with their students for 4–6 weeks. On the other hand, other teachers within the same grade level may not preplan a particular thematic unit and, in turn, allow students to explore their interests during free play. In this case, teachers then support each child's interest individually, expanding on the student's choice of interest. The main issues at hand are as follows: 1) when and how should thematic units be selected, dispersed, and organized 2) how can teachers reach a consensus regarding standard school-wide planning practices and take into account student's interests and diversity, and 3) how can teachers find the appropriate time to plan and create integrative thematic lessons and resources.

Problem Statement

The problem is the inconsistent curriculum design approach to lesson planning, including the varying integration of thematic units within preschool and kindergarten schools (Xoshimova, 2020). There is a lack of consistency between the approaches of teachers who may or may not pre-plan thematic units before starting a school year (Sollome et al., 2018). This dilemma results in various

classroom lesson designs among teaching staff and the use of thematic units.

Curriculum coordinators may face difficulties in tracking how teachers teach grade-level objectives. It is questionable if all students within one grade level are given equal opportunities to gain needed skills. Curriculum coordinators and teachers could negotiate the planning and instructional choices to support better learners in achieving knowledge and understanding success (Kloos et al., 2018; Zin et al., 2019).

Purpose of the Study

The purpose of this qualitative phenomenological study was to investigate preschool and kindergarten staff's attitudes, opinions, beliefs, and experiences about pre-planned and unplanned thematic units in a kindergarten center in Germany. By analyzing teachers' thoughts and experiences about using or not using pre-planned thematic units, future researchers can better comprehend the differences between planning strategies used for children's learning and the importance of effective classroom lesson design.

Planning, implementing, and executing thematic units have proven problematic, especially for untrained or inexperienced preschool and kindergarten teachers (Chumdari et al., 2018; Retnawati et al., 2017). Teachers may lack the professional knowledge required for thematic teaching instruction and reaching diverse learners (Carley Rizzuto, 2017). Some teachers may also lack specialized skills to curate a thematic topic, age-appropriate curriculum objectives and draw in knowledge across various subject domains (Efendi & Hsi, 2020; Inzana et al., 2017).

Significance of the Study

The study could help future preschool and kindergarten curriculum coordinators, and teachers consider school-wide curriculum planning approaches to teach with integrative thematic units. The study could also help support methods leveraged by school staff to comprehensively address

students' interests and support students' diverse needs. A student's interest may be valuable to motivate a child's learning ambitions. Moreover, being mindful of a child's background diversity may help apply relatable and appropriate teaching instruction to promote the achievement of age-appropriate and attainable skills. Exploring pre-planned and spontaneous thematic units can also reveal how teachers can best utilize their time and energy to plan thematic lessons more successfully.

Research Questions

A phenomenological design was selected as the research study method. A phenomenological study can help secure multi-faceted discoveries of issues within real-life settings (Van Manen, 2017). Descriptive and interpretive phenomenology explore participants' lived experiences and the contextual features of the experiences about their influences, such as culture, social norms, or the well-being of the participants who had experienced the phenomenon (Matua & Van Der Wal, 2015). The research in this study looked into preschool and kindergarten teachers' beliefs and experiences of using pre-planned or unplanned thematic units within one specific, large international early childhood center in Germany. The research questions are as follows:

Research Question 1: What are the preschool and kindergarten teachers' experiences and opinions when implementing pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Research Question 2: What are the preschool and kindergarten teachers' planning methods when using pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Conceptual or Theoretical Framework

The brain-based learning theory (Caine & Caine, 1990) and the integrative thematic learning theory (Kovalik & Olsen, 2010; Kovalik, 2014) are connected to this research study. The brain-based learning theory created by Geoffrey Caine and Renate Nummela Caine supports the combination of instructional methods and neuroscience (Caine & Caine, 1990; El-Henawy, 2019). Brain-based learning encompasses cognitive expansion (Jayasankara Reddy et al., 2021; Jazeel et al., 2020; Kaufman et al., 2008), which can connect to the importance of integrative thematic units. The question of how teachers can use lessons to tap into students socially, emotionally, and cognitively can be resolved with brain-based learning. The brain is highly responsive to environmental influences such as social, emotional, and cognitive (Jazeel et al., 2020).

Developed by Susan Kovalik and Karen Olsen (2010), the integrative learning theory expresses the importance of leveraging strategic lesson designs and learning with themed units. Kovalik and Olsen recommend a deliberate scope and sequence for planning student learning. Mindfully threading together themes, age-appropriate objectives, and contextual thematic lessons can uphold student interest and motivate students to engage best in learning. Creating lessons that follow student interests can make lessons more meaningful (Wardani, 2020). The need to combine theories, such as the brain-based learning theory and integrative learning theory, supports more varied teaching strategies (Adel, 2020; Bustamante, 2019; Geevarughese, 2020). Combining the brain-based and integrative learning theories could achieve better quality lessons for preschool and kindergarten students to support their interests and diversity in learning styles (Gürkan et al., 2019).

Definitions of Terms

Key terms used within the study have been clearly defined to support clarity for the reader. Key terms serve as a key to help decipher the meaning of another word or words. The keywords used

within this study are as follows:

Children's interests: Children's interests can be divided into the following two areas 1) Personal interests or favorite things (animals, music, and toys) or 2) Situational interests, which emerge when an activity, material, or person attracts a child and motivates the child to learn more (Lowry, 2016).

Diverse learning needs: Diverse learning needs can be attributed to a person's culture or more personal, emotional, or even educational aspects associated with student support services (Gronseth et al., 2021). Neuro-diverse students can have a range of differences in terms of brain function and behavioral traits.

Early childhood education: This is education found in childcare centers, daycares, nurseries, preschools, kindergartens, or early childhood centers. Early childhood education ranges between 0 and 6 years of age (Cascio, 2021).

English language learners: English language learners, also known as ELLs, are students who need support to speak English fluently. Many ELLs hail from homes and backgrounds where English is not their native language. ELLs often need specialized instructional methods to succeed in learning English (August, 2018)

Integrated curriculum thematic teaching: Integrated curriculum thematic teaching is a method of curriculum design that supports a holistic teaching approach to reflect the real world. Various learning areas are combined to integrate a theme of choice (Zin et al., 2019).

Multiple intelligences and learning styles: Eight main learning styles exist: Verbal-linguistic, logical-mathematical, visual-spatial, auditory-musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic (Gürkan et al., 2019).

Pre-planned thematic units: Pre-planned thematic units (for example, animals, houses, and

transportation) are thematic units that can be planned before the start of the school year. Learning is elicited by integrating several academic subjects (for example, literacy, math, and science) with a pre-planned theme (Chumdari et al., 2018).

Unplanned thematic units: Unplanned thematic units (for example, animals, houses, and transportation) comprise thematic units that are spontaneously chosen by a student or group of students based on their interests and implemented anytime during a school year (Pettersson, 2017). Learning is elicited by integrating several academic subjects (for example, literacy, math, and science) connected to a spontaneous theme.

Assumptions

The study used a qualitative methodology approach to collect the opinions of preschool and kindergarten teachers who have used pre-planned or unplanned thematic units. It was assumed that participants would be experienced teachers who have worked in preschool and kindergarten. These teachers could have opinions about pre-planned and unplanned thematic units. There could be differences in opinion due to various participants' cultural or educational backgrounds. Assumptions were also made on the importance of pre-planning units regarding lesson preparation or unplanned units to help integrate students' spontaneous interests into lessons.

Using qualitative research strategies can help uphold authentic thoughts from preschool and kindergarten staff on their experiences using pre-planned or spontaneous thematic units (Harrison et al., 2017). It was assumed that data could be captured by analyzing teachers' views and experiences of using pre-planned and spontaneous thematic units to help future educators take appropriate action steps in curriculum design. Utilizing a descriptive study that analyzes professionals' experiences in the field could help research scholars gain in-depth information about working with integrative thematic units.

Scope and Delimitations

This study aimed to comprehend integrative thematic instructional designs and recommendations to teach thematic units efficiently. Participants for this research study comprised 15 preschool and kindergarten teachers with experience working with pre-planned and unplanned thematic units. Participants were engaged from one specific, large international kindergarten in Germany.

The scope of this study ranged from a wide variety of aspects, which all united to address the common goal of finding effective planning strategies for integrating thematic units in preschool and kindergarten. The steps to implement thematic lessons and incorporate students' interests into the themes are included. Theme allocations and how they connect with subject disciplines were considered. The preparation involved in readying oneself for thematic unit instruction was also profoundly investigated.

The advantages of teaching with thematic units were investigated, along with how teachers and students collaborate to guide themed units using children's interests. Dilemmas were explored regarding the struggles teachers may find following children's interests. The research was also conducted on how teachers may use essential questions and inquiry to capture children's voices on thematic topics. The logistics for planning thematic units were touched upon, including finding materials and time to plan and adequately preparing learning materials and resources to support students with diverse learning needs, for example, ELLs, special needs students, or students having multiple intelligences and learning styles (Gudnason, 2017; Nurlaela et al., 2018). Lastly, professional development was explored to identify how to best support uneducated or inexperienced teachers with planning integrative thematic units and harnessing the inquiry process.

Preschool and kindergarten teachers used an online questionnaire and follow-up interview to

communicate their thoughts, opinions, and attitudes regarding using pre-planned or unplanned thematic units. Delimitations of this study included the fact that the research solely focused on preschool and kindergarten staff from one specific, large international kindergarten in Germany. Fifteen preschool and kindergarten teachers that have worked within the international school participated in this study.

Study Context Considerations

The boundaries of this study support the considerations of the study's context. This study used the participation of 15 preschool and kindergarten teachers in one specific, large international kindergarten in Germany. The objectives of this study concentrated on the thoughts, opinions, and attitudes of using pre-planned or unplanned thematic units in preschool and kindergarten. Research scholars have found that more data is needed to support effective planning and instructional design methods regarding thematic units (Demetriou, 2020; El-Henawy, 2019; Hollingsworth & Vandermaas-Peeler, 2017; Lin, 2018; Pettersson, 2017; Retnawati et al., 2017; Shideler, 2016; Sollome et al., 2018; Szecsi et al., 2017; Wardani, 2020; Zin et al., 2019).

The research for this study took place within one specific, large international kindergarten in Germany during the school year 2021–2022. The theories utilized to support the research included the brain-based learning theory (Caine & Caine, 1990) and the integrative thematic learning theory (Kovalik & Olsen, 2010). The research methods comprised a qualitative approach using an online questionnaire, follow-up interviews, and in-depth qualitative data analysis from the participants' authentic comments. Many connecting points were provided within the literature review to prepare for participants' answers and widen the study's scope. Delimitations of the study placed boundaries on the study's analysis, as the study encompasses only thoughts and attitudes from 15 co-workers from one international school in Europe.

Limitations

There could have been natural limitations inherent in the study's research design. Issues that could not be controlled within this study could have been that the school has a high population of socio-economically advanced students. Other limitations could have comprised cultural bias or personal issues regarding the planning of integrative thematic units.

Issues could also have pertained to sample sizes and the selection of participants' data. A low number of participants could have resulted in insufficient sample sizes. There was a need for genuine, deep thoughts and considerations of participants' experiences using pre-planned or unplanned thematic units. A lack of previous research exists, as scholars have mentioned a need for more investigations on the subject matter (Hollingsworth & Vandermaas-Peeler, 2017; Retnawati et al., 2017; Zin et al., 2019). Furthermore, there could have been a limit to the access provided to participants' data if issues arouse, such as the inability to obtain participants' data through email or an online survey. In addition, time constraints could have burdened the study if participants were asked to participate and there was not enough time to contribute thoughtfully.

Chapter Summary

Educators can act as leaders, deciding when and how to implement and execute integrative thematic studies. To best support preschool and kindergarten teachers in strategizing effective planning techniques, pre-planned integrative thematic units and brain-based learning may help (El-Henawy, 2019). Using a deliberate scope and sequence curriculum design with data and standard-driven lessons could help students achieve academic success. When steering integrative thematic units with brain-based learning methods, the classroom environment can become enriched with supportive resources and materials (Shideler, 2016; Shukla, 2019). Lessons involving STEM (science, technology, engineering and mathematics) can be deliberately prepared in advance to teach

diverse learners in preschool (Brenneman et al., 2019). Inquiry can be implemented to support students' voices and choices on where to move the design of the thematic unit (Anitah & Suryani, 2018; Lin et al., 2021; Ramanathan et al., 2021). Using intentional syllabi may best support diverse learners such as ELLs, special needs students, or students with multiple learning styles (San Jose et al., 2017; Shideler, 2016; Sudarma et al., 2021). Age-appropriate targets connected with data from previous lessons can be intermeshed together with intentional syllabi. In addition, there is strong support for using well-planned integrative thematic units to support communication and language targets (Ashokan & Venugopal, 2016; Bustamante, 2019).

Identifying the importance of child-led play versus teacher-led play during play-based learning can be targeted with study participants (Danniels & Pyle, 2018). However, it is crucial to consider the benefits of free play, spontaneous play, and the power of natural engagement with the environment around students for learning (Abla, & Fraumeni, 2019; Caruana, 2017). Investigating the utilization of pre-planned or spontaneous thematic units by gathering thoughts, opinions, and comments from experienced professionals in preschool and kindergarten has helped identify views about which practices may best support effective student learning. Chapter 2 examines the literature review portion of this study by providing in-depth content to explore the elements of integrative thematic units and the opportunities available to enhance learning for young children with its foundation and varied ways of implementation.

Chapter 2: Literature Review

Pre-planning thematic units in advance may best support the implementation of instruction, preparation of suitable materials, and support diverse preschool and kindergarten students to reach developmentally appropriate learning goals. Pre-planning thematic units before the beginning of the school year may better prepare preschool and kindergarten teachers. The problem pertains to the lack of consistent thematic unit integration within classroom lesson design among preschool and kindergarten teachers who may or may not engage in pre-planning thematic units before a school year begins. The lack of consistent practice can result in a wide discrepancy among elementary school staff choosing thematic units. This, in turn, can affect the instructional decisions to safeguard learners' achievements (Kloos et al., 2018; Zin et al., 2019). The purpose of this qualitative phenomenological study was to investigate preschool and kindergarten staff's attitudes, opinions, beliefs, and experiences about pre-planned and unplanned thematic units in a kindergarten center in Germany. By exploring teachers' thoughts and experiences about utilizing or not utilizing pre-planned thematic units, scholars can better understand the varying planning techniques used for students' learning and the impact they could have on effective student learning.

The current literature pinpoints a need for further research to support teachers' methods for effectual thematic unit planning (Chumdari et al., 2018; Kloos et al., 2018; Retnawati et al., 2017; Sollome et al., 2018; Wardani, 2020; Zin et al., 2019). Many planning techniques have been leveraged for implementing and executing thematic units in the early years. Complications exist among students, staff, and curriculum coordinators as integrating thematic units into early-year classrooms pose challenges (Demetriou, 2020; El-Henawy, 2019; Hollingsworth & Vandermaas-Peeler, 2017; Lin, 2018; Pettersson, 2017; Retnawati et al., 2017; Shideler, 2016; Sollome et al., 2018; Szecsi et al., 2017; Wardani, 2020; Zin et al., 2019).

Gaps in the literature include effective methods early childhood teachers utilize for selecting thematic teaching and preparing materials and resources. Complications include the organization and dispersal of thematic units, school-wide standard planning practices among teachers, incorporating students' interests, supporting diverse students, and finding time for planning and creating thematic resources (Chumdari et al., 2018; Kloos et al., 2018; Retnawati et al., 2017; Sollome et al., 2018; Wardani, 2020; Zin et al., 2019). Delivering an inquiry approach with teachers' and students' needs in mind is another area of research that can be studied concerning integrative thematic planning (Zin et al., 2019).

The literature review provides information about research strategies, including library databases, search engines, and key search terms. Theoretical frameworks are reviewed along with two theories relevant to the research study, an origin of the theories, a description of the theories, and how the theories work together for the interest of the study. The literature review states current research, which upholds ideas, analysis, and synthesized concepts related to the study (Linnenluecke et al., 2020). A summary and conclusion are facilitated as a final portion of the literature review. The summary aimed to provide insights to scholars to understand better if pre-planning thematic units before a school year begins hosts more benefits for successful students' learning, especially considering diverse students' needs.

Literature Search Strategy

Searching for literature to support a research study can systematically retrieve quality information for the best results (Schoormann et al., 2018). The primary resources used to gather literature for the research study were Google Scholar and the American College of Education (ACE) online library. Google Scholar is an online search engine and database. On the other hand, the ACE online library is a resource for college students with various scholarly works and journal articles.

Information for the study has been derived from several published peer-reviewed education journals within the past five years. Key search terms used for the literature review include the following: *brain-based learning theory, children's interests, early childhood education, English language learners, diverse learning needs, Geoffrey Caine and Renate Nummela Caine, highly effective teaching model, inquiry, integrated curriculum thematic teaching, integrative thematic learning theory, Karen Olsen, kindergarten lesson planning, multiple learning styles, preschool lesson planning, Susan Kovalik, thematic learning styles, and teaching difficulties*.

Theoretical Framework

The study is based on the brain-based learning theory (Caine & Caine, 1990) and the integrative thematic learning theory (Kovalik & Olsen, 2010). The literature review sections connect the brain-based and integrative thematic learning theories. Possible effective strategies for planning thematic units in the early childhood setting are included, in addition to ideas for integrating children's interests in the guidance of thematic units and methods to support planning thematic units for students with diverse learning needs.

Brain-based learning theory can be used in pre-planning thematic units in preschool and kindergarten. Formulated by Geoffrey Caine and Renate Nummela Caine, the brain-based learning theory is an advancement to instructional methods grounded in cognitive neuroscience (Caine & Caine, 1990; El-Henawy, 2019). The brain is highly responsive to environmental influences such as social, physical, cognitive, and emotional aspects (Jazeel et al., 2020). Brain-based learning proposes teaching methods and instructional designs based on the most up-to-date scientific research explaining how the brain harnesses and uses information. Brain-based learning includes factors such as cognitive expansion, which help scientists understand how different students learn as they age and mature socially, emotionally, and cognitively.

Understanding the components of the integrative thematic learning theory also supports exploring pre-planning thematic units in preschool and kindergarten by identifying effective practices for using thematic instructional implementation. The integrative learning theory, created by Susan Kovalik and Karen Olsen (2010), emphasizes the need for thematic learning and strategic instructional design. A strategic instructional design is a deliberate curriculum scope and sequence that has been meticulously pre-planned in advance, keeping in mind students' interests, teachers' needs, and the requirements of a school's curriculum coordinator. Planning with a strategic process includes thoughtfully connecting themes, curriculum objectives, and contextual thematic teachings, which are more relatable and attractive for learner engagement. Planning with a strategic approach can help deliver lessons more meaningfully (Wardani, 2020). Research findings from educational theorists such as Piaget et al. (1969) and Bruner (1960) uphold thematic instruction for early learning. Piaget and Bruner's research showcases how the learning process is highly integrated. Engaging in social interactions is crucial to learning (Ashokan & Venugopal, 2016). Young children naturally learn best by actively making connections and engaging in the environment with learning materials, teachers, and peers.

Thematic learning is also associated with fundamental constructivist ideas, as learning with themes supports knowledge gained by individual and social construction. Personal and social construction builds knowledge from one's perspective and bridges the knowledge with other informational inputs. The groundwork of thematic learning connects several academic disciplines with one theme. Connecting literacy, math, social studies, drama, art, music, and more subjects can teach a particular theme. Tying student activities to one theme can help student learning be more natural and less fragmented (Ashokan & Venugopal, 2016). Thematic instruction often requires in-depth research and preparation. Planning an interdisciplinary theme across various subject domains,

such as literacy, math, art, or music, requires preparation time and collaboration with teaching colleagues, curriculum coordinators, and administrators (Wall & Leckie, 2017).

Brain-learning capacities can create an enriched environment for learning (Kaufman et al., 2008). Brain-based learning theory and integrative thematic learning theory can be fused. It may be possible, by leveraging pre-planned thematic units to couple together brain–mind learning capacities with enriched learning environments, which support a) an emotional climate promoting relaxed alertness; b) instruction with the immersion of complex experiences; and c) consolidation of learning with active processing (Kaufman et al., 2008).

Students can use self-efficacy to promote an appropriate emotional environment for relaxed alertness by reducing environmental threats, using social interactions, conducting meaningful research, and building emotional connections. When building instruction with immersion in complex experiences, students can engage in physiology in learning, identify and master patterns, perceive details from big pictures, and use developmental steps and shifts for knowledge attainment. For strengthening consolidation and active processing, students can tap into their unique learning styles, use focus from outside contexts, use both unconscious and conscious processing, and learn from memorization (Kaufman et al., 2008). Effective learning could occur while weaving together brain-based learning and pre-planned thematic instruction to support enriched learning environments. Educators can pre-plan instructional strategies and lesson designs that include problem-solving, thinking creatively, and project-based learning to enhance student skills with creativity and innovation (Seechaliao, 2017). A scholarly exploration can be done on pre-planning thematic units and how much support this could provide teachers and students for effective learning.

Brain-based and integrative thematic learning theories have been applied in previous studies. Successful results were noted when the two theories were combined within a study researching a

brain-based learning instructional model to support mathematics students (Geevarughese, 2020). Another study interlocked the two theories to gain deeper insights into how brain-based learning and thematic learning can help students cope with learning disabilities. The research found that various learning strategies are needed to support diverse students, especially with developmental delays, as not all students' brain maturation is the same (Adel, 2020). The need for more varied learning strategies in classrooms contributes to the importance of promoting integrated thematic learning, appropriate planning time, and material design to create quality lessons to support multiple learning styles (Gürkan et al., 2019).

Research Literature Review

Pre-planning thematic units could help teachers prepare quality lessons using brain-based learning strategies and children's interests (Kovalik, 2014). Applying the brain-based learning theory and the integrative thematic learning theory supports the exploration of teachers' reasons and instructional decisions regarding pre-planned thematic units in preschool and kindergarten. This literature review section draws attention to discovering effective strategies for planning thematic units in the early childhood setting, integrating children's interests in the guidance of thematic units, and utilizing an enriched learning environment for designing thematic units for students with diverse learning needs.

Integrative Thematic Instruction Design

Integrative Thematic Instruction (ITI) first began in 1994, which changed how teachers delivered lesson experiences to young students (Kovalik & Olsen, 2010). The creator of integrated thematic instruction, Susan Kovalik, designed thematic instruction to better connect the science behind learning with human biology and school lessons (Kovalik, 2014). Kovalik had the unique vision to apply the integrated thematic instruction theory into practice using a strategic sequence of

events. Students begin the model of instruction by participating in and discussing real-life moments. Subsequently, the instructional model transitions into a conceptual development stage for students to better understand the content through real-life experiences.

The integrated instructional model aims to equip children to practice inquiry, pose questions, and make comments about the world in which they live. Furthermore, language is developed to strengthen the comprehension of the theme, which is explored in the next tier. After that, students apply what they have learned to the real world. The focus of this instructional model is to enable students to use real-life simulations to prepare them for daily life to gain knowledge, understanding, and skills for the future. In essence, Kovalik (2014) expresses the desire to fill the gap between brain-based learning techniques and how children use themes to build knowledge for the real world.

Current early childhood educational trends highlight a strong push for the integrated instructional model using science, technology, engineering, and mathematics (STEM) to facilitate quality education for all students (Brenneman et al., 2019). The integrative thematic model also supports students combining classroom learning with volunteer projects within the students' community (for example, volunteer drives, charity fundraisers, or park clean-ups). Learning to engage in community activities can encourage students to become empowered learners and active citizens (Abla & Fraumeni, 2019). Through the integrative thematic model, students learn to use community action to empower themselves to become citizens who take ownership of the greater world (Kovalik, 2014). The instructional theory and model emphasize a child's comprehensive learning plan by integrating themes and using students' inquiry with the real world. A student's inquiry and opinions contribute to learning (Kovalik, 2014). The ability to expand students' learning by offering choices to the student treasures students' voices.

Educators are responsible for enhancing learning by enriching students' lessons and the

environment by using diverse resources and materials in classes and a wide variety of exposure to different learning atmospheres (indoor or outdoor classrooms, field trips, excursions, and so on). Kovalik and Olsen (2010) stressed a unique biology of learning, which goes against a human's genetic makeup or environmental influences. Intelligence is a function of experience. Students are eager learners and naturally use free will and inquiry to strengthen brain development (Abla & Fraumeni, 2019). Young students' thinking is flexible and resilient. Scientific studies have found that a child's brain physically changes in growth as it acquires input from an enriched learning environment.

On the other hand, when a student is not offered an enriched environment for learning, the human brain can physically shrink (Kovalik & Olsen, 2010). Integrated thematic learning combines learning dimensions of emotion, physical elements, and academics. Curriculum coordinators support the integrative thematic learning model as one of the most effective models for teaching (Efendi & Hsi, 2020).

The research conducted by Olsen (2021) expresses four body-brain compatible learning elements to justify the integrative thematic instructional theory and Highly Effective Teaching Model (HET). The HET model encompasses ideas that enable a) students to have an absence of threat and to create a community; b) students to nurture reflective thinking; c) students to have meaningful content; and d) students to reach mastery of the application. Using a thematic lesson design places more emphasis on the involvement of students. Active participation in learning can influence a student's ability to attain greater knowledge (Efendi & Hsi, 2020).

Instructional content should be meaningful and relevant for the students. Content can be connected to a sensory-rich learning environment. Content is related to students using movement to gain an understanding of kinesthetics. Students are encouraged to make educational choices,

collaborate, and employ learning strategies to make content meaningful. Mastery of application is additionally essential for students to have ample and adequate time to learn and access immediate feedback and wiring to long-term memory. Olsen (2021) stated that the four body–brain compatible learning elements could be pre-planned with preschool and kindergarten activities to target age-appropriate learning objectives and enhance students' wisdom.

The four body-brain compatible learning elements listed can be connected to three essential parts of the literature review and theoretical design. The body–brain compatible learning elements, such as meaningful content, choices, and an enriched environment, can complement the brain-based learning theory and the thematic learning theory to explore more effective planning strategies with thematic units in the early years setting (Kovalik & Olsen, 2010; Kovalik, 2014). Body–brain compatible learning is relevant to integrating children's interests and inquiry in guiding themed units. Investigative studies can further help scholars understand how appropriate planning strategies can be implemented to uphold brain-based learning and integrative thematic instruction to students with diverse learning needs. Brain-based learning research conducted by Jayasankara Reddy et al. (2021) indicated that when students attach interest, inquiry, and emotion elicitation with body–brain learning, the ability to recall and retrieve information for memory is strengthened, leading to better academic success.

Effective Strategies for Planning Thematic Units in the Early Years Setting

Thematic instruction is a blueprint for instructing students using specific themes (for example, animals, transportation, or occupations) associated with several academic subjects to facilitate connections and meaningful educational experiences for students (Ashokan & Venugopal, 2016; Chumdari et al., 2018; Kovalik, 2014; Wardani, 2020). Thematic instruction aims to obtain knowledge and skills from a theme stemming from various academic subjects simultaneously to solve

issues or dilemmas. Instruction can begin with intriguing ideas, questions, or real-world problems relevant to the students. Students can acquire new knowledge best by taking a whole concept and breaking it down into elements. It is recommended to break down knowledge into parts through authentic real-life experiences (Chumdari et al., 2018; Kovalik, 2014; Wardani, 2020).

Every school has a unique community and culture of instructional practice, which leads to diversities in understanding, planning, and implementing thematic teaching. Conversely, there is a gap in research for effective practices in the steps leading up to the execution of themed unit instruction while considering students' individual needs (Lin, 2018; Retnawati et al., 2017; Sollome et al., 2018; Zin et al., 2019). Further research needs to be conducted on practices for thematic teaching, which cater to the overall developmental needs of children (Wardani, 2020; Zin et al., 2019). In addition, research should explore efficient and effective protocols in planning thematic units before administering them to students (Wardani, 2020; Zin et al., 2019). Looking into the professional requirements for teachers and educators to teach thematic units beforehand is the first step to using integrative thematic instruction effectively.

Recommendations for Teaching Thematic Units

Several recommendations must be considered when undertaking thematic instruction. First and foremost, research has found that teachers and educators should be professional in strategically using instructional methods for inter and intra-disciplinary needs for study (Retnawati et al., 2017). Teachers and educators should have ongoing professional development, experience with thematic subject content, and should have learned teaching methods for instruction. Instructors should be open-minded to the steps and goals needed to string thematic instruction in a classroom for students' educational success (Lin, 2018). Lastly, it is recommended for teachers and educators have a passion and be dedicated to connecting thematic learning for students to progress their knowledge and skill

levels (Chumdari et al., 2018). Once teachers and educators take hold of the recommendations to begin integrative thematic instruction, they can then consider the process for implementing thematic instruction.

Steps to Implement Thematic Teaching

Several strategic steps can be followed by teachers when implementing thematic instruction (Chumdari et al., 2018; Kovalik, 2014). The first step is to select age-appropriate themes. Second, teachers consider the specific concepts associated with the chosen theme. Concepts are aimed to correlate with the school's desired curriculum objectives by mapping essential competencies and developmental skills. Third, teachers determine learning experiences that can occur under the chosen thematic unit. Fourth, the teachers can pinpoint which subject matter elements will be highlighted during the execution of the activities. Fifth, teachers and educators can decide and review if the subject matter correlates to the chosen theme. Sixth, teachers should create and build planning to help support the allocation of activities and implementation of the lessons. Seventh, teachers can organize a specific order to know how and when learning activities will occur and how learning activities will include a variety of subject disciplines. Lastly, a reflection period can restructure or polish planning thematic units (Kovalik, 2014). Teachers can use follow-up methods to discuss and assess the new knowledge the students have learned.

Three thematic lesson plan development stages should be considered (Chumdari et al., 2018). When using themes with young children between the ages of one and six, teachers could prepare an enticing preliminary entry point into the themed unit, core activities building upon the unit, and final activities to finish the themed unit using an exit point strategy (Chumdari et al., 2018). These three stages can help stimulate and motivate the students to participate and engage in learning deeply. Students should be encouraged to initiate conversations and engage in fun and challenging

discussions about the theme. As stated by Chaves-Barboza et al. (2017) and Chumdari et al. (2018), the final portion of thematic unit planning gives teachers and students ample time to reflect on their learning and assess students' goals using the thematic units' lesson design.

Once teachers and educators consider the steps of thematic instruction, the next portion of curriculum planning, which requires selecting thematic units for study, can be undertaken. When selecting unit themes for young children, there are essential recommendations. The theme should be broad enough so young students can deeply explore and investigate the theme's related elements and contexts (Chumdari et al., 2018). Themes should also interest the students (Cheng, 2016; Pettersson, 2017). Students' background knowledge and prior understanding of the theme could also support thematic unit selection.

School curriculum coordinators may also consider specific thematic topics to help promote learning (Chumdari et al., 2018). The themes could follow the chosen school's curriculum, scope, and sequence. Units may also be selected due to a particular time of the school year (for example, holidays, celebrations, or school events). Finally, specific learning materials and resources can be available to support themed units (for example, books, toys, and games) (Chumdari et al., 2018; Wardani, 2020). Selecting a theme for study needs careful thought and strategic design (Chumdari et al., 2018). How students' interest is used within the selection of thematic units is a factor that can also be integrated into the planning process of utilizing thematic units.

Students' Interest in Themes

When using thematic integrative instruction, teachers need to consider that students should be interested in the themes (Sollome et al., 2018). Examples of units popular with young children are animals, plants, food, transportation, occupations, or fairy tales (Fieldwork Education, 2020). Pettersson (2017) expressed that there are various ways in which schools select units and tie together

students' interests. Pettersson discovered that teachers, school curriculum coordinators, and management teams could choose thematic units before the new school year. Having school staff select units prior to the new school year may seem like a common practice. However, some preschools and kindergartens in other regions of the world may not permit staff to select thematic units before a school year (Pettersson, 2017). Some schools encourage teachers to follow each student's unique interests (Spiewok, 2012). For example, in East Germany, children have freedom and ample opportunity for free play without defined curriculum planning designs. Observations of the students should naturally guide the selection of thematic topics based on what each child is interested in during their daily play (Spiewok, 2012). Educators can build spontaneous-themed unit lessons and materials strictly based on each child's individual interests (Spiewok, 2012). Hambrett (2018), in the work 'Kindergarten in Germany: The Lowdown on Preschool Childcare,' has found that most of Germany's public school systems for preschool and kindergarten do not use pre-planned or structured instruction. Hammbret's research states that most kindergartens have no formal education component. In Germany, it is in first grade when students are formally taught to read and write. Preschools and kindergartens are reserved for unstructured play and self-led exploration.

To provide structure to meet concrete curriculum objectives, school governments may take it upon themselves to select thematic units (Zin et al., 2019). Thematic units can be chosen and created by the country's government or state educational mandates to ensure developmental objectives are strongly tied in. School personnel may find this structure helpful in anchoring a school's scope and sequence to reach age-appropriate learning objectives. Other teachers may find a given structure too rigid and believe this hinders the teacher's flexibility with lessons. School staff may disagree if the selected themes from a school's government suit their class and are interesting enough for their students (Pettersson, 2017). An important goal educational staff can consider selecting thematic units

that best aid the achievement of age-appropriate curriculum objectives (Zin et al., 2019). Once thematic units are selected, they can be allocated across grade levels school-wide.

Thematic Allocation and Dispersal into Subject Disciplines

If there is no careful consideration of what each grade level is learning, then there can be notable gaps in learning content and objectives between each grade (Demetriou, 2020). Without a strategic school-wide allocation of thematic units placed between grade levels, thematic units could be repeated or disregarded, leading to lower availability of new content knowledge. Pre-planning thematic units in advance can be vital in avoiding the repetition of subject content. A variety of thematic units can span many grade levels to avoid repeating themed topics each year (Demetriou, 2020). For example, a preschool may have each grade level study a different themed topic per term.

Teachers who stay in one grade level may find it easier to repeat units yearly for new students. Integrative thematic units, lesson plans, and materials can be updated and reused (Sollome et al., 2018). Advanced pre-planning of thematic units can help deliver a wider variety of themed units within a preschool and kindergarten. Careful consideration can also be made regarding how chosen themes are allocated across grade levels and how the themes can connect across a variety of academic disciplines.

School staff can use thematic learning approaches to instruct students and connect many academic disciplines (Ashokan & Venugopal, 2016). To implement thematic instruction, teachers can use various instructional techniques and approaches. Themes can connect to academic disciplines such as literacy, mathematics, social studies, science, and so on (Demetriou, 2020; Kovalik, 2014). A thematic unit entitled ‘Animals’ can guide students to learn animal poems for literacy, add and subtract animals for mathematics, discover how animals survive in various climate zones for science, and learn how animals help humans for social studies lessons. The use of inquiry along with the

chosen theme and community action projects (park clean-ups, recycling initiatives, or volunteering in the local area) promotes cohesive learning opportunities beyond adding the topic to different content areas.

Thematic integrative instruction can be separated into three approaches: multidisciplinary, interdisciplinary, and transdisciplinary (Chumdari et al., 2018). Each of these three approaches has a unique way of using thematic instructional design. Using a multidisciplinary approach, the students leverage a combination of learning elements to explore a themed lesson (reading, writing, listening, and speaking together). Educators could align social studies, science, and history to create an intradisciplinary approach. The teacher overlaps instructional methods, resources, and materials on various academic subjects within interdisciplinary approaches. The transdisciplinary approach guides teachers and students to converse about specific themes and find connections across the subjects in breadth and depth (Chumdari et al., 2018). Teachers coming together to share ideas and organize and plan lessons can help support the extensive research to prepare for thematic lesson instruction used in the early years setting.

Thematic Unit Instructional Preparation

When school personnel uses thematic units for instruction, the teacher can conduct extensive research and preparation of knowledge concepts in advance (Retnawati et al., 2017). When educators teach a themed unit, educators should aim to gain deep and extensive knowledge about the concept and topic (according to best practices related to thematic unit preparation). Gathering knowledge about the theme ahead of time with a team of grade-level teachers may be helpful. Staff can create and build instructional lesson designs with interlocking aspects (Retnawati et al., 2017). When educators make lessons with strategic care, purpose, and organization, students may digest information better than learning lessons loosely strung together in fragments (Ashokan & Venugopal,

2016). Students may face difficulty engaging in tasks where lesson activities have no common vocabulary or concept elements. Teachers may influence higher-level thinking among young students when lessons have been strategically organized to connect vocabulary, concepts, and ideas (Retnawati et al., 2017). Thematic units can tie together learning in a more fluid fashion, which is less fragmented, by using themed resources and materials, which, in turn, can enrich the student's environment.

Curriculum unit materials to support themed units can comprise a wide range of prepared resources (Chumdari et al., 2018). Kovalik and Olsen (2010) noted that one way to overcome impoverished minds for learning is to provide a sensory-rich atmosphere in each classroom. If school administrators committed to providing ample time for teachers' planning, creating, and building relatable themed resources, this could improve students' learning. Better care and attention to teachers' planning strategies can support the construction needed to fill in gaps when more content understanding, knowledge, or skills need to be strengthened. A prepared curriculum and planning guide given to teachers before a school year, which begins with pre-planned and allocated thematic units, could help educators use their planning time effectively. Preparing thematic units in advance may also allow school staff to organize and store unit materials in specific locations for easier access for each grade-level team. This may provide teachers more planning time once the main thematic topic has been anchored. Teachers can use their given planning time to create a broader range of attractive and exciting resources to deepen their students' knowledge, skills, and understanding (Wardani, 2020). The scope of thematic learning can also expand outside the classroom and into the greater community.

Cooperative projects, which bring together active participation through pairs or groups of students, various grade levels, parents, or the community, can also be considered a strong force of

integrative teachings to support student academic attainment (Cheng, 2016). Community projects such as volunteering at a local library or animal shelter can create creative learning opportunities. Planned field trips and excursions can also be allocated and strategically placed within thematic planning time frames to support compelling learning opportunities, such as trips to an aquarium, zoo, a local business, or a natural park. Teaching with thematic units can bring a school community together to support problem-solving, critical thinking, critical reasoning, and in-depth analytical thought to acquire important educational goals.

Advantages of Teaching with Thematic Units

Thematic teaching has many advantages (Anitah & Suryani, 2018; Ashokan & Venugopal, 2016; Chumdari et al., 2018; Kovalik, 2014; Nurlaela et al., 2018). When students acquire knowledge as part of a larger context, they can learn more efficiently. Acquiring knowledge with thematic instruction can help students build a knowledge base spanning various academic disciplines. Asking students to draft a book report about a frog's life cycle with self-drawn illustrations can be an example of integrating three academic disciplines: literature, science, and art. Learning can be more comprehensive, which can improve students' initiative to be more involved. Learning with themes can also help support a child's natural learning. Children between the ages of one and six naturally gather information together by integrating new knowledge elements with previous knowledge derived from broader topics (Chumdari et al., 2018). Age-appropriate and authentic learning materials can be used with thematic units, which help young students relate to the learning and help build problem-solving skills. Educational systems can also decide upon child-centered topics which are current and relevant to the perspective and needs of the students. In themed unit instruction, students can choose individual and unique projects to further their knowledge about specific themes based on their interests (Pettersson, 2017).

Current early childhood education practitioners highly recommend themed unit instruction, which promotes project-based learning, place-based learning, and cooperative learning within an early year's classroom setting (Retnawati et al., 2017). Diverse learning styles (visual, aural, verbal, physical, logical, or social) can also be considered for administering thematic instruction. Furthermore, school staff can drive engaging and dynamic instruction using instructional techniques best suited for the taught concept (Gudnason, 2017).

Activities can also be differentiated into individual, paired, or group projects supporting ELLs, students with special needs, or students of multiple intelligences (Sudarma et al., 2021). Studies conducted by Carley Rizzuto (2017) on cultural and linguistic diversity found that teachers should be aware of students' cultural backgrounds, languages, and learning diversities. Instructors must be better equipped to support all diverse students strategically. Implications for teacher professional development to host a better responsive pedagogy for all diverse students were recommended.

Thematic instruction also promotes communication between the teacher and students to be authentic. Themed instruction renders class discussions effective and transformative to the learning experience (Cheng, 2016). Using themed discussions can encourage students to interact together with respect and cooperation within their peer circles. Interpersonal skills can be advanced with paired and group work because learners develop listening and speaking skills in context (Cheng, 2016; Chumdari et al., 2018).

According to the teachers' or students' curriculum needs, themes and a strategic scope and sequence can be elongated. Additionally, themes can have a flexible time frame for open-ended discovery, aligning to various informative concepts. Lastly, thematic teaching can also release more opportunities for assessment practices. Using a plethora of informal assessment strategies with

technology, for example, online learning journals, presentations, projects, and portfolios, are examples of thematic unit assessment choices (Danniels et al., 2020).

In summary, the advantages of thematic learning span several areas. Learning can be pleasurable for students, as learning can be derived from intrinsic motivation, targeting the interests and needs of the students. Thematic lessons can be connected to the developmental needs of the student. In turn, the achieved learning objectives could last longer as they may have more meaning and be memorable. Lastly, students' social skills may be strengthened when students converse with classmates about the learning content (Efendi & Hsi, 2020).

Collaborating Children's Interests in Guiding Themed Units

Students can participate in the thematic planning process by sharing their thoughts, opinions, and desires for learning (Anitah & Suryani, 2018) and guiding lessons with their questions and concerns about a theme to promote discovery and exploration. Encouraging students to use thematic material that is meaningful to them, where they can collaborate with peers and have choices in their learning, promotes body–brain compatible learning elements, as noted within the brain-based and thematic instruction learning theories (Kovalik & Olsen, 2010). Collaborating with children's interests is essential to incorporate students' perspectives. Conversely, it is questionable if students should be the first ones to select themed units for learning or if the educational staff should select themed units before a school year begins. Based on a trained teacher's perspective, adults may be better equipped to choose units themselves, as adults understand the broad scope and sequence of content and objectives needed to be reached, spanning an entire school's curriculum spectrum (Pettersson, 2017).

Thematic units can be an effective tool to increase children's curiosity and interests. However, there is a lack of uniformity in planning and using thematic units between teachers. Research

conducted by Sollome et al. (2018) showed the wide variance between teachers' understanding and implementing thematic units to incorporate students' interests. Some teachers believed one student or a group of students' interests could select a thematic unit to be studied. Other teachers believe students become interested in thematic units by becoming exposed to new content themes they may not have learned about before (Pettersson, 2017). Sollome et al. (2018) stated that preschool and kindergarten teachers discover thematic teaching as a practical approach to learning and increasing children's curiosity by exposing students to new content and interests. A vital need exists for school personnel to come together to understand better the most effective practices for using thematic units and inquiry (Pettersson, 2017; Sollome et al., 2018).

Teachers and Students Creating Thematic Interest Together

Thematic integrated instruction can make lessons appear attractive and exciting for students. Thematic units help engage and motivate learners when teachers prepare and expose students to various themed resources and activities. Research findings show how important it is to weave students' interests and instruction into planning by first having teachers select the unit theme and then deepening the thematic topic with the students' inquiry and interests (Cheng, 2016; Pettersson, 2017). In a study by Pettersson (2017), several texts of the national curriculum and information gathered from eight different preschool groups were collected. Pettersson's study added details on learning in preschool regarding planning with students' interests in mind.

Pettersson's study bridges the notion that students' interests can guide a pre-planned unit. Students and teachers can work together to delve into thematic units with teachers' guidance and students' inquiry (Cheng, 2016; Pettersson, 2017; Zin et al., 2019). When creating thematic units in the early years, children's interests were often accounted for by what teachers provided, such as themed lesson materials and enriched learning environments (Pettersson, 2017). When incorporating

thematic activities, learners become excited and motivated to learn, as thematic activities can include art, music, role-play, literacy, math, science, and outdoor play. Sollome et al. (2018) have discovered that when educators use one well-prepared and designed concept at a time across several activity areas, repetition of the theme increases content mastery. Repetition of unit themes' contents can solidify new language vocabulary and topic elements, thereby leading to mastery of skills.

Dilemmas Teachers found Following Student's Interests

School staff has spoken out about struggles with allowing students to select themed units as the school year progresses. Dilemmas arise when specifying if student-selected thematic units are precisely the topic in which all students in one class are interested (Pettersson, 2017). Focusing on children's individual interests and building individual lessons in a group setting is challenging if there are numerous students (Pettersson, 2017; Retnawati et al., 2017). When students select units, the chances of units being repeated yearly may be high if there is no pre-planned, school-wide curriculum scope and sequence. Repeating unit themes year-to-year as students matriculate to the next grade level may hinder students' ability to learn about other themes to which they have not yet been exposed (Pettersson, 2017).

With attention to the use of thematic units, problem-solving, language development, and social interaction, scholars have examined the benefits of using an integrated curriculum where students engage through the guidance of the theme (Cheng, 2016; Xoshimova, 2020). Successful knowledge attainment can be safeguarded when teachers incorporate students' voices in selecting thematic units (Xoshimova, 2020). The findings from one collaborative action study explore how kindergarten teachers create lessons using a science thematic curriculum (Cheng, 2016). One of the themes from the research study indicated positive benefits for contextual thematic learning. Cheng (2016) expressed how students' life experiences play a role in learning thematic units and art. Cheng

stated (1) by using students' life experiences, teachers can build thematic lessons and incorporate art into the lessons; (2) students' art skills improved through exploration, perception, and creativity; and (3) professional development on the proper usage of thematic units prior supported educators with successful instructional planning. This article illustrates students' interests and the teachers' ability to incorporate interest into lessons and objectives.

Incorporating Student's Inquiry when Exploring Thematic Units

Further research questioned the benefits between inquiry-based integrated thematic instruction and thematic instruction models without inquiry (Anitah & Suryani, 2018; Zin et al., 2019). Simple thematic instruction uses themes to link many subjects together to provide meaningful learning experiences for students. Inquiry-based thematic instruction can benefit students when they engage in learning at school (Anitah & Suryani, 2018; Hollingsworth & Vandermaas-Peeler, 2017; Lin et al., 2021; Zin et al., 2019). One research study stated the importance of integrated thematic learning in early childhood education and facilitated positive reviews of the inquiry-based model versus the instructional model without student investigations (Anitah & Suryani, 2018). Inquiry-based thematic instruction is a more supportive model for thematic teachings versus the thematic instruction model, as inquiry-based thematic instruction couples together the investigations of students to examine parts of a theme in which the students are most interested (Anitah & Suryani, 2018). Inquiry helps to optimize thematic ideas and explore units more by encouraging students to ask questions and discover answers. Learning can flourish when students take on new perspectives, update information, and venture more in-depth within a thematic topic (Anitah & Suryani, 2018; Hollingsworth & Vandermaas-Peeler, 2017; Lin et al., 2021).

Essential Questions for Student Inquiry using Thematic Units

Early childhood teachers and educators are responsible for building classroom environments

to promote exploring specific themed topics. Teachers can build themed unit activities to cultivate questions and answers from students (Wall & Leckie, 2017). Students can be asked to inquire and participate in the planning of units by answering essential questions related to the chosen themes (Ramanathan et al., 2021). Essential questions can help build lessons and materials to support the chosen theme. Consciously incorporating students' inquiry prepares students to dive into themed lessons. Focus on specific curriculum objectives that need to be achieved based on the student's developmental age can be made within the inquired-themed unit.

Essential guiding questions can begin the inquiry process. Specific and essential guiding questions should be crafted to help students focus on thematic units and objectives (Adbo & Carulla, 2019; Wall & Leckie, 2017). Questions can be open-ended, engaging, and stimulating. Questions can ask students to exert higher-order leveled thinking. Once a unit theme is declared to a class of students, essential guiding questions can help lead the class into more profound and essential concepts, facts, and figures relative to the theme.

Essential guiding questions can be revisited at the end of each themed unit to assess students' learned knowledge. Guiding questions are open-ended, engaging, and thought-provoking and can promote critical thinking. Information can be used for student progress reports, reflections, and teacher assessments. Using essential guiding questions, students can participate more fully in their learning journey by inquiring more about the topic, answering questions, or sharing thoughts on the taught-themed material (Adbo & Carulla, 2019; Wall & Leckie, 2017).

Using essential guiding questions, teachers can promote more active student participation. Essential guiding questions allow students to be a more substantial part of their class's learning journey (Ramanathan et al., 2021). Instructors can lead students to discuss, participate in defense circles, or have debates about conversations related to the chosen thematic unit during an inquiry

process with pre-planned units. Students can gain more profound knowledge about thematic content when teachers place an effort to encourage students to participate in the inquiry process. In turn, students can strengthen their ability to develop critical analysis and thought processes. The importance of students' interest and inquiry is imperative. It is crucial to learn how a student's voice can be woven within effective thematic instruction (Adbo & Carulla, 2019; Ramanathan et al., 2021; Wall & Leckie, 2017).

Professional Development to Support Thematic Units and Inquiry

First and foremost, preparing an organized system to select units is paramount (Pettersson, 2017). The appropriate allocation and guidance of thematic units and instructional methods can also be identified. Teachers should aim to have the knowledge and tools to promote more effective and successful learning experiences. Early childhood students' learning with unit themes, inquiry and enriched learning environments can create optimal learning experiences. (Pettersson, 2017; Retnawati et al., 2017; Zin et al., 2019). There is a critical need for novice teachers to learn from experienced preschool and kindergarten teachers who have achieved success using thematic units and inquiry together may be beneficial for improving students' performance (Sollome et al., 2018).

Finding Materials, Time to Plan, and Challenges with Inquiry for Thematic Units

New teachers state challenges related to building an inquiry program, as there can be a lack of teaching materials and time to plan (Hollingsworth & Vandermaas-Peeler, 2017). New teachers have mentioned frustration with thematic instruction. One study surveyed 51 teachers using in-depth interviews highlighting preschool teachers' struggles in implementing an inquiry process with thematic teachings. Overall, the school staff stated that professional development is needed to understand a more systematic nature for planning and building science-themed units with an inquiry into the classroom. The work shows the importance of professional development for staff and

materials, scheduling, and time to build interest-based and inquiry-based teaching. By learning from experienced teaching peers, teachers can build effective thematic units with a practical implementation design, incorporating students' interests and inquiries.

New educators may want to glean information from experienced teachers to find confidence in working with instruction. Successful academic achievement in students' learning is a result (Kupila & Karila, 2019). In one study, experienced teachers guided novice teachers using thematic units.

Lin (2018) expressed how experienced teachers who have used thematic units found strong support in pre-planning thematic units before a school year began. Lin stated that pre-planning could better support instructional practices that target children's developmental needs. Senior teachers in Lin's study had gathered together methods for executing thematic units. The work explains strong evidence in favor of an organized system of allocated thematic units across a curriculum that can be implemented to support the implementation of thematic teaching in the early years. Senior teachers declared that once the central theme concept is wholly planned, staff can more easily arrange and design instructional activities for the class (Lin, 2018).

Utilizing collaborative action research with observations, interviews, reflection notes, and assessments can help promote student interest, inquiry, and professional development strategies to support thematic instruction (Cheng, 2016). Lesson planning, including student interest and inquiry, facilitates a deeper connection to their learning students. When teachers combine a proper organization of thematic planning with brain-based learning strategies and thematic instruction, this can support an enriched learning environment with meaningful content (Kovalik & Olsen, 2010). Students can have choices in their learning when participating in topics of inquiry. When educators gather ideas for thematic instruction from students' investigations and incorporate activities to support diverse learning needs, various learning choices can be facilitated for all students.

Support Methods for Planning Thematic Units for Students with Diverse Learning Needs

Thematic learning is beneficial to accommodate students' unique needs due to its student-centered learning nature. Thematic learning can support students who require differentiated learning styles and differing reading abilities in several ways (Nurlaela et al., 2018). Diverse students such as ELLs, students with special educational needs, and students with multiple learning intelligences can benefit from thematic instruction.

Nurlaela et al. (2018) discovered a difference in achievement when students are tested, comparing their learning by the thematic instructional model versus the conventional instructional model. The conventional instructional model has isolated and disconnected topics, with students learning about topics passively. Within a thematic instructional model, a teacher is a facilitator who provides ample opportunities for students to construct their knowledge using themes. With 140 preschool students, Nurlaela's study facilitates high scores for thematic instruction compared with the conventional instructional model with significant data on several accounts. The thematic instructional model is more effective and hosts a greater capacity for supporting different learning styles and reading abilities when compared to the conventional model. With a learner-centered approach, a thematic instructional model helps students build knowledge, connecting theme concepts and applying the knowledge to real-world settings. The thematic model has more credible proof of being a solid curriculum model for early childhood education, as learners can collaborate on long-term goals surrounding a theme. This model helps students build conceptual understanding (Nurlaela et al., 2018). The four body-brain compatible learning elements, which support brain-based learning strategies and the thematic instructional model, can guide educational professionals when teaching diverse learners and planning thematic units (Kovalik & Olsen, 2010).

Brain-based Learning Strategies in Thematic Teaching to Support Diverse Students

The ability to plan thematic units and incorporate research-based and effective brain-based learning strategies within planning could support successful student learning. Combining pre-planned thematic units with brain-based learning strategies could overcome the challenges schools face in delivering quality instruction to students with diverse learning needs. Brain-based learning techniques could be strategically applied in thematic units' pre-planning, such as lessons involving mathematics, chunking, and language and literacy preparation (Shukla, 2019).

Additional learning support is an example of a diverse learning need. Using a sample of 15 preschool children, Jazeel et al. (2020) applied brain-based learning techniques to enhance learning. The study involved a purposive sampling technique with students with low proficiency in mathematics skills. After teachers utilized brain-based learning methods, it was discovered that the students' mathematical achievement skills were enhanced.

Chunking is grouping information into smaller parts with an overarching theme or unit. Knowledge can be chunked based on color, category, similarity, or relationships. Numerous chunks are more manageable to remember than multiple individual elements. Research findings by Shukla (2019) presented observations that the human brain works best with information networks. When the need arises to learn new vocabulary for a language lesson, teachers may often divide the lessons into themes for chunking vocabulary. One lesson may pertain to restaurants, having students practice food and drink vocabulary. Another lesson may have an animal focus, having students learn the vocabulary of animals, from house pets to jungle animals or from desert animals to underwater sea creatures.

Research conducted by Bustamante (2019) and Umarkulova (2021) also found that chunking is a powerful brain-based learning technique that supports language development. Participants found

that chunking not only helped acquire new vocabulary but also helped learners integrate the new vocabulary into appropriate grammar and syntax contexts. Chunking was recommended for all ages to create a more comprehensive vocabulary lexicon to support proper speech and language development.

Words employ vital brain processing centers to connect abstract aspects and existing data. Suppose a student does not have the vocabulary of a themed unit before the start of the unit. In that case, the student may be unable to comprehend, participate in, or inquire about the thematic lessons administered (Shukla, 2019). Knowing which thematic units a grade level needs to cover before a school year can aid the quality use of time to prepare language resources. Literacy supports are significantly required to render the experience of learning vocabulary information solid for students. Some literacy supports that can be used to strengthen thematic lessons could involve visual mind maps, vocabulary cards, picture dictionaries, videos, or audiobooks.

Chunking and preparing vocabulary from language and literacy supports are simply a few of the many researched brain-based learning techniques that can be premeditated when planning thematic instruction. Ample time to create thematic unit lessons and apply brain-based learning techniques can help establish quality lessons for diverse students (Bustamante, 2019; Umarkulova, 2021). These techniques improve memory, conceptual understanding, depth and breadth of learning, problem-solving skills, critical thinking, and creativity (Shukla, 2019).

Supporting ELL Students, Special Needs Students, and Multiple Intelligences

Research questions the existing evidence for thematic teachings and its support for ELL instruction (Szecsi et al., 2017) and teachers' importance in planning and creating enriched learning environments to support ELL students' learning needs. Schools should become more aware and knowledgeable of practices adhering to the needs of young ELL students, as there are more ELL

students worldwide now than ever before (Szecsi et al., 2017). A teaching environment supporting ELLs' needs and allowing them to use their native tongue in the classroom can safeguard academic success (Mifsud & Vella, 2018). Strategic planning can be made in advance to support the building of language tools for ELL students (Mifsud & Vella, 2018; Szecsi et al., 2017).

The thematic instructional approach also supports students in learning a second or foreign language more easily (Ashokan & Venugopal, 2016). Thematic vocabulary can be better recalled as a part of a whole concept, such as retrieving food vocabulary in a healthy eating unit or recognizing transportation forms in a themed unit about travel. Kovalik and Olsen (2010) found that 20 words utilized in real-world dialogs and real-world locations can promote language learning. When you allow the human brain to bridge an association between words, content meaning, and various contexts, the brain absorbs the information faster and recalls words more easily in the future. These are believed to comprise memory hooks, which help students recount and recall the vocabulary again. Immersion in an enriched learning environment could provide the most valuable sensory inputs (Kovalik & Olsen, 2010).

Educators can strive to administer quality lessons working with ELLs using recommended effective teaching strategies. Thematic learning can support students with diverse learning needs (Nurlaela et al., 2018). However, research has found that teachers need to leverage better strategies in preparing and planning thematic units to create more effective lesson materials and resources (Retnawati et al., 2017). Materials and resources for thematic units can support ELLs and students with special needs. Special needs students can be helped by planning activities and lessons that build on students' learning strengths to suit multiple intelligences.

San Jose et al. (2017) noted the importance of capturing special needs students' voices to recognize how lessons were delivered to them. After working with several special needs students

(some of whom were deaf and mute), the data showcased the need for teachers to suit their instructional approach with differentiation and avoid adapting the learner to the instructional system solely desired by the teacher. Studies conducted by Kovalik and Olsen (2010) found that when students are nurtured in under-stimulating environments with poor brain development, their intelligence could be improved compared to when they change to a more engaging and stimulating learning environment.

Young students with speech and language delays can find it challenging to catch up to peers with developmentally appropriate literacy successes. Wilcox et al. (2020) created the Teaching Early Literacy and Language (TELL) curriculum using strategic teaching practices to best support students with speech and language impairments. Wilcox et al. used 91 preschool teachers and over 250 preschool students diagnosed with developmental speech and language impairments to participate in the TELL curriculum. Conclusive results discovered improvements in students' oral language and literacy skills after experiencing the TELL curriculum. Thus, the TELL curriculum showcases effective, brain-based learning strategies to strengthen students' learning (Wilcox et al., 2020). Using instructional approaches to support multiple learning styles can also help students with special needs. Thematic teaching can provide this support by enriching classroom environments with sensory-rich resources and materials that students can explore and manipulate for learning (Kovalik & Olsen, 2010).

Students can have multiple intelligences: verbal and linguistic, mathematical and logical, musical, visual and spatial, body and kinesthetic, and interpersonal or intrapersonal intelligence. Supporting students with multiple intelligences can help diverse students learn in an improved manner (Ashokan & Venugopal, 2016). Multiple intelligences can span various instructional methods through which a student can learn effectively. Preschool and kindergarten teachers can organize many

learning activities to support multiple intelligences (Ashokan & Venugopal, 2016). Students who struggle with literacy and need to know their alphabet can utilize their musical intelligence by singing the alphabet or adding body and kinesthetic intelligence by molding their bodies into letters. Students who struggle to learn timetables for mathematics could create short stories of number arrays to memorize timetable facts using verbal and linguistic intelligence. Alternatively, multiplication fact-related games can be played with or without student peers to support interpersonal and intrapersonal intelligence.

The thematic instructional design could be considered one of the most developmentally appropriate practices for utilizing multiple intelligences for early childhood students. Multiple intelligence activities uphold instructional practice methods supported by brain and psychology scholars (Ashokan & Venugopal, 2016). Children naturally build concepts and ideas by connecting previous knowledge to current knowledge and building a network of related information to understand their world better (Sudarma et al., 2021). When teachers purposefully plan and implement thematic lessons incorporating inquiry and multiple learning intelligences, teachers could support the natural way young children acquire information.

Pre-planning Thematic Units in Advance

Heidi Hayes Jacobs has been highlighted as one of the first advocates for pre-planning thematic units in advance for kindergarten and primary school students (Inzana et al., 2017). She suggested there should be a four-phased approach to planning an integrative curriculum. Jacob's proposal states that the pre-planning of themed units should be completed six months to a full year before a school system begins its thematic curriculum instruction. Pre-planning units before a school year help academic staff create curriculum lessons and materials to support teaching. Staff should create a proposed skeleton of units, which can be executed. A skeleton plan of units can be piloted in

the first year to gauge its success with students' learning outcomes. Based on the piloted program's results, the next phase of solidifying the units amongst grade levels should be strategically finalized within the school system (Wall & Leckie, 2017).

Thematic instruction requires additional preparation, materials, resources, and research (Wall & Leckie, 2017). Allowing teachers to choose themes in advance is crucial for the thematic learning approach (Wall & Leckie, 2017). The themes should be child-friendly, and students should naturally be interested in the selected topics. Making the theme relevant to the school's chosen curriculum objectives is paramount. An interdisciplinary unit theme can also be allocated amongst specific subjects. Instructors using the themed unit should target specific academic objectives to be reached through daily lessons and activities (Wall & Leckie, 2017).

Pre-planning thematic units may also help when unexpected challenges arise within a school system (Szente, 2020). During the COVID-19 pandemic, teachers scrambled to drive thematic lesson planning for online classes for toddlers and preschool students (Szente, 2020). Unclear planning methods and strategies to support the students' learning led teachers to believe they were unprepared to teach in digital environments. A recommendation was for teachers to be admitted into teacher preparation programs and engage in in-service professional development classes to prepare better planning, lessons, and materials, which can most effectively work with young students online (Szente, 2020).

Disadvantages of Thematic Teaching

Thematic teaching can pose many disadvantages. When implementing themed units, problematic issues can arise when uneducated or inexperienced preschool and kindergarten teachers try to execute thematic planning or instruction (Chumdari et al., 2018; Retnawati et al., 2017). Educators may lack professional development to implement thematic teaching. All teachers may not

have the specialized skills to integrate thematic units with age-appropriate curriculum objectives across various subject domains (Efendi & Hsi, 2020).

Challenges of Planning and Learning with Thematic Units

Engaging in overwhelming amounts of thematic knowledge, which is unplanned and unorganized, could stress teachers, students, and curriculum coordinators. Students learning can be hindered when themed topics are not strategically selected (Chumdari et al., 2018). When educators provide a narrower learning path with a planned curriculum design, this lessens stress for students. Having students learn large amounts of information without specific focus can overwhelm students. Finding an organized way to divide a thematic unit's content into smaller portions for easier understanding can be critical for success in learning. In addition, aligning education with age-appropriate objectives is paramount for teachers to guide students to learn, thereby facilitating the achievement of developmental goals (Chumdari et al., 2018).

Disadvantages can also exist depending on the perception of a teacher's planning methods. When some educators try to connect changing themes with specific skill objectives systematically, this can lead to frustration (Retnawati et al., 2017). Transitioning subject-based objectives into integrated thematic lessons takes time, professional training, and dedication from teachers, curriculum coordinators, and specialists. It may also be challenging to create and uphold assessment strategies yearly to target subject learning goals if assessments are connected to specific themes. A more structured curriculum scope and sequence with pre-planned themed units may ease teachers' frustrations when preparing lessons and assessments with thematic units (Retnawati et al., 2017). Some effective lessons and assessments, which had been successful in the past years for student learning, could be reused or updated, thereby saving time and energy for a teacher's planning.

Lack of Resource Support and Allocation amongst Grade Levels

Finding the proper learning facilities and supports for themed units, for example, lesson materials, resources, field trips, community events, or volunteers, before the academic year begins was also noted as very difficult without a prior concrete thematic unit design (Retnawati et al., 2017). The research conducted by Demetriou (2020) stated that to help students take on science instruction at the university level, students should be better prepared and exposed to strategic and appropriately allocated science-based instruction at the preschool, primary, and secondary levels. Gaps can exist in a student's content knowledge base when strategic-themed content and objectives are not integrated into a firm structure (Demetriou, 2020; Saleha & Shakerb, 2021). Teachers could use better strategies in preparing and planning thematic units across several grade levels to fill learning gaps yearly.

One study by Saleha and Shakerb (2021) shows there is discordance among schools regarding curriculum scope, sequence design, and restructuring. Factors are an absence of school management leadership, a lack of professional development, and a teacher's voice for contributions to creating a solid scope and sequence. Within the study using 275 science, math, and English teachers from international schools in Dubai, Saleha and Shakerb (2021) found that staff was respectful and positive towards strategic curriculum integration, even though the curriculum was complicated and had a heavy workload. School staff, nevertheless, were receptive to taking on a more straightforward curriculum design. When schools do not follow a strategic curriculum scope and sequence plan, gaps in learned skills from preschool to primary and secondary levels are discovered, and learning goals from all levels are not achieved (Demetriou, 2020).

Challenges using Inquiry in Thematic Unit Teaching and Finding Ample Planning Time

One study expressed that teachers face many obstacles in implementing inquiry-based thematic teaching (Retnawati et al., 2017). School staff faced difficulty selecting themes, connecting

to problem-based instruction, and linking lessons to students' inquiry. Teachers also faced difficulty when using students' inquiry at the same time as aiming to achieve developmental skill objectives. An abundant amount of planning time to build lesson plans and resources for thematic units can be complicated, as well as writing lessons to meet students' inquiry needs and grade-level objectives.

Implementing and executing thematic instruction takes significant thought and effort. Teachers might face difficulties finding abundant time to plan thematic units amidst their busy daily schedules (Anitah & Suryani, 2018). Many teachers often request more time to plan and prepare lessons to ensure all learning elements are integrated (Demetriou, 2020). Wardani (2020) noted the advantages of thematic instruction, but teaching professionals can avoid the pitfalls of using thematic planning due to poor organization.

Thematic Units or Free Play

Thematic units can lay a firm foundation to build developmentally appropriate skills, as thematic units provide language and literacy supports to students and a meaningful context to young children. Learning in early childhood settings with thematic units should be happy and exciting and include hands-on materials, and students can be scaffolded to learn new skills when necessary (Montero Rodríguez, 2019). Although there may be several positive attributes to using thematic units in preschool and kindergarten, there is still a counterargument to using thematic units in young children. Thus, curriculum coordinators must consider the importance, use, and amount of child-led free play during the early years. Play can be used in two ways in early childhood classrooms—for developmental learning or academic learning. Developmental play supports child-directed free play to build social and emotional skills, cognition, and self-regulation. With child-led discovery, children may gain new information about the world and develop problem-solving skills in an improved manner compared to the learning and skills derived from teacher-led settings (Danniels & Pyle,

2018).

In one study, Caruana (2017) indicated that a balance between adult-led and child-led play is recommended for a child's learning and skill development. Structured and free-flowing play experiences can host many rich learning opportunities. Solely encouraging free play in preschool and kindergarten environments may be inadequate to prepare students for grade one. On the other hand, if children are deprived of child-led, free play, specifically as a young child, a child could suffer negative developmental growth and be deprived of basic pathological needs. Specific student objectives can be focused on and achieved when teachers support academic learning. Successes in achieving age-appropriate objectives can be perceived when teachers lead pre-planned games or activities, collaborate with their class, and intervene in child-led play to reach age-appropriate developmental goals (Danniels & Pyle, 2018).

Cultural Differences of Free-play and when to begin Academics

It may be essential to consider what is needed for students to be prepared for grade one. The country in which your child is being raised plays an important role. To illustrate this, early childhood education was compared in Germany and China (Faas et al., 2017). Academics in preschool and kindergarten are rigorous, and children are encouraged to learn early literacy and mathematics before grade one. In China, preschool and kindergarten students are directed by adults in mostly whole-group activities to target specific learning objectives. Before proper school begins, preschool and kindergarten students are encouraged to learn for themselves in individual activities or small groups based on individual children's motivations, interests, and needs. In Germany, there is more stress on children taking the initiative and engaging in self-led experiences driven by one's curiosity (Faas et al., 2017). On the other hand, in Germany, students are discouraged from beginning any academics before grade one (Hambrett, 2018).

Study Context Considerations

Germany prides itself on being the forefather of the original preschool and kindergarten education. Born and raised in Germany, Freidrich Frobel was the first to imagine a children's garden where children could independently learn in a preschool setting. Frobel's pedagogy stemmed from the idea of children making choices for themselves, being able to freely move within their educational environment, challenging themselves by engaging in real-world experiences, and guiding children to form their self-discipline by understanding the natural consequences of their actions. Frobel's motto states, 'I want to educate people to be free, think, and take action for themselves' (Tovey, 2020). As a whole, Frobel believes children learn best with complete freedom of self-activity (Dar, 2018). A literature gap can be identified on whether students should have a pre-planned preschool and kindergarten curriculum design to gain skills or if it is simply unnecessary at this stage of childhood development. The answer may be more contextual and pertain to the beliefs of one's own country and school district regarding what is more critical for a child's growth and development (Faas et al., 2017). Utilizing a phenomenology study to explore this gap may be most appropriate to move forward.

Chapter Summary

Initiatives linking current school practices with promising new neurological and cognitive science research offer valid possibilities for improving education, particularly for children with diverse learning needs (El-Henawy, 2019; Mahoney et al., 2020). The literature identified that proper planning and organization, using brain-based learning strategies and a thematic inquiry design for early childhood learning, might positively affect a child's brain development. Early childhood practitioners can reconsider how thematic units are selected and planned on a school-wide scope and sequence before a new academic year.

A literature review study conducted by El-Henawy (2019) expressed that neuroscience has reached a level where studies show brain-based instruction can support learning, especially with diverse students. Academic growth can be perceived in terms of developmental skills such as communication and language, physical development, social, emotional, behavioral development, math, literacy, the ability to understand the world, and expressive arts and design. Using pre-planned units strategically allocated within a school-wide curriculum scope and sequence with lessons supporting brain-based instruction and thematic learning can optimize academic skill growth.

Mahoney et al. (2020) indicated the need for schools and communities to collaborate to build professional development opportunities for teachers to learn effective strategies to support diverse learners. When teachers have tools and resources to improve student learning, predominantly regarding social and emotional competencies (such as managing emotions, showing care for others, and hosting positive relationships), all learning at other subject levels can become more manageable. Effective, brain-based learning strategies to support social–emotional needs can benefit curriculum design (Mahoney et al., 2020).

Linking the brain-based and thematic learning theories can lay the groundwork for substantial instructional foundations for more effective learning strategies in early childhood classrooms. Brain-based instruction can promote students' perceptions of learned content through action, memory, language, and selective attention. El-Henawy's study (2019) showed the importance of research and the power of pre-planning lesson activities, which, in turn, could most effectively stimulate the brain for learning. Considering brain-based learning strategies and aligning them for thematic unit instruction could help support successful thematic teachings.

School employees can be trained to construct curriculum planning by integrating children's perspectives for successful learning. This can be done when the academic staff allows a student's

voice to be an intrinsic part of the thematic planning process (Anitah & Suryani, 2018). Pre-planning lesson activities may be constructive to support diverse learners who must complete pre-planning to prepare the best lessons, materials, and resources to support unique learning needs. It is essential to note scholars' findings regarding spontaneity in thematic planning. It is questionable if a student could be more motivated to learn because of a self-guided interest in a thematic topic or if motivation is prevalent after teachers select and showcase the thematic topic without asking students.

In essence, pre-planning thematic units and utilizing brain-based teaching encourages educators to consider the nature of the brain in decision-making to reach more learners (El-Henawy, 2019). Academic skills can be supported when teachers use a well-designed scope and sequence curriculum design along with data and standard-driven lessons to help students achieve academic success. Teachers are the stewards of instructional practices who can implement and execute lessons. Environmental influences such as classroom resources and material preparations could be best implemented when professionally pre-planning a school's curriculum with integrative thematic units and brain-based learning methods (Shideler, 2016; Shukla, 2019). Shideler (2016) declared that teachers could create an intentional curriculum design to support diverse learners using intentional syllabi. Intentional syllabi incorporating age-appropriate objectives fused with data from previous lessons can help create a deliberate curriculum design. Shideler's information can support the need for pre-planning themed units to best support curriculum needs for diverse students. Shideler's article recommends pre-planning and organization to support effective and successful learning.

Some scholars have claimed that the thematic instruction model successfully improves student learning in early childhood education (Wardani, 2020). Teachers and educators can follow specific strategies to promote thematic units in preschool and kindergarten. Bridging together the brain-based learning theory and the integrative thematic learning theory for effective instruction could help

students successfully learn. Exploring pre-planned or spontaneous thematic units by conversing with experienced teachers will help identify which practices best support effective learning. Experienced teachers who have used pre-planned units in the field may elucidate if there are benefits or concerns. Encouraging teachers and educators to share experiences regarding pre-planned and unplanned thematic unit instruction could provide in-depth insights to scholars regarding the best selection and implementation practices of thematic units.

The next portion of this study entails research methodology to explore preschool and kindergarten teachers' experiences and opinions using pre-planned or unplanned thematic units before beginning a school year in one specific, large international kindergarten in Germany. A phenomenology study was chosen to explore the following research questions 1.) What are preschool and kindergarten teachers' experiences and opinions when implementing pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany? 2.) What are the preschool and kindergarten teachers' planning methods when using pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

The role of the researcher, research procedures, population, sampling, recruitment, participation, instrumentation, data collection, preparation, and analysis are included within the research methodology. The qualitative methodology for the study aimed to collect opinions of preschool and kindergarten teachers who have experience using planned or unplanned thematic units. Analyzing teachers' thoughts and experiences using thematic units may help future educators weigh the effectiveness of pre-planning thematic units. Utilizing a descriptive and analytical study will help scholars obtain in-depth insights from educators in the field to comprehend better beliefs, experiences, attitudes, and interactions of working with themed units. Qualitative research will support authentic opinions and experiences expressed by the staff (Harrison et al., 2017).

Chapter 3: Methodology

Contextual thematic unit instruction is an effective early childhood teaching form (Wardani et al., 2020). Planning a curriculum with contextual, thematic instruction and materials helps deliver lessons more meaningfully (Wardani, 2020). Pre-planning thematic units before the school year begins may better prepare preschool and kindergarten teachers when planning instruction, preparing materials and supporting diverse preschool and kindergarten students to achieve developmentally appropriate learning goals.

The problem is that some preschool and kindergarten teachers do not promote pre-planning thematic units before a school year begins, which, in turn, results in a wide discrepancy between elementary school staff and the methods for choosing thematic units (Zin et al., 2019). The background of the problem is that teachers have a diversity of understanding, planning, and implementing thematic teaching (Zin et al., 2019). The extent of the problem is that some teachers are keen to pre-plan thematic units before a school year begins despite studies showing that thematic units could be best selected by the student's interest and inquiry (Anitah & Suryani, 2018; Retnawati et al., 2017). The purpose of this qualitative phenomenological study was to investigate preschool and kindergarten staff's attitudes, opinions, beliefs, and experiences about pre-planned and unplanned thematic units in a kindergarten center in Germany. The research questions used to target this study were as follows:

Research Question 1: What are the preschool and kindergarten teachers' experiences and opinions when implementing pre-planned and spontaneous thematic units at one specific, large international kindergarten in Germany?

Research Question 2: What are the preschool and kindergarten teachers' planning methods when using pre-planned and unplanned (spontaneous) thematic units at one specific, large

international kindergarten in Germany?

A qualitative, descriptive, and interpretive phenomenology study had been designated to explore the research questions. The role of the researcher will be expressed, including the research procedures, population, sampling, recruitment, participation, instrumentation, data collection, data preparation, and data analysis. Strategies to establish reliability and validity were stated, and ethical procedures were considered when administering the research study.

Research Design and Rationale

The methodology for this research study was qualitative to gather the experiences and opinions of preschool and kindergarten teachers who have used planned or unplanned thematic units. A qualitative study helped retrieve in-depth insights from the participants and focus the research query as a humanistic approach. It was used to understand participants' beliefs, experiences, attitudes, behavior, and interactions. Using qualitative research, authentic experiences and opinions were expressed, documented, and analyzed (Harrison et al., 2017).

A phenomenological study allowed deep, multi-faceted explorations of complex issues in real-life settings. It was advantageous to employ when there was a need to comprehensively appreciate an issue, event, or phenomenon of interest in its natural, real-life context (Van Manen, 2017). A qualitative, descriptive, and interpretive phenomenology design was chosen for this study. Descriptive phenomenology explores and describes the lived experiences of individuals. Interpretive phenomenology examines the contextual features of an experience in connection to other influences, for example, culture, gender, employment, or the well-being of people experiencing the phenomenon (Matua & Van Der Wal, 2015). Compared to other qualitative research designs (such as a case study, ethnography, and grounded theory), a phenomenology design was chosen to explore this topic.

Fundamentally, a case study focuses on a single incident, event, organization, or individual

over a period of time (Harrison et al., 2017). A case study facilitates a detailed investigation. On the other hand, a phenomenology study aims to study many participants' subjective, lived experiences and perspectives. To better understand teachers' opinions and beliefs about using planned or unplanned thematic units, probing and gathering a more comprehensive range of feedback was essential. A wider range of feedback for the study was captured using a more significant number of teacher and educator participants to gain a plethora of viewpoints (Van Manen, 2017). An ethnography study provides direct access to the culture and practices of a group, and it is a valuable approach for first-hand studying the behavior and interactions of people within a particular context (Hammersley, 2018). Ethnography seeks to build a description of an event or social situation primarily through observations (Hammersley, 2018). However, this phenomenology study aimed to investigate the experiences and opinions of teachers and educators who have beliefs that may differ from one another regarding a particular context, for example, why one would prefer using planned thematic units versus unplanned thematic units. This study aimed to gain deeper insights into a participant's thoughts and opinions, which required probing the participants with questions to focus on individuals' lived experiences (Van Manen, 2017). A grounded theory study was not a feasible study design, as grounded theory sets out to construct theory from data, which is then systematically gathered and analyzed. The grounded theory seeks to build a theory of an occurrence in a particular context (Dougherty, 2017). Phenomenology seeks to provide a close reflective understanding of social relations focusing on various individuals and their experiences (Van Manen, 2017). A phenomenology study examined the research questions through various lenses to divulge multiple facets of the phenomenon (Harrison et al., 2017).

The qualitative phenomenology design for this study had advantages and anticipated benefits. The advantages were appropriate for connecting with the research context, as participants in the

sample had experienced the common issues associated with teaching preschool and kindergarten students with or without pre-planned thematic units. Unlike experimentation, in a qualitative phenomenology study, contextual conditions were not defined or controlled but instead a part of an investigation. The anticipated benefits were that participating subjects could reveal first-hand experiences to answer the research questions best and provide unrestrained, free responses for the research in a less threatening way. There were no planned issues with time, resources, or practical restraints in gaining responses from available participants.

Role of the Researcher

My role as a researcher was to be an investigator in this study. I did not participate in the study as a participant or persuade participants to answer questions in a particular way. I am a teacher who works in the same school building as the other staff members. Staff working in the same classroom as myself did not participate in the study. Currently, staff within the school share various thoughts and opinions about the topic to be researched, many without one particular shared belief. There are no ethical issues or possible conflicts of interest between myself and potential research participants. A conflict of interest is a situation in which personal considerations can compromise or bias professional judgment (Rossfeld et al., 2020). There were also no conflicts of interest due to dual roles within the school. Incentives such as compensations, which could include anything offered to participants, monetary or otherwise, to encourage participation in the research, were not provided.

Data was collected in an ethical, safe and organized format to maintain reliability and validity of the data. Participants' data were collected, numbered, filed and stored in a secure location without participants' names. Participants signed informed consent.

To construct trustworthiness, validity, and content validity, the test instrument was created to measure the concept that it was intended to measure and completely represent what it aimed to

measure (Rahardja et al., 2019). Interpretations and conclusions of the data were protected using professional, ethical protocols such as confidentiality, citation, and data integrity. For reliability, consistency was maintained using the same research instrument and research questions for all participants. The study was also under the guidance of the study professors. If any issues concerning using participants in the same school where I work arose, the study participants could issue any comments, questions, or concerns to myself or the school headmaster to seek assistance. An honesty and integrity agreement was drafted to support the study (Appendix A).

Research Procedures

A specific population and sample selection were chosen for this qualitative phenomenology study. Suitable research instrumentation was selected to elicit participants' experiences and opinions on the study topic, and proper data collection and preparation procedures were utilized. Appropriate recruitment and participation measures were implemented while making professional connections with the school location site, headmaster, and participants.

Population and Sample

The total teaching staff population at the research site location was 50 preschool and kindergarten teachers. This study's target population comprised 50 preschool and kindergarten teachers who have taught in one specific, large international kindergarten in Germany. The sample population was 15 preschool and kindergarten teachers. Using this target and sample population for the study helped capture a vast quantity of feedback from various participants. The number of participants was an appropriate sampling, as data gathered from the participants supported this study with a substantial amount of reliable information (van Rijnsoever, 2017). The study was proposed to obtain 15–20 participants during a full staff meeting within the school. I used information from the recruitment letter as a script to explain the purpose and scope of the study during a staff meeting (see

Appendix B), which was read aloud to find participants. A convenience sampling method was used for this study. Convenience sampling is a method where investigators enroll subjects based on their accessibility (Elfil & Negida, 2017). Therefore, participants who met the eligibility criteria were selected based on their availability and willingness to participate in the study. Although convenience sampling is a non-probability method, convenience sampling is the most valid and commonly used method in research (Elfil & Negida, 2017). This method was quick, inexpensive, and convenient, as sample elements were selected according to their convenience, accessibility, and proximity (Elfil & Negida, 2017).

Using pre-planned and unplanned thematic units within the school's curriculum design has been an ongoing debate within the selected study location. The participation criteria for participants included professional teachers and educators who have worked with students between the ages of one year to six years, who have experienced pre-planned and unplanned thematic units, and who have taught within the school. Teachers and educators who have not worked within the school, have not worked with students between the ages of one year to six years, and did not have experience using thematic units were not permitted to participate in the study.

To help recruit participants, an email was sent to the school's headmaster to explain the phenomenology study design and ask for permission to conduct the study within the school. Permission was granted at the site (see Appendix C). A formal permission letter was also shared with the headmaster (see Appendix D). An informed consent letter to be filled out by the participants for participating in the study was proposed and shown to the headmaster (see Appendix E). The informed consent letter upheld ethical procedures for research outlined in the Belmont Report (Paxton, 2020). The study was presented to preschool and kindergarten staff to seek volunteer participants during a full staff team meeting.

After the participation proposal, interested staff signed up to participate in the study by offering an email address. A recruitment letter was emailed to interested participants. The recruitment letter included the study's description, purpose, and rationale. An informed consent document was included in the recruitment letter—the informed consent letter clarified participant protection and confidentiality during the proposed study. Lastly, an online, open-ended questionnaire and follow-up interview appointment using Google Docs were included in the email with an easy-to-access link for the participants to click and complete (see Appendix F).

To begin the research procedures for this qualitative phenomenology design, a recruitment letter was disseminated to teachers and educators within the German international school. The study aimed to comprise 15–20 preschool and kindergarten teacher participants who wanted to participate voluntarily. The study involved online questionnaires and face-to-face interviews (for example, using Google Meet), which was most convenient for participants during the site location's lockdown circumstances due to the COVID-19 pandemic. Participants were invited to participate in the research because of their experience as a teacher or an educator who could contribute much knowledge to this subject, which meets the criteria for this study. The participation criteria included professional teachers and educators who have worked with students between the ages of one year to six years, experienced both pre-planned and unplanned thematic units and taught within the German international school.

Instrumentation

The study participants were asked to fill in an online, open-ended questionnaire with Google Docs (see Appendix F) and participate in a follow-up interview (see Appendix G). The questionnaires and interviews aimed to gather preschool and kindergarten teachers' overall thoughts, experiences, and opinions using pre-planned or unplanned thematic units. The research instruments aligned with

the research questions, as the aim was to elicit direct inquiries about using pre-planned or unplanned thematic units.

When collecting phenomenological data, one should be as non-directive as possible (Waters, 2016). In this phenomenological study, participants were asked to depict their experiences authentically without having any use of directing or suggesting their descriptions. Participants were asked to give full descriptions of their experiences based on the open-ended questionnaire questions and interview, connecting to thoughts, feelings, memories, and a portrayal (Waters, 2016). The research instruments used a questionnaire and interviews in an open-ended format. This allowed participants to voice their mindsets and notions freely. The questions were not based on pre-determined responses and allowed participants to articulate their unique perceptions (Krosnick, 2018). Using phenomenological articulation, a depiction from a free perspective effectively brought forward needed information. The questions drafted for the questionnaires and interviews were created using questionnaires and interview examples from studies containing the same subject theme as a guide. To improve efficacy, questionnaire and interview designers should review questions from earlier surveys before writing their own (Krosnick, 2018).

The questionnaires and interviews were completed during the 2021–2022 school year at the chosen German international school site. The online, open-ended questionnaire duration spanned approximately 10–15 minutes. The follow-up interview took longer—approximately 45 minutes to one hour, depending on how much information the participant wanted to share. The questionnaires and interviews prompted the participants to share personal and confidential information. If a participant felt uncomfortable talking about some of the topics, then the participant did not have to answer the questions.

The questionnaires and interviews were created with content validation of three Subject

Matter Experts (SMEs) in Early Childhood Education. The SMEs have supported the study and had been chosen for it as each had degrees in Early Childhood Education, experience and expertise in teaching children between the ages of one and six, and have used thematic units. An email invitation was created for each SME to ask for their comments and criticism about the questionnaire and follow-up interview questions (see Appendix H). A draft of the proposed questionnaire and interview questions for criticism and feedback was provided to each SME. Each SME's recommendations to improve the questionnaire and interview were taken into account and used to support the final questionnaire and interview best to be given (see Appendix I). SMEs' input was considered when creating the final questionnaire and follow-up interview (see Appendices J and K).

Data Collection

For data collection, the contribution of 15 preschool and kindergarten teachers from one specific, large international school in Germany was used to fill out a questionnaire and conduct an interview. The English language was used throughout the research process within the questions and answers of the questionnaires and interviews. The teachers' interpretations of the events having pre-planned thematic units and/or using unplanned thematic units were gathered on the online questionnaire using Google Docs (see Appendix I). The follow-up questionnaire (see Appendix J) was administered. The audio during a face-to-face meeting conducted at one specific, large international school in Germany was recorded through a 45-minute to the one-hour online video conference call using Google Meet. Google speech-to-text feature was used for transcription.

Participants who did not wish their interviews to be recorded were not allowed to participate in the study. Using an open-ended questionnaire and follow-up interview elicited unique responses from the participants and avoided bias, which could result when suggestive responses are provided (He, 2021). I also created an honesty and integrity agreement (see Appendix A) to support ethical

procedures during the research process.

Participants completed the questionnaire, returned it when complete, and included extra thoughts during the follow-up interview. A deadline was given to participants to help support a timeline for the study. Finished questionnaires and interview data were downloaded, printed for data preparation and saved. After participants finished the questionnaires and interviews, each questionnaire and interview was kept anonymous by removing participants' names and replacing the names with numbers. Once the questionnaires and interviews were numbered, the documents were saved confidentially in a portable file and locked within a desk, as mandated for three years, as per the recommendation from the Institutional Review Board (Hantke, 2020). Once the study is published, the participants can be given access to the study's results. After three years from publication, the questionnaires and interviews will be destroyed using a paper shredder. While there was no direct financial benefit to the participants, participation will help scholars discover more about the benefits and drawbacks of pre-planned and/or unplanned thematic units.

Information about the participants' names or anything related to the participants outside the scope of the study was not shared. During the defense of the doctoral dissertation, the data collected was presented to a dissertation committee. The data collected is stored in a locked and secure location at a private home that is not assessable by outside parties. Any information about the participant is coded and does not have a direct correlation to any factoids that directly identify the participant. Numbers identify the questionnaires and interviews within the study.

Participation was voluntary. At any time the participant wished to end involvement in the research study, the participant could do so without facing repercussions. At all times, participants could refuse or withdraw their contributions. If participants had any questions about the study, then the participants could ask such questions at any time. The research plan was reviewed and approved

by the Institutional Review Board (IRB) of the American College of Education.

Once participants finished the questionnaires and interviews, a formal thank you letter was emailed to each participant. The results will be offered to the participants through an executive summary. At the end of the research study, the results can be published so other interested people may learn from the research.

Data Preparation

Qualitative research needs to be prepared for data analysis. Research needs careful planning and a systematic implementation arrangement (Harrison et al., 2017). The data from the questionnaires and interviews were collated into an easy-to-read format. Data preparation for this study comprised of the following steps: (a) Print and number all collected questionnaires and interviews; (b) file each questionnaire and interview in number order within a portable binder; and (c) organize the data given on each questionnaire and interview into an MS Word document using manual coding procedures for data analysis (see Appendix L). Specific coding procedures helped organize all elicited responses from the participants. Each response was recorded and valued for the study findings. This format helped during the data analysis portion of the study to support finding similarities, differences, and unique responses from the participants.

Data Analysis

To facilitate thorough data analysis, data from each questionnaire and interview was read and examined to find similarities, differences, and unique responses. This examination provided information on common themes, discrepancies, and noteworthy details using a manual, thematic coding plan designed. A thematic coding plan is an arrangement that logically links the data to a series of propositions, and an interpretation of the subsequent information was delivered for the study. For example, the subject organized the question’s answers during the study's data preparation

stage. The practice of manually coding the data was decided for this qualitative case study, as there could be fewer errors in correlating data with human coding than with mechanical coding techniques (He, 2021).

A manual coding analysis helped organize participants' responses. Completing an analysis helped support the research to understand better what drives teachers' attitudes, opinions, beliefs, and experiences about pre-planned thematic units. Coding procedures helped systematically organize and understand data by using codes as the essential elements of labeling and organizing datasets (Allen, 2017; Elliott, 2018). This process was performed by linking data and synthesizing the information into categories. Manual coding was conducted by marking up hard-copy printouts of the questionnaires and interviews. Manual coding involved circling, highlighting, bolding, underlining, and/or coloring significant and prominent quotes and themes. This procedure aimed to find repetitive patterns and consistencies in the data. During the coding process, cognitive and emotional feelings were targeted. This data analysis process included deconstructing the questionnaire and interview answers and seeking similar, different, and unique themes. The process helped understand and synthesize the data to link new ideas. Subsequently, the data was created visually to share the findings.

To display data, a textual analysis was done from the questionnaires and interviews to extract and examine data, derive patterns, and finally interpret the data. A hierarchical coding frame helped organize codes based on how they related to one another (Allen, 2017). The top-level code describes the topic- Exploring Thematic Unit Planning. The mid-level codes specify "Pre-planning Thematic Units before a School Year Begins" and "Not Pre-planning Thematic Units before a School Year Begins." The third level codes state whether the sentiment has benefits (positive) or drawbacks (negative). A fourth level of codes shows details of the benefit or drawback attributes or the specific

themes associated with the attributes. Hierarchical coding frames were used to quickly read the gathered data, as they were organized into a simple tree-like structure to showcase multi-level modeling (Allen, 2017). Using hierarchical coding frames for the presentation of data along with a summary of collected research, and comparing the data to other research findings, supported the exploration of the study.

Reliability and Validity

Several procedures were used to establish the qualitative study's trustworthiness, reliability, and validity. To establish credibility, the research findings needed to be linked to reality to demonstrate the truth behind the findings (Korstjens & Moser, 2018). Triangulation was done to create credibility. Triangulation involves using several methods, data sources, observers, or theories to secure a complete perception of the phenomenon being studied. Triangulation was used to ensure that the research findings were robust, comprehensive, and transparent. This study used a triangulation of sources to safeguard credibility. Triangulation involves using diverse data sources within the same method, for instance, comparing people who host different perspectives.

Data saturation supported reliability and validity. Data saturation was obtained when there was sufficient information to replicate the study findings, when the potential to obtain new information had been attained, and when additional coding was no longer possible. The most common way to employ the saturation criterion was to create a semi-structured research instrument with open-ended questions. The types of responses and repetitions were recorded. The saturation point was found when no new information or themes were recorded (Nascimento et al., 2018).

Credibility is the confidence that can be derived from the truth of the research findings. Credibility ascertains whether the findings represent conceivable information drawn from the participants' original data and whether it is a correct analysis of participants' original views

(Korstjens & Moser, 2018). Transferability pertains to situations wherein the results of qualitative research can be transferred to other contexts with other respondents. Transferability supports credibility when scholars use thick descriptions to create accounts (Korstjens & Moser, 2018).

Member-checking was also performed to support trustworthiness. Member-checking was another technique leveraged in qualitative research to establish credibility (Korstjens & Moser, 2018). After participants shared their questionnaire and interview answers and data were analyzed and placed into a presentation, the data, interpretations, and conclusions were shared with the participants and checked to ensure the validity of the content. By sharing the data interpretations, participants were allowed to clarify their intentions and correct any errors that could have been made (due to misinterpretation or misunderstandings). Furthermore, the participants could provide additional information if required.

Validity was ascertained by comparing the outcomes to other relevant data and theories correlated with planning contextual thematic units. For ascertaining construct and content validity, the test instrument was created to support the understanding that it was intended to measure and fully represent what it aimed to measure (Rahardja et al., 2019). The study was also under the guidance of the study professors. If any issues arouse, the study participants could issue any comments, questions, or concerns to the school headmaster or me to seek assistance.

Dependability was also created when findings were stable over a time period. Dependability involves participants' evaluation of the study's findings, interpretation, and recommendations such that the evaluation can be supported by the data received from the study participants (Korstjens & Moser, 2018). Confirmability can be taken into account as well. Here the findings of the study could be confirmed by other study researchers. Confirmability was ensured when data and explanations of data findings were not fake and unrealistic but were derived from the given data (Korstjens & Moser,

2018).

Reflexivity was maintained to support ethical procedures. Reflexivity is the process of critical self-reflection about oneself as a researcher. Critical self-reflection is essential so one does not hold biases, preferences, or preconceptions which may impede a researcher's relationship to the research (Korstjens & Moser, 2018). The practice of reflexive journaling was used within this study to answer the questions generated while conducting the study and maintain critical self-reflection (Meyer & Willis, 2019). Using a journal also supported trustworthiness in presenting ideas, thoughts, and feelings and increased awareness about bias-related issues.

Ethical Procedures

Data was protected using professional, ethical protocols such as confidentiality, citation, and data integrity. Arrangements and procedures were made in the research to protect the participants. Potential participants received an informed consent document through email before the study started and were asked to sign the included informed consent form (see Appendix E). Participants signed the informed consent, and their data was collected and numbered to maintain anonymity. Any information about the participants was anonymous, coded, and does not have a direct correlation to the participants, thereby preventing direct identification of the participant. Each questionnaire and interview were numbered. After questionnaires and interviews were numbered, the documents were saved confidentially in a portable file and locked within a desk, as mandated for three years, as per the recommendation by the Institutional Review Board (Hantke, 2020). After three years from publication, the interviews will be destroyed (Hantke, 2020).

Legal requirements for human subjects' protection and related ethical guidelines were followed for this study using the three principles of the Belmont Report: 1) respect for persons, 2) beneficence, and 3) justice (Earl, 2020). All letters, forms, and instruments pertinent to IRB review

and approval were attached to the study. Data is confidential through appropriate storage, controlling dissemination, and restrictive access. Each administered interview can be obtained during this time by IRB to review to help gain trustworthiness and enhance validity (Hantke, 2020). There are no proposed ethical issues related to research in the target site, conflicts of interest, or authority differentials (Hantke, 2020).

Chapter Summary

This qualitative phenomenology study has been designated to explore the research questions using robust procedures such as appropriate population sampling, recruitment, and participation methods. Methods for population sampling included convenience sampling. Recruitment was done at one specific, large international school in Germany.

Participants were asked to contribute to the study by hosting specific criteria—experiences working with children between the ages of one to six years and teaching thematic units in a German school. The study instrumentation comprised an online, open-ended questionnaire and interviews, which posed questions to preschool and kindergarten teachers and educators about their experiences and beliefs about planning thematic units in preschool and kindergarten. Data collection involved gathering all questionnaires and interviews, numbering the documents and manually coding the data for meticulous data preparation and analysis. Data analysis entailed examining the data to find similarities, differences, and unique responses. Appropriate measures were taken to professionally care for all participants included in the study regarding consent forms. Adherence was maintained to strategies to establish reliability and validity, and ethical procedures were considered when administering the research study.

The subsequent portion of the study presents research findings and data analysis results. The number of participants, timeframe, and responses were stated for data collection. Intervention fidelity

was described. Data analysis and study results were declared. Data analysis described how data was secured, prepared, sorted, categorized, coded, and searched for themes. The results were organized by the research questions and themes and supported by specific representative data (for example, quotations from the questionnaires and interviews). The success of reliability and validity were described using credibility, transferability, dependability, and confirmability.

Chapter 4: Research Findings and Data Analysis Results

The purpose of this qualitative phenomenological study was to investigate preschool and kindergarten staff's attitudes, opinions, beliefs, and experiences about pre-planned and unplanned thematic units in a kindergarten center in Germany. Current thematic unit planning research highlights a need to better support teachers with effective unit planning strategies (Nurlaela et al., 2018; Saleha & Shakerb, 2021; Xoshimova, 2020). Early childhood education staff use various planning techniques to apply thematic units in preschool and kindergarten (Nurlaela et al., 2018). Selecting and utilizing pre-planned thematic units before the beginning of a school year or not selecting pre-planned units and creating more spontaneous units based on students' interests is in question.

Differences between preschool and kindergarten staff's planning and instructional techniques are frequent in terms of how best to integrate thematic units into early years' classrooms (Demetriou, 2020; El-Henawy, 2019; Hollingsworth & Vandermaas-Peeler, 2017; Lin et al., 2021; Pettersson, 2017; Retnawati et al., 2017; Shideler, 2016; Sollome et al., 2018; Szecsi et al., 2017; Wardani, 2020; Zin et al., 2019). Differences in instructional techniques can stem from educational staff's diversity in education, culture, or personal teaching styles. Specific pre-planned thematic units can be administered to some school staff at the beginning of a school year. Pre-planned units may help staff best organize, collaborate, and prepare instruction. Other staff may not want pre-planned themed units to be administered at the beginning of a school year. Some teachers may first explore students' interests during free play. Subsequently, spontaneous units could be created after teachers observe one or many students' interests. The preschool and kindergarten staff may disagree on selecting the best, implementing, and executing thematic units. This predicament raises the question of how and when thematic units should be selected, delegated, and organized and how preschool and

kindergarten staff can agree on a school-wide standard for planning (considering students' interests and diverse learning needs). The predicament also questions how teachers can find adequate time to plan and build integrative thematic unit lessons and materials.

Curriculum coordinators and staff could decide on an agreed-upon method for selecting thematic units to best instruct students and achieve academic success and learning objectives (Kloos et al., 2018; Zin et al., 2019). The problem is the conflicting thematic unit design approaches within preschools and kindergartens (Xoshimova, 2020). Many public German preschools and kindergartens do not pre-plan student learning and instead follow the interests of their students. Without pre-planned scope and sequence for thematic unit designs, the curriculum coordinators may find difficulties tracking the content that students in grade levels learn and how well students meet grade-level learning objectives.

This qualitative phenomenological study explored preschool and kindergarten staff's attitudes, opinions, beliefs, and experiences about pre-planned and unplanned thematic units in a kindergarten center in Germany. By discovering teachers' thoughts and experiences about using or not using pre-planned thematic units, future researchers can better understand the differences between planning strategies used for children's learning and the importance of an effective classroom lesson design. Thorough research on this topic has been completed at a specific international early childhood center in Germany. Preschool and kindergarten staff have had the opportunity to share their thoughts using pre-planned and unplanned (spontaneous) integrative thematic units. Data collection and analysis have been performed for the research study. The reliability and validity of the study were expressed, and the conclusion of the research findings was presented. This qualitative phenomenology study aimed to explore preschool and kindergarten teachers' attitudes, opinions, beliefs, and experiences about pre-planned thematic units at an international early childhood center in Germany. The

following research questions were explored:

Research Question 1: What are the preschool and kindergarten teachers' experiences and opinions when implementing pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Research Question 2: What are the preschool and kindergarten teachers' planning methods when using pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Data Collection

To gather data for the research study, 15 educational staff members from a specific international early childcare center in Germany participated and shared their viewpoints. The criteria for participation were as follows: participants must have been 18 years of age and a current or former employee from the specific international early childcare center. They must have had the experience of using pre-planned or unplanned (spontaneous) integrative thematic units. Using online questionnaires from Google Forms and face-to-face follow-up interviews at the site location helped elicit data to answer the research questions.

Before participants engaged in the research study, they could read and sign an informed consent document. Participants informed consent, online questionnaires, and face-to-face interviews were completed, scanned, printed, and saved in a secure location to be accessed. The time frame in which the data was collected spanned 3–4 weeks. Each online questionnaire was estimated to span 10–15 minutes or more, depending on each participant's needs. Face-to-face interviews spanned 45 minutes to one hour, with the data being transcribed using Google speech-to-text transcription on the data collection sheet. A few participants could not arrive at the site location (due to the COVID-19 pandemic). In this case, a Google Meet was created, and face-to-face interviews were conducted

online with virtual meetings.

Data Analysis and Results

All questionnaires and face-to-face interview information were read to identify similar, different, or unique responses for the methodical data analysis using data coding. Data coding procedures support categorizing and arranging information by codes to label datasets (Allen, 2017; Elliott, 2018). This inspection provided findings on similar themes, disagreements, and striking details. A combination of hierarchical and thematic coding was used for the data analysis.

Hierarchical coding is based on the fundamental idea that coding is placed within a hierarchy, where layers are formed to express granularity (Saldaña, 2021). To organize and display the data, a hierarchical coding frame was created. A tree-like hierarchical coding frame was used for multi-level discoveries within the research data. A hierarchical coding frame displays how codes link and connect (Allen, 2017). A top-level code explains the main topic.

In this study, third-level codes showcase the benefits (positive) or drawbacks (negative) of using pre-planned and unplanned thematic units. Fourth-level codes show explicit details of the benefits and drawbacks of each third-level code's attributes. On the other hand, mid-level codes express varying views from the top-level code.

To explain the coding process in better detail, the top branch of this study's hierarchical coding frame tree comprised the exploration of planned and unplanned (spontaneous) thematic units. The second layer was divided into two areas: preplanning thematic units before a school year begins and not preplanning thematic units before a school year begins. The third layer of the tree was divided into four areas (two for each branch prior), expressing the benefits and drawbacks of pre-planned and unplanned thematic units. The final layer of the hierarchical coding frame tree states the details of each benefit and drawback derived from the participant's information. All participants were

offered the opportunity to express the benefits and drawbacks of pre-planned and unplanned thematic units.

Thematic coding is a particular form of analysis used for qualitative studies, which involves identifying excerpts of text that link to common themes (Gibbs, 2007). Data collected for this study was disseminated, analyzed, then connected by coded themes and synthesized into subject categories by marking up hard copy printouts of the questionnaires and face-to-face interviews. The thematic coding plan utilized logically linked data to the declared propositions, and the data was elucidated. Each question answered within the study was classified by a themed subject (pre-planned or unplanned thematic units). Highlighting, bolding, underlining, and color-coding pertinent information supported analysis, such as emotions and feelings about the subject matter. Example coding themes found during the research analysis were planning time, preparing resources, stress, and student interest.

Tables for General Information

Tables 1 and 2 list general information about the specific International Early Childcare Center in Germany used for the study and the general information about the participants who participated in the study working or have worked within the specific International Childcare Center.

Table 1

General Information—Specific International Early Childcare Center in Germany

Characteristic	Description
Location and Type of School	Germany, urban, internationally accredited, full-day child care center
Approximate Age & Number of Students	Children 1-6 years of age 350 students
Approximate Number of Staff	50
Number of Grade Levels and Students per Grade and Class	Five grade levels, unmixed ages, approx. 60 students per grade, 15–20 students per class
Staff Nationalities	Staff come from North America, South

	America, Europe, Asia, Africa, and Australia/Oceania
Student Nationalities	Students come from North America, South America, Europe, Asia, Africa, and Australia/Oceania

Table 2

General Overview of Participants who Work at or have Worked within the Specific International Early Childcare Center in Germany

Characteristic	Sample
Current Job Titles	4 Kindergarten Teachers/Educators (students aged 5–6) 2 Preschool Teachers/Educators (students aged 4–5) 2 Preschool Teachers/Educators (students aged 3–4) 2 Nursery 2 Teachers/ Educators (students aged 2–3) 1 Nursery 1 Teachers/Educators (students aged 1–2) 1 Assistant Principal for Early Years Curriculum 1 Teacher/Educator on maternity leave (Kindergarten and Primary) 1 Assistant Principal for Primary Students 1 Teacher/Educator on sabbatical (Primary)
Years working in Early Childhood Education	2, 4, 5, three stated 7 years, 8, 11, 12,13, 17, 19, two stated 20 years, 22
Nationalities	4 Americans, 1 American/German, 1 British/German, 1 Canadian, 2 German 1 Irish/Australian, 1 Italian, 1 Kenyan, 3 New Zealanders/Australians
Current Teaching Grade Levels	4-0, 3 Kindergarten, 2 preschool (ages 4–5), 2 preschool (ages 3–4), 2 Nursery (ages 2–3), 1 Nursery 1 (ages 1–2), 1 Grade 1
Ages	25, 29, 30, 31, 34, two 35, two 42, two 43, 45, two 46, 50
Genders	15 Females
Highest Educational Degree and Country where the Degree was Obtained	1 Technical College Entrance Qualification, Germany 1 Diploma in Childcare and Early Education, Germany 1 Educator Training, Kenya and Germany 2 State Approved Educators, Germany 1 Bachelors of Education (Early Childhood) United States of America 2 PGCE Sunderland, United Kingdom 2 Bachelors of Education (Early Childhood), Australia 1 Bachelors of Education (Early Childhood), United States of America 1 Bachelors of Science Education, United States of America 1 Masters of Education, Spain 1 Masters of Special Education, Australia 1 Masters of Special Education, United States of America

Tables for the Hierarchical Coding Frame used for the Research Study

Tables 3 and 4 showcase the hierarchical coding frames. These are used for coding the research data and the themes. Codes were found within the hierarchical coding frame and used to code the research data.

Table 3

Hierarchical Coding Frame Tree used for Coding Research Data.

Exploring Planned and Unplanned (Spontaneous) Thematic Units			
Preplanning Thematic Units before a School Year Begins		Not Preplanning Thematic Units before a School Year Begins	
Benefits	Drawbacks	Benefits	Drawbacks
Details of Benefits	Details of Drawbacks	Details of Benefits	Details of Drawbacks

Table 4

Examples of Themes and Codes found in the Hierarchical Coding Frame used to Code Research Data

Exploring Planned and Unplanned (Spontaneous) Thematic Units			
Preplanning Thematic Units before a School Year Begins		Not Preplanning Thematic Units before a School Year Begins	
Benefits: Planning time	Drawbacks: Lack of student interest	Benefits: Flexibility with lessons	Drawbacks: Staff stress
Details of Benefits: Planning time is effective when given unit themes in advance	Details of Drawbacks: Student interest may not be accounted for when adults preselect unit themes	Details of Benefits: Teachers have more flexibility in their day when lessons are not pre-planned before	Details of Drawbacks: Staff may feel stress not having pre-planned units ready ahead of time

Research Study Findings and Details

This qualitative phenomenological study aimed to explore preschool and kindergarten staff's attitudes, opinions, beliefs, and experiences about pre-planned and unplanned thematic units in a kindergarten center in Germany. By exploring kindergarten staff's perspectives and experiences about pre-planned and unplanned thematic units, insights can be found to support the study's research questions. The following research questions were explored for the research study:

Research Question 1: What are the preschool and kindergarten teachers' experiences and opinions when implementing pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Research Question 2: What are the preschool and kindergarten teachers' planning methods

when using pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

During the Spring term in 2022 at a specific German International Early Childhood Center, various international school preschool and kindergarten staff members participated in the study. Participants were aged from 25 to 50 years old. Participants currently or recently held job positions throughout all levels within the school, from Nursery (ages 1–2 years old) to Kindergarten (ages 5–6 years old). Participants were educated from a variety of countries worldwide. Regardless of a staff member's age, education, experience, and current teaching level, all participants had varying viewpoints on the benefits and drawbacks of using pre-planned and unplanned thematic units. Table 5 shows all 32 coded themes within the research study.

Table 5

All Common Themed Codes found in the Data

Overall Benefits of using Pre-planned Thematic Units (Drawbacks of using Unplanned Thematic Units)				
Pre-planned units allow time for appropriate preparedness	Pre-planned units give secure thematic content and lesson plan design structures	Pre-planned units give a well-organized school-wide scope and sequence of thematic units	Pre-planned units make planning more straightforward	Pre-planned units help with lack of stress when planned in advance
Pre-planned units give a ready arrangement for learning content, goals, and objectives	Pre-planned units help teachers familiarize themselves with unit topics beforehand	Pre-planned units help better gauge time on how to plan the theme	Pre-planned units help topics not be repeated from grade level to grade level	Pre-planned units help planning to be easier for young or new staff, and substitutes

Pre-planned units help grade-level teams reflect on planned lessons	Pre-planned units help staff plan in advance for visitors, school trips, and so on.	Pre-planned units help staff better plan in advance for parent involvement	Pre-planned units help specialist teachers plan (art, music, etc.)	Pre-planned units help staff create a repertoire of ready materials.
Pre-planned units support easy preparation, storage, and reuse of materials	Pre-planned units help staff share resources among grade levels saving time and money	Pre-planned units help staff collaborate with grade levels for cross-level interactions	Pre-planned units help special student needs, and the use of special needs support staff	Pre-planned units support creating specific themed resources to accommodate diverse students

Overall Benefits of using Unplanned (Spontaneous Thematic Units)

(Drawbacks or Difficulties using Pre-planned Thematic Units)

Unplanned units can help staff avoid feeling overwhelmed with the use and creation of planning	Unplanned units help student's interests be the primary motivator to choose their units and reach objectives	Unplanned units help authentic learning opportunities be used in real-time
Unplanned units support student's inquiries and questions	Unplanned units can support students' interest and engagement in their topics	Unplanned units leave lots of space for spontaneity.
Unplanned units help staff not have to share planned themed topic resources	Unplanned units could alleviate an overload of planned thematic materials and resources	Unplanned units can leave flexibility to support what each student needs
Unplanned units alleviate stress for staff to record planning on technology	Unplanned units can keep topics' fresh' for the students year to year	Unplanned units may make working with diverse students easier with the flexibility

Participants in the study were encouraged to voice authentic opinions about the benefits they found using pre-planned thematic units. Table 6 showcases a few excerpts about the benefits of using preplanned thematic units. An example of the participant's answers is given in the left column, and an interpretation of the participant's answers is given in the right column.

Table 6

Excerpts about Overall Benefits in using Pre-planned Thematic Units

Participant Code	Interview Answer	Interpretation
11	"Pre-planned topics help focus on certain objectives and filter them. Research is thorough as the topic is known ahead of time. Exchange with colleagues is easier. Equipment and materials can be shared."	Pre-planned units can help staff organize thematic content with learning objectives, help staff know the content in advance, and an exchange with staff peers is easy for materials.
5	"Pre-planning thematic units gives educators the time and space to organize resources (such as parental involvement, learning materials, and field trips). Preplanning ensures educators have a calm opportunity to build, store and share resources with fellow colleagues without being rushed or in a moment of stress. Each has an equal chance to contribute."	Pre-planned units can help staff prep needed resources and plan for special parent support or field trips. Pre-planning can help minimize stress as the workload of planning preparation can be shared across a grade-level team.
6	"You can make sure that you have all of these areas covered (ESL, multiple intelligences and special needs) for these children with diverse needs."	Pre-planning helps support instructional decisions to best care for students with diverse learning needs.

Participants in the study were also encouraged to voice authentic opinions about the benefits they found using unplanned thematic units. Table 7 showcases a few excerpts about the benefits of using unplanned thematic units. An example of the participant's answers is given in the left column,

and an interpretation of the participant's answers is given in the right column.

Table 7

Excerpts about Overall Benefits of using Unplanned Thematic Units

Participant Code	Interview Answer	Interpretation
1	"It is good to have a rough idea, but one should not swear oneself to plans, especially when working in teams. Teachers and children work at their own pace. There are always rough factors, too—staff shortages, class absences, fire drills, weather, and so on. The schemes can sometimes also be very thorough and overwhelming. Teachers may feel they are paying more attention to checklists and charts and not seeing children as individuals."	Unplanned thematic units can support flexibility. Many unforeseen circumstances could disrupt the school day. Teachers should have the freedom to see students as unique learners and not be fixated on the planning, the objectives, and the checklists.
10	"Yeah, I also really like this because it gives you the opportunity to use children's interest in this specific moment, and that is like sometimes —it is worth gold when kids see what they are interested in, and you can just use that moment."	Unplanned thematic units help staff follow the student's interests. When the students are self-motivated in a topic, they may learn more in the moment.
4	"It was Raphael. I still remember, and he sat for hours working on this butterfly, sort of phases of the butterfly, and he just showed it in like just completely different ways than any other children and organized his thoughts."	Unplanned lessons allow students to explore their own interests and reach learning objectives in their own way. When lessons are unplanned, students may surprise their teacher with their processes and products.

The research questions have been answered by analyzing the participants' lived experiences, opinions and perceptions of using planned and unplanned thematic units.

Research Question 1: What are the preschool and kindergarten teachers' experiences and opinions when implementing pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Research Question 2: What are the preschool and kindergarten teachers' planning methods when using pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Research Question 1 has been answered by 15 participants, each giving detailed accounts of their experiences working with planned and unplanned thematic units. Each participant provided thorough details, expressing each planning method's benefits and drawbacks. Participants had many benefits with planned thematic units, such as having more time to prepare lessons in advance, building resources, ensuring better team collaboration, and a lack of anxiety planning. However, participants also found many positive factors for using unplanned thematic units, specifically using students' interests and having more flexibility with lesson designs.

Research Question 2 has been answered by 15 participants who expressed their planning methods focused on using planned and spontaneous thematic units. Participants noted that planning methods could significantly vary from teacher to teacher if there is no one agreed-upon unit selection approach for a school. If no preselected units are given to staff before a school year, then teachers have free reign on what they would like to offer their students regarding lesson content. Participants in this specific school used various planning methods from grade to grade to meet age-appropriate objectives. Some preschool and kindergarten staff used preselected units from management staff. Some staff used students' interests in their classes to plan their units. Using pre-planned or unplanned

thematic units has been flexible within the specific early childcare center and left to grade-level staff. The only requirement from the school's management team for unit planning is for all grade levels to plan within their grade level together and agree on 4–6 thematic units, which will be delivered to students at the same time during the school year.

When a school does not have a pre-determined selection process for thematic units, friction and conflict can be created between some staff. Friction between staff can result when employees need to work together. However, they have a different vision of how to embark on a planning design. Participants described disagreements among staff on which selection process is best—either pre-planned thematic units or unplanned thematic units spontaneously chosen by students. The dispute has created much discord among staff members over the past years within the specific school. Some staff wishes to prepare thematic units in advance to support quality lesson delivery. Other staff feels the students should be the prominent directors of choosing what they want to learn. Enabling students to lead their learning will improve their ability to achieve age-appropriate learning objectives.

Participants agreed that when grade-level staff deviates from an agreed-upon unit selection process, this can lead to problems with school teamwork and poorly executed class learning. For example, participant 5, in favor of preselected thematic units, exclaimed, "Those preselected units are saving grace for the year because if you do not (have them), then it is stressful." Participant 8 agreed, expressing, "We were asked to follow the interests of the children. Moreover, cover—and make sure you cover—all the objectives from the curriculum. But base them on the children's learning. And I felt this was much work. And I couldn't do anything beforehand. I had to wait till I found their interest, and then once I had the interest, I had to quickly come up with a plan that tried to incorporate everything into it—like math and science, everything. And I found it quite stressful."

Participant 1, in favor of unplanned thematic units, shared, "We have to make sure that

(lessons) tie into the children's real-life and day-to-day experiences. Lessons should always make these kinds of natural connections. That's the best. So that's how the children really learn." Participant 4 shared a similar standpoint: "Let it be messy. Childhood should be messy. That is a very hard mindset for us to have as teachers. It is not going to be this perfect box every day."

Regarding supporting students with ESL, multiple intelligences and special needs, many participants found pre-planned thematic units to be helpful and strategic in best supporting students' learning outcomes and success. On the other hand, many participants expressed a great need for students to lead lesson designs themselves and to ensure that students' interest was the motivating factor to achieve academic needs. Participant 12 and many other participants agreed that a mixture of pre-planned units administered at the beginning of a school year and the freedom to incorporate student interests would be beneficial. Many participants have stated there could be common ground found when there is flexibility to add student interests. Participant 12 stated, "I think an overarching theme is good, but then the teachers should have the ability and control to take it in the direction that they see fit based on the interests of their students."

Reliability and Validity

Specific procedures have been used for the qualitative study to establish trustworthiness, reliability, and validity. For credibility, triangulation has been administered by triangulating several data sources, observations, and theories to understand the studied phenomenon fully. The data results show that the research findings have answered succinctly and thoroughly expressed each research question.

Diverse data sources were taken by comparing feedback from participants with different opinions and perspectives on the subject matter. Data saturation was attained after gathering comments and opinions from 15 participants' online questionnaires and face-to-face follow-up

interviews. Sufficient information expressed many coding themes regarding the benefits and drawbacks of pre-planned and unplanned integrative thematic units. Data saturation was established after encouraging participants to answer open-ended questions. After responses and repetitions were recorded, the point of data saturation was found.

Member-checking was also used to support the trustworthiness of data. After each participant shared their thoughts and opinions, a transcribed MS Word document of each follow-up interview was created and sent to the participant. The participants were then invited to read through their transcribed interview content to check if everything stated had been appropriately interpreted. Each participant was allowed to correct or clarify any errors or misunderstandings.

Validity was provided by comparing the data to other relevant theories about planning contextual units. The test instruments were appropriately made to explore the content it was made to explore, enhancing construct validity and content validity. Enabling the study to be controlled under the supervision of the research study professors supports validity. Participants were encouraged to reach out to me, the school's headmaster, or the study chair, if any concerns arose.

During the study's research, a neutral standpoint was maintained, with no solid preferences or preconceptions that could steer the research data in a specific direction. Dependability and confirmability were also taken into account. Dependability was ensured when study findings were stable over the allotted time. Confirmability was created when the study findings were confirmed as authentic. Each participant's contributions have been shared with the dissertation chair throughout the research process. Finally, reflexivity was added to this study with the process of critical self-reflection.

Chapter Summary

A plethora of different standpoints was facilitated by listening to several participants'

perspectives about using pre-planned and unplanned thematic units. Listening to participants' perspectives helped find information to answer the study's research questions. The following research questions were explored:

Research Question 1: What are the preschool and kindergarten teachers' experiences and opinions when implementing pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Research Question 2: What are the preschool and kindergarten teachers' planning methods when using pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

The participants gave varying answers when asked about their thoughts and opinions using pre-planned and unplanned thematic units. Planning methods for each (pre-planned and unplanned units) for their preschool and kindergarten classes were described along with their lived experiences. Participants gave many examples of the benefits of pre-planning thematic units. These included "time to plan" and "prevents and alleviates stress." Grade-level teamwork and brainstorming were mentioned to help a lot. Participants stated, "Collaborative resources shared in specific locations within a school can also help immensely."

However, the data gathered during the thematic coding process also stated many benefits for unplanned (spontaneous) thematic units. Many participants found "following their students' interests " very important. Participants found much value in 'in-the-moment planning' (ITM) by using authentic learning experiences. Lastly, research participants shared that staff and students must be "passionate about the topic." Staff can find fun ways to introduce, expose, and share new topics with the students.

In conclusion, the staff stated the benefits of using pre-planned and unplanned, spontaneous

activities. Schools may offer security for staff with preselected, allocated thematic units. However, the allowance for planning to ‘get messy’ to follow students’ needs and interests is crucial too. The subsequent chapter will explore these research findings, interpretations, limitations, and recommendations. Implications for leadership will be expressed, and a conclusion for the study results will be presented.

Chapter 5: Discussion and Conclusion

The purpose of this qualitative phenomenological study was to investigate preschool and kindergarten staff's attitudes, opinions, beliefs, and experiences about pre-planned and unplanned thematic units in a kindergarten center in Germany. Within this early childhood center, the staff has had the experience of using pre-planned thematic units and unplanned (spontaneous) integrative thematic units. Differences in instructional methods among staff were prevalent, stemming from the staff's prior education, culture, personal teaching styles, or teaching preferences. Some staff value pre-selected and pre-planned integrative thematic units at the beginning of a school year. Integrating pre-planned units ahead of time can anchor a teacher's ability to organize materials, collaborate with colleagues, and prepare activities and lessons in advance. Other staff personnel found unplanned and spontaneous lessons best for early childhood students, stating that spontaneous lessons can be delivered following individual students' interests.

Preschool and kindergarten staff can disagree on selecting the best, implementing, and executing integrative thematic units. The problem is how and when thematic units should be selected, delegated, and organized throughout early childhood centers. Creating cohesive teams of staff and teachers who make unified decisions on a school-wide planning standard and consider student interests and diverse learning needs is in question. The following research questions have been explored:

Research Question 1: What are the preschool and kindergarten teachers' experiences and opinions when implementing pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Research Question 2: What are the preschool and kindergarten teachers' planning methods when using pre-planned and unplanned (spontaneous) thematic units at one specific, large international kindergarten in Germany?

Findings, Interpretations, and Conclusions

Findings from the study's research and data analysis confirm and expand knowledge from several stated points made in the peer-reviewed literature collected in Chapter 2. An analysis to interpret the findings and a connection to the theoretical framework used for this study have been created. The study is based on the brain-based learning theory (Caine & Caine, 1990) and the integrative thematic learning theory (Kovalik & Olsen, 2010). Participants in the study independently noted aspects of their work that align with the two theories and how the selection process of thematic units can promote successful learning.

A child's brain development is highly influenced by its environment, influencing the growth of social and emotional skills, physical skills and overall cognitive development (Jazeel et al., 2020). With its foundation in neuroscience, the brain-based learning theory supports the need for well-prepared and enriched learning environments for early childhood students (Caine & Caine, 1990; El-Henawy, 2019). Kovalik and Olsen (2010) complement the brain-based learning theory with the integrative learning theory, which emphasizes learning with thematic units and well-prepared instructional designs. Bridging together the brain-based learning theory and the integrative thematic learning theory marries brain/mind learning capabilities and intentionally enriched learning environments which can uphold three elements for effective learning a) students having a calm emotional atmosphere which can promote content alertness for learning; b) the immersion of new and multifaceted experiences; and c) the consolidation of learning with active brain processing (Kaufman et al., 2008). Participants in the study discussed aspects of these three elements within their

interviews when speaking about the benefits of pre-planned thematic units.

Benefits of Pre-planning to Support Learning Objectives

Interviewed participants expressed a wide variety of benefits of pre-selecting and pre-planning thematic units to support learning objectives. Themed codes found the benefits of pre-planned units led to the appropriate time for preparedness, certain thematic content and lesson plan design structures, a well-organized school-wide scope and sequence, and alleviated stress. Participants stated that pre-planned themes help staff prepare for learning content, goals, and objectives. Participants stated that lessons could be adequately prepared and executed once one knows the thematic concepts chosen in advance. Pre-planned themes help teachers familiarize themselves with the topic beforehand. When thematic units are pre-selected and pre-planned before a school year begins, staff school-wide can have a solid content base of thematic topics for children to learn. Pre-planned themes delegated school-wide also help topics not be repeated from one grade level to the next. The brain-based and integrative learning theories complement the notion that preplanned thematic units allow teachers to construct better-designed, enriched learning environments for healthy brain stimulation. With preplanned units organized and delegated in advance, teachers can feel at ease knowing their materials and resources are not only known ahead of time but are easily assessable if appropriately stored the year before.

Several researchers have agreed with these findings, stating that well-prepared thematic instruction using strategic themes can serve as a vital blueprint for lesson delivery to students (Ashokan & Venugopal, 2016; Chumdari et al., 2018; Kovalik, 2014; Wardani, 2020). Many participants agreed with the research findings, stating that the first step when implementing thematic instruction is to pre-select age-appropriate themes (Chumdari et al., 2018; Kovalik, 2014). When teachers begin with a pre-selected unit and entice a child with new ideas, questions and real-world

issues relevant to a child, new knowledge acquisition can be broken down into parts through purposeful, real-life lesson experiences.

Many participants agreed that pre-planning could help the organization of a thematic unit with objectives. Staff expressed the benefits of choosing pre-planned themes ahead of time to support correlating specific objectives by theme. Students learning goals and objectives can be vertically aligned with other age groups and themes. When preschool and kindergarten staff ensure a strategic school-wide allocation of integrative thematic units from grade level to grade level, learning content and objectives can be better streamlined to avoid content gaps between grade levels (Demetriou, 2020).

Participants stated that pre-planned units make staff's jobs more straightforward as they provide an anchored framework to cover objectives. Many study participants stated that pre-selected and pre-planned themes alleviated stress for teachers and students. Participant 10 said, "Planning can help in stressful times. When you already have a plan, you can focus more on the practice during these times." Pre-planned units can also help young or new staff feedback and reflect with each other on best instructional practices for teaching interdisciplinary connections. The use of pre-planned themes can be helpful for all staff, especially young or new staff, who may need a helpful direction on where to begin planning objectives. Participant 10 also declared, "Preplanning is helpful for young educators who just started in the job, since having a plan would give security in handling the actual group situation."

Study participants declared that pre-planned themes help staff gauge how much time could be allocated for a thematic topic and how in-depth lessons could go. Participant 1 stated, "I have found it beneficial to have pre-planned lessons for several reasons: to familiarize myself with the topic, gather resources, consult with colleagues and differentiate for children with different learning styles and

abilities. It also helps to gauge how much time and in-depth one can go into a topic." Pre-planned themes can help teachers plan visitors, school trips, and parent involvement. In addition, pre-planned themes can help staff organize how best to differentiate children with different learning styles and disabilities.

Thematic units within the same grade level can also be repeated yearly. Pre-planned units may then only need to be tweaked to suit new changes needed for the future to meet grade-level objectives. Participant 6 agreed, stating, "You can create a repertoire of what you are doing with the children and reuse and build on all of these aspects."

Participants also shared that pre-planned themes could help during spontaneous colleagues' absences. Participant 7 shared this thought, stating, "I find it very beneficial. Substitute teachers can come into a class and continue with a planned theme and objectives currently being discussed in the classroom. If someone gets sick, then it is easier to have preplanned materials. The kids need structure; if new staff come in, it can be very confusing. It helps everyone have a plan."

Benefits Preplanning to Support Building, Organizing, Distributing, Sharing, and Storing Thematic Materials and Resources

Having units pre-chosen and delegated school-wide could help all staff within a school be aware of what thematic content will be covered on every grade level and what materials could be used within each grade level. Themed codes found regarding benefits of pre-planned units and thematic resources included lack of stress, easy preparation and location of prepared materials, and the ability to share resources among grade levels. Many study participants agreed that one should not have to stress about instructional resources. There is no rush to build, store and share resources when staff can know what units they need to cover in advance. The brain-based learning theory and the integrative learning theory support effective teacher instruction. Teachers can feel more confident

with their lesson designs by having time to prepare quality unit structures in advance. Without preplanned thematic units per grade level, teachers may feel worried or stressed as they may need to write the curriculum spontaneously and build materials and recourses quickly.

Curriculum coordinators, teachers, and specialists (such as sports, music, or art teachers who cover many grade levels) can know what each level will be learning. Knowing themed units ahead of time can assist specialists in tying their discipline within selected thematic units during each grade level. The staff can engage in cross-level interactions to share plans and resources to support one another if one knows what topics are being taught from one level to the next. Grade-level teams can share with colleagues and collaborate, and there is the intrinsic ability to give and receive constructive feedback on lessons and materials. All staff members have an equal opportunity to contribute to a shared workload. Staff may feel it is easier to revisit and revise plans yearly and reuse resources. Staff may enjoy having an extensive repertoire of prepared resources per themed topic, as preparing quality thematic resources can be time-consuming. An awareness of the thematic units will help staff allocate time to prepare materials and collect resources. Staff can have ample time to develop an organized library of stored materials in large boxes in specific storage spaces or on a school computer server where the staff can easily find what is needed. In addition, having prepared materials used year-to-year can be very cost-effective. The same resources can be used multiple times, year after year, for any staff that needs them. Staff may not need to purchase new materials if they have been adequately taken care of, saved, and stored in an easy-to-find location.

The studies by Hollingsworth and Vandermaas-Peeler (2017) indicate that when a thematic unit needs to be planned, there can be a struggle to find adequate planning time and materials. Having materials and resources ready on the go can support teachers' effective use of planning time (Wardani, 2020). Integrative thematic unit resources can also be updated and reused when needed

(Sollome et al., 2018). In the work of Heidi Hayes Jacobs (Inzana et al., 2017), it is recommended to pre-plan thematic units six months to a full year in advance before a school year begins, thereby significantly helping all academic staff organize, purchase, and create lesson materials to support teaching best. Research findings from the study by Saleha and Shakerb (2021) have found that most teaching staff lean toward having a more straightforward curriculum design plan from management to alleviate anxiety and stress with lesson and material preparation.

Benefits Found with Pre-planning to Support Students with Diversity Needs, such as Supporting ESL, Multiple Intelligences, or Special Needs

Participants expressed their experiences using pre-planned thematic units to support diverse students (ELLs, multiple intelligences, and special needs). Themed codes found indicated the importance of knowing a theme ahead of time to better prepare teaching instruction for special students' needs, having the ability to collaborate with outside special needs staff to support, and the ability to create unique resources to accommodate diverse students. Study participants declared that knowing a pre-planned unit can help staff seek assistance and collaboration from interns, colleagues, and support staff to support student outliers best. Class teachers can have ample time to conduct in-depth research to support students in diverse contexts with the chosen thematic unit. A teacher can prepare to learn new strategies using pre-selected units for diverse students. Staff also declared strong support for reusing unique resources for diverse students. Staff can reuse plans and resources for a thematic topic to support diverse students a second or third time. Lessons can also be prepared to be more theory-based to support diverse students by adequately planning and integrating the lessons to suit the needs of the children. Staff can reflect on best practices and how to incorporate diverse learning styles and needs.

Having the time to prep in advance by knowing the thematic unit and how to tailor it for

diverse students is paramount. Staff may feel pressure with unplanned units, and a lesson's quality may not meet students' needs. Time to plan with pre-selected units may allow for all essential subject areas to be covered for all students with diversity. Teachers can take the time to think about what the children need and adequately provide the resources using differentiation.

Vocabulary cards and language word mats can be prepared in advance to support the thematic unit. Parents can also have a heads up on how to help at home with similar vocabulary cards, language word mats, storybooks, and other resources for special educational needs. The planning can be flexible to suit the children's needs, moods, and feelings. Study participants urged that the planning can still be adapted even if a thematic unit is pre-selected and pre-planned.

In reviewing this study's literature review and theoretical design, one can perceive the importance of brain-based learning strategies and the thematic instructional model and how both can guide professionals when teaching diverse learners and planning integrative thematic units (Kovalik & Olsen, 2010). Using pre-planned and prepared vocabulary mind maps, vocabulary cards, videos, audiobooks, and more to support brain-based learning techniques can highly support students who are diverse in terms of ESL, multiple intelligences, or special needs (Ashokan & Venugopal, 2016). An enriched learning environment can provide the most input for all senses (Kovalik & Olsen, 2010). Early childhood staff can share ideas and prepare lessons together with a transdisciplinary approach to find deeper connections with breadth and depth across integrative subjects (Chumdari et al., 2018). When lessons are carefully crafted with purpose and intentions connecting content to learning objectives, students can digest learning concepts more quickly than when subjects are unplanned or loosely brought together in fragments (Ashokan & Venugopal, 2016). This statement agrees with the fundamental purpose of the brain-based learning theory and integrative learning theory: to construct learning invitations and provocations in lessons and the environment for academic success.

Drawbacks or Difficulties in Pre-planning to Support Learning Objectives

Even though staff found many benefits for pre-planned thematic units, study participants also articulated various drawbacks and difficulties with using pre-selected and pre-planned units. Thematic codes were found regarding drawbacks for pre-planned thematic units. During the data analysis, staff stated feeling overwhelmed with pre-planned units, students' interest not being a motivator to reach objectives, and authentic learning opportunities missed in real-time.

Staff stated that having pre-planned units may make teachers and educators feel weighed down when trying to meet objectives. It is believed that even with pre-planned units, there may still be little time for planning with students' needs and interests in mind. Particular time needs to be planned for students to guide their learning. Teachers must know when to interject new materials or questions in a particular direction. Leaving room for students' inquiries should be accounted for. Teachers may pay more attention to checklists in planning objectives, and students may not be perceived as individuals. Staff articulated that some pre-planned units may not engage children. Furthermore, units may be boring. Taking an individual student's needs into account may be paramount for motivation to learn. Staff expressed the need to see what children are interested in within specific moments. Consideration could be made to observe and take in what students want to learn about "in the moment." Pre-planned units may leave little space for spontaneity. One might miss authentic learning opportunities coming from the students in authentic scenarios. Staff members declared that if there is too much pre-planning, the opportunities for authentic learning to reach learning objectives naturally may be rushed.

Retnawati et al. (2017) research discussed similar findings from the participants' statements. When some teachers and educators try to combine skill objectives within a thematic unit systematically, frustration may occur. Coupling together age-appropriate learning objectives within a

specific unit and designing weekly lessons around the topic involves professional education, development training, and intense dedication from all early childhood staff. Many public preschools and kindergartens (also known as 'Kitas') in East Germany encourage early childhood staff to follow each child's unique interest as a guide for lesson planning (Spiewok, 2012). Early childhood curriculums in East Germany pride themselves on observing the students and naturally following the needs of the children based on their individual needs (Spiewok, 2012). Within the work, 'Kindergarten in Germany. The Lowdown on Preschool Childcare', Hambrett (2018) states that most German Kitas do not use formal or academic instruction. German preschools and kindergartens are chiefly reserved for child-led play and child exploration. The local educational culture within the selected study location varies its instructional techniques from some of the selected study participants' preferred teaching styles.

Drawbacks or Difficulties Preplanning to Support Building, Organizing, Distributing, Sharing, and Storing Thematic Materials and Resources

The study participants alleged experiences of difficulty sharing pre-planned unit materials with colleagues. Thematic codes found in the data analysis indicated that issues might arise when sharing, storing or reusing thematic resources. It may be difficult for staff to put items back in an organized, orderly manner. It may be tricky to follow up on resources appropriately if staff changes. This could be a problem if staff frequently changes yearly or from one grade level to the next. Furthermore, if the staff is told to pre-plan and share resources, some may share, but others may rely on their team partners and not do as much work as others to prepare. Some staff may also feel there is no need to store or maintain several resources, as learning materials can be found in nature or everyday materials.

Issues may arise in finding adequate storage space for pre-planned thematic materials. There

may be an overload of pre-planned materials stored in one place. Teachers may become overwhelmed or lost with deciding what materials to use within a topic if too much is available. There might be too much pre-planning, and one may not know how best to meet the student's needs. Thematic materials could also be inaccessible or unable to find within the school building or on a school server. Having sufficient materials or enough materials per theme could be problematic as well. Preparing thematic units in advance may be costly if one needs to purchase apps, login software, or hardware to support the topic. Some staff may not be skilled in preparing materials for a pre-selected unit. Staff may need help filling out planning on a computer or using technology for pre-planning materials and resources.

Many staff stated that having pre-planned units with prepared materials may hinder the teacher from keeping the learning 'fresh,' for example, by using new ideas to target learning objectives. Some teachers may use the same materials for a unit a second or third time. It is questionable if the theme and materials are still relevant for the children if the unit and resources have been repeated continuously. Also, one may find it difficult to prepare materials for an undesirable pre-planned unit. Staff may feel the pre-planned unit and prepared materials may not reflect the teachers' and students' needs. Research conducted by Chumdari et al. (2018) agrees that themes need to be broad enough so young children can relate to and deeply explore the theme's contexts and aspects. Cheng (2016), Pettersson (2017), and Sollome et al. (2018) agree. Themes and resources must interest the teacher and, most importantly, the students.

Drawbacks or Difficulties Found with Pre-planning to Support Students with Diversity Needs such as Supporting ESL, Multiple Intelligences, or Special Needs

During the thematic coding process, themes that came to the surface about the drawbacks of supporting diverse students with pre-planned thematic units elaborated on the inflexibility of pre-planned lessons for struggling students. Participants described that pre-selected and pre- planned

units might make planning inflexible to meet specific objectives for diverse students (such as ESL, multiple intelligences, or special needs). Staff needs to adapt planning to different students' paces to support the individual child. Diverse students may not react positively to pre-selected and pre-planned thematic units. Pre-planned units may not be carried out realistically if students are new, emotional, have limited language comprehension, or have social anxiety.

Diverse students may also have physical restlessness, hunger, or tiredness. Diverse students may also show challenges in cognitively taking in planned lessons. Students with severe disabilities, ADHD, or more may not do well with a prepared and structured plan. Children with special learning needs require a large span of flexibility. Pre-planned and pre-selected units may also be unrealistic, as there may be too many children in a class to support diverse students individually with one-on-one support. Some pre-planned vocabulary may be too challenging for specific students. Making a pre-planned thematic unit more straightforward for diverse students may be too difficult.

To reach learning attainment successfully, diverse learners must consider students' voices (Xoshimova, 2020). However, this raises a pertinent question: how to do so appropriately can be a substantial challenge for early childhood staff. Focusing on specific children's interests and crafting lessons to support them can be a significant challenge if a class has many students and insufficient staff (Pettersson, 2017; Retnawati et al., 2017). When trying to accommodate all the diverse learning needs of early childhood students, it can be challenging to strategize the use of thematic units, especially if the chosen thematic units are not what all students in a class are interested in (Pettersson, 2017). The brain-based and integrative learning theories host components that support preplanning units in advance to prepare for quality lesson designs. However, it can also support preconceived ideas of interest the students may want to follow based on the preplanned unit. For example, if the students are covering a unit on Animals, teachers could prepare in advance several books and

materials on a variety of animals the students may show interest in.

Limitations

Natural limitations have been found during the study's research. The selected school for the study found some cultural bias regarding the staff planning of integrative thematic units. Some of the selected school's employees are German. In most public German preschools and kindergartens, prepared academic learning is frowned upon, as many German citizens believe structured, teacher-led learning should occur in Grade 1 (Hambrett, 2018).

More research can be conducted on effective thematic unit designs in preschool and kindergarten (Hollingsworth & Vandermaas-Peeler, 2017; Retnawati et al., 2017; Zin et al., 2019). Validity was found by comparing the research data to theories relevant to the study of planning contextual units. Construct validity and content validity were achieved by interviewing preschool and kindergarten staff at the research site with well-tailored surveys and questionnaires targeting pre-planned or unplanned thematic units. The complete study also has been controlled under the supervision of the research college professors. All participants who joined the study could connect with the college, school principals, or study chair if any issues arose during the research study process. Credibility, confirmability and dependability were constructed during the study creation. Participants' data has been professionally and adequately gathered, stored and analyzed. The study findings have been confirmed as authentic building study confirmability. The study findings were also stable over the time allotted for gathering the research data solidifying dependability. The study findings can host transferability in which the qualitative research findings can be transferred (or generalized) to other preschool or kindergarten settings. Preschools and kindergartens worldwide could apply the knowledge found within this study and the study results within one's curriculum scope and sequence planning strategies.

Recommendations

Learning through play can be categorized into two main developmental and academic processes in preschool and kindergarten classrooms. Developmental play underpins child-led freedom to strengthen social and emotional abilities, cognition, and self-regulation skills.

When children have the opportunity for child-led discovery, they can build new knowledge about the world around them and solve better problems than in teacher-led environments (Danniels & Pyle, 2018). However, teacher-led learning is also important and needed in early childhood settings. In a study by Caruana (2017), a balance of developmental and academic play with child-led and adult-led learning experiences was shown to host many rich learning opportunities. If students are only offered free play, then they may be inadequately prepared to begin a rigorous primary school start. On the other hand, if students are not given child-led, self-regulating experiences, the students can be burdened with negative growth opportunities—lacking primary children's needs for self-stimulation and exploration.

It is highly recommended for both teachers and students to be a part of leading a student's learning journey. Successful student outcomes can be seen when teachers balance teacher-led instruction and child-led inquiry and play (Caruana, 2017). Teachers can design play-based thematic unit lessons and activities within an enriched learning environment. Teachers may observe, collaborate, and intervene during child-led play to nurture developmental goals (Danniels & Pyle, 2018).

Preschool and kindergarten students can learn best with pre-selected integrative thematic units, student-led inquiry, and a highly enriched learning atmosphere (Pettersson, 2017; Zin et al., 2019). New teachers can learn from experienced staff with the education, professional development and experience using pre-selected thematic units. Experienced staff can show how to weave together

a pre-selected unit and students' inquiries and individual choices (Sollome et al., 2018). Teachers can create themed unit activities by cultivating their students' questions and answers (Wall & Leckie, 2017). Students can participate in planning units by answering questions essential to the pre-selected theme (Ramanathan et al., 2021). Staff can guide students using guiding questions, which can be open-ended, enticing, and motivating for students' interest to be piqued (Adbo & Carulla, 2019; Wall & Leckie, 2017). Students can be drivers of their learning, thereby enabling self-confidence and inspiration. (Ramanathan et al., 2021). Inquiry-based learning can support a flourishing of learning when students can use self-skills to build new perspectives and access updated information and when there is an ability to reach deeper into the core of a thematic unit (Anitah & Suryani, 2018; Hollingsworth & Vandermaas-Peeler, 2017; Lin et al., 2021).

When utilizing thematic units in the early years, students' interests were taken into account based on what the educational staff provided in their immediate environment, such as the lesson activities, resources, and materials (Pettersson, 2017). Research studies highlight the importance of selecting a unit theme and deepening an integrative thematic unit topic by stringing together the student's ideas, curiosity, imagination, and desires (Cheng, 2016; Pettersson, 2017). Teachers are responsible for exposing and guiding students to new content and interests they may have never had the opportunity to learn about (Cheng, 2016; Pettersson, 2017; Sollome et al., 2018; Zin et al., 2019). Young students can be drawn to new knowledge units using role-play, art, math, music, games, and other stimulating elements. Sollome et al. (2018) found that when teachers use one well-prepared thematic unit at a time, incorporating several activity areas and repetition of a unit's language or vocabulary resources, content skill mastery and successful learning outcomes can be achieved.

Implications for Curriculum Leadership

A preschool or kindergarten curriculum coordinator can select broad thematic units for each

grade level. Then teachers can use children's observations and inquiries to bring in their interests within thematic units. Within this study, it was elaborated by study participants that a curriculum coordinator could pre-select and delegate broad thematic units, allowing for an organized scope and sequence of pre-selected thematic topics school-wide. This may allow each grade level time to plan, prepare, research thematic content, and develop materials. Study participants expressed that even if themes are pre-selected in advance, teachers can still offer natural flexibility for student involvement to support students' unique inquiries, imagination, and creativity.

Important considerations should be made when preparing thematic unit lesson designs (Chumdari et al., 2018). Schools can pre-select and delegate different thematic units across grade levels. An example of delegated thematic units dispersed throughout preschool and kindergarten grades could consist of the following (see Table 8):

Table 8

Example of Delegated Thematic Units dispersed throughout Preschool and Kindergarten Grades

Grade + Age	Thematic Unit 1	Thematic Unit 2	Thematic Unit 3	Thematic Unit 4
Nursery 1–2yrs	Emotions	Colors	Shapes	The 5 Senses
Nursery 2–3yrs	Seasons	Houses and Homes	Dinosaurs	Sand and Water
Preschool 3–4yrs	Who am I	Transportation	Light and Dark	Plants and Flowers
Preschool 4–5yrs	Family and Friends	Occupations	Food and Drink	Animals
Kindergarten 5–6yrs	Celebrations	Shopping	Fairy Tales	Travel

Implications for Teachers and Educators

Teachers and educators can be given their pre-selected units before a school year begins to begin working with their grade level team and pre-planning ideas and activities in which the students

may engage. Preschool and kindergarten staff can gather materials and resources that connect to their units for planning ideas. Staff can begin brainstorming exciting entry point and exit point lessons to entice students into the theme and to end a theme (Chumdari et al., 2018). For example, teachers can prepare to visit a local zoo before beginning a unit on animals or have students create their very own fairy tale puppet theater show when ending a unit on fairy tales. School-wide cooperative projects planned can bring together students, teachers, management, parents, and the community. Using pre-planned thematic units and a school's community to build on students' learning can make the learning relevant to the student's inner world. Using this recipe for learning attainment can build a strong force of integrative thematic teachings and community partnership (Cheng, 2016).

Conclusion

Utilizing pre-selected thematic units and open flexibility for students' inquiry and interests may be a positive solution for all early childhood staff and students in preschools and kindergartens. When thematic units are pre-selected, broad, child-friendly, and age-appropriate, students can be exposed to a wide variety of knowledge that can be delegated among grade levels. Having educational staff be malleable to spontaneous changes in the theme based on the student's voices and choices is crucial to inspire students' inner knowledge, desires and motivation for learning.

A well-designed curriculum scope and sequence meticulously organized ahead of a school year can bring substantial benefits to students, teachers and all school stakeholders. When teachers and educators are given pre-selected thematic units, which connect to learning objectives and contextual teachings, they can feel more equipped to take on their job. Learning content can be more relatable and exciting for the student, making lessons more meaningful (Wardani, 2020). Early works from Piaget et al. (1969) and Bruner (1960) state how a child's learning processes are highly integrated with their outside world. Using deliberate planning methods, teachers and educators can

appropriately connect students to their outside world. In a structured and intentional learning environment, social and physical interactions can help students bridge new and previous information together (Ashokan & Venugopal, 2016).

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Appendix A

Honesty and Integrity Agreement

Date: March 21st, 2022

Researcher: Deborah Fischer

I, Deborah Fischer, do solemnly swear to abide by the utmost honesty and integrity while partaking in my doctoral research with the American College of Education for my doctoral study entitled: A Phenomenological Study Exploration of Pre-planned Thematic Units in Preschool and Kindergarten. As the researcher who will aim to collect data within my place of employment, I aspire to complete my doctoral research with all my colleagues or participants in a trustworthy and ethical manner. I promise to keep clear of the following:

- The social desirability of responses—due to friendships or loyalty
- The social desirability of responses—due to lack of anonymity
- Biased responses—due to cognitive priming
- Biased responses—due to personal agendas
- Perceived coercion to participate, and
- Confidentiality breaches, as stated in the Belmont Report

If ethical violations have been made during the research process, I will halt the research study and improve its contents with the support of my ACE professors and Dissertation Chair.

Mrs. Deborah Fischer

Appendix B

Recruitment Letter

Recruitment Letter

Date: April 1, 2022

Dear fellow LIK teaching and educator colleagues,

I am a doctoral candidate at the American College of Education. I am writing to inform you about an opportunity to participate in a dissertation research study.

Study Title: A Phenomenological Study Exploration of Pre-planned Thematic Units in Preschool and Kindergarten

Description of the study: Contextual thematic unit instruction is an effective early childhood teaching form (Wardani et al., 2020). Planning a curriculum with contextual, thematic instruction and materials helps deliver lessons more meaningfully (Wardani, 2020). Pre-planning thematic units before the school year begins may better prepare preschool and kindergarten teachers when planning instruction, preparing materials and supporting diverse preschool and kindergarten students to reach developmentally appropriate learning goals. However, some teachers and educators are hesitant about leveraging pre-planning thematic units before a school year begins. What are your opinions on this? An online open-ended questionnaire and a follow-up interview will be used during your participation to capture your opinions in English.

Description of criteria for participation:

The participation criteria for participants include professional teachers and educators who have

worked with students between the ages of one year to six years, who have experienced pre-planned thematic units and unplanned thematic units and who have taught in a large international school in Germany. Your participation in the study will be voluntary. If you wish to withdraw from the research at any time, you may contact me using the information provided below. I may publish the results of this study. However, I will neither use your name nor share identifiable data that you will provide. Your information will remain confidential. If you would like additional information about the study, please contact the following:

Doctoral Candidate Contact Information:

Deborah Fischer[redacted]

Chair Contact Information:

Dr. Lorainne Cleeton: lorainne.cleeton@ace.edu

If you meet the criteria above, feel interested in participating in the study, and would like to be included in the potential participant pool, please use the links below to access, review, and accept the informed consent and fill in the online interview to begin.

Link to Approved IRB Informed Consent (Please read all pages and sign page 5)

https://drive.google.com/file/d/1ysH04szMLho0mpfps3TPcicYTiFUl158/view?usp=sharing

Link to the Open-ended Questionnaire

https://docs.google.com/forms/d/e/1FAIpQLScrYWkJkiM8YobLWlceZ6kOTY0Ev1RCPWzokS_z88edGs3izw/viewform?usp=sf_link

Please read each link and document above and return them to: [redacted]

Thank you again for considering this dissertation research opportunity!

Deborah Fischer

Appendix C

Site Approval Request and Permission

From: Deborah Fischer
Sent: 03 October 2020 20:36
To: [redacted]
Subject: Doctorate Study Permission Request

Hello [redacted]

I would like to write to you to request permission to use our school in my doctoral research studies.

Currently I am in my 2nd year as a doctoral student at The American College of Education. My focus is Leadership, Early Childhood Education and Curriculum and Instruction. My dissertation concept paper is entitled 'An Exploration of Preplanned Integrative Thematic Units in Early Childhood Education- A Case Study'.

I feel over the past 16-17 years with LIS/LIK I have seen an incredible success of our LIK/LIS teachers using preplanned Integrative thematic units. My work will involve asking LIK/LIS teachers and staff to volunteer for their thoughts, opinions and experiences using this curriculum planning style. My professors see a strong asset for this research and are excited to see me follow through with this topic.

I will need written permission that I can use our school for research. An email from yourself will suffice:). Is this okay? If you will need more information from me on this topic I would be happy to meet to do so.

Thank you for considering.
Kind Regards,
Deborah Fischer

Doctorate Study Permission Request

From: [redacted]
Sent: 05 October 2020 08:26
To: Deborah Fischer
Subject: RE: Doctorate Study Permission Request

Good morning, Deborah,

And of course you have the school's permission to conduct your doctoral research among our children and our colleagues. All of whom, I am sure, will be proud to be associated with someone who is working so hard and so thoughtfully to achieve an even better understanding of the optimum conditions for work with young children.

Have a great week,

[redacted]

Kind regards | Mit freundlichen Grüßen

[redacted]

[redacted]

[redacted]

Mrs. Deborah Fischer

[redacted]

[redacted]

29 March 2022

Doctorate Research

Dear Ms. Fischer,

I hereby confirm that Leipzig International School has no objections to you conducting the survey of LIS employees required for your doctoral thesis.

The data processing and thus responsibility for data protection lies with you. No data will be collected or processed by the school for your work.

I wish you all the best for your doctoral thesis.

Kind regards,

[redacted]

Head of School

[redacted]

Appendix D

Permission Letter

Permission Letter

Date: March 21, 2022

Name:

Role: Headmaster

School and Address:

Dear

I, Deborah Fischer, a doctoral candidate at the American College of Education (ACE), am writing this letter to request permission to use an online, open-ended questionnaire and interviews as research instruments for my doctoral case study entitled 'A Phenomenological Study Exploration of Pre-planned Thematic Units in Preschool and Kindergarten.' The purpose of this qualitative phenomenological study was to investigate preschool and kindergarten staff's attitudes, opinions, beliefs, and experiences about pre-planned and unplanned thematic units in a kindergarten center in Germany. This information will be used for my dissertation research on pre-planning thematic units.

Additional information:

Participant count: 15–20 teachers or educators

Important contact person for this study includes: Deborah Fischer, the Principal Investigator

E-mail: [redacted] Phone: [redacted]

Dissertation Chair: Dr. Lorannie Cleeton Email: lorannie.cleeton@ace.edu

Thank you for your attention to this issue and prompt response. I appreciate your time and consideration of my request.

Regards,

Deborah Fischer

Appendix E

Informed Consent Letter

Informed Consent

Prospective Research Participant: Read this consent form carefully and ask as many questions as possible before deciding whether you want to participate in this research study. You are free to ask questions at any time before, during, or after your participation in this research.

Project Information

Project Title: A Phenomenological Study Exploration of Pre-planned Thematic Units in Preschool and Kindergarten

Researcher: Deborah Fischer

Organization: American College of Education

Email: [redacted] **Telephone:** [redacted]

Researcher's Dissertation Chair: Dr. Lorainne Cleeton

Organization and Position: American College of Education, Dissertation Chair and Professor

Email: lorainne.cleeton@ace.edu

Introduction

I, Deborah Fischer, am a doctoral candidate student at the American College of Education. I have been conducting research under the guidance and supervision of my Chair, Dr. Lorainne Cleeton. I will give you some information about the project and invite you to be a part of this research. Before you decide, you can discuss the research with anyone you feel comfortable with. This consent form

may contain words you do not understand. Please ask me to stop as we review the information, and I will reiterate the explanation. If you have questions later, you can ask them then.

Purpose of the Research

You are being asked to participate in this research study, which will help gather opinions about using pre-planned thematic units. This qualitative phenomenology study aims to explore preschool and kindergarten teachers' attitudes, opinions, beliefs, and experiences about pre-planned thematic units in one specific, large international kindergarten in Germany. Conducting this qualitative study will support scholars and educational professionals worldwide about experienced teachers' and educators' opinions using pre-planned or unplanned thematic units.

Research Design and Procedures

The study will use a qualitative methodology and phenomenology study research design. The study will comprise 15–20 participants who will voluntarily participate in this study. The study will involve an online, open-ended questionnaire and follow-up interview, which will be conducted at the convenience of the participants. A recruitment letter will be disseminated to teachers and educators within a specific international school in Germany.

Participant Selection

You are invited to participate in this research because of your experience as a teacher or educator who can contribute much knowledge to this subject, which meets the criteria for this study. The participation criteria for participants include professional teachers and educators who have worked with students between the ages of one year to six years, who have experienced pre-planned and unplanned thematic units and who have taught within the study site location.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate. If you choose not to participate, there will be no punitive repercussions, and you do not have to participate. If you select to participate in this study, you may change your mind later and stop participating even if you had communicated your agreement earlier.

Procedures

If you agree to participate in this research study, you will be asked to fill in an online, open-ended questionnaire and complete a follow-up interview in English. The type of questions will be direct inquiries about using pre-planned or unplanned thematic units.

Duration

The online, open-ended questionnaire and interview will require approximately 10–15 minutes. However, depending on how much information you would like to share, it could take longer. The span of the follow-up interview will range from 45 minutes to one hour at a time convenient for you at the German international school site.

Risks

The researcher will ask you to share personal and confidential information, and you may feel uncomfortable discussing some topics. You do not have to answer any questions if you do not wish to do so. You do not have to provide reasons for not responding to any question.

Benefits

While you will have no direct financial benefit, your participation will likely help the researcher discover more about using pre-planned and/or unplanned thematic units. The potential benefits of this study will aid educational personnel and scholars who wish to learn more about the benefits or

drawbacks of using pre-planned and unplanned thematic unit instruction.

Confidentiality

During the defense of the doctoral dissertation, the data collected will be presented to a dissertation committee. The data collected will be kept in a locked and secure location. Any information about you will be coded and will not have a direct correlation, directly identifying you as the participant. The researcher will not share information about your name or any details connected to you outside the study. Only the researcher will know your number, and the researcher will secure your information. All data gathered in this study will remain completely confidential.

Sharing the Results

At the end of the research study, the results will be available for each participant. It is anticipated that the results will be published to help other interested people learn from the research.

Right to Refuse or Withdraw

Participation is voluntary. At any time that you wish to end your participation in the research study, you may do so without repercussions.

Questions about the Study

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact the researcher, Deborah Fischer. This research plan has been reviewed and approved by the Institutional Review Board of the American College of Education. This committee's role is to protect research participants from harm. If you wish to ask questions to this group, email IRB@ace.edu.

Certificate of Consent

I have read the information about this study, or it has been read to me. I acknowledge why I have been asked to participate in the research study. I have been provided the opportunity to ask questions about the study, and any questions I posed have been answered to my satisfaction. I certify that I am at least 18 years of age. I voluntarily consent to be a participant in this study.

Print or Type Name of Participant:

Signature of Participant:

Date:

I confirm that the participant was allowed to ask questions about the study, and all questions have been answered to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily. A copy of this Consent Form has been provided to the participant.

Print or type the name of the lead researcher:

Signature of lead researcher:

Date:

PLEASE KEEP THIS INFORMED CONSENT FORM FOR YOUR RECORDS.

Appendix F

Questionnaire

Questionnaire

Directions: Please read the questions below and share your experiences, thoughts and opinions in English

1. What *benefits* have you found for the use of pre-planning thematic units in regard to following and planning curriculum objectives?

2. What *drawbacks* have you found for the use of pre-planning thematic units in regard to following and planning curriculum objectives?

3. What *benefits* have you found for the use of pre-planning thematic units in regard to building, organizing, distributing, sharing, and storing thematic materials and resources?

4. What *drawbacks* have you found for the use of pre-planning thematic units in regard to building, organizing, distributing, sharing, and storing thematic materials and resources?

5. What *benefits* have you found for the use of pre-planning thematic units in regard to supporting students with diversity needs such as supporting ESL, multiple intelligences, or special needs?

6. What *drawbacks* have you found for the use of pre-planning thematic units in regard to supporting students with diversity needs such as supporting ESL, multiple intelligences, or special needs?

7. What has been your most effective strategies utilizing thematic units?

Thank you for your thoughts! After submission, a follow-up interview to explore more about your answers will be scheduled.

Appendix G

Follow-up Interview

Follow-up Interview

Forty-five-minute to one-hour follow-up interviews will be scheduled with each study participant to explore participants' experiences, thoughts, and opinions from the study's questionnaire. After completing the questionnaire, the researcher will reconnect with the participant, collaborate to decide an appropriate face-to-face meeting time at the German international school site or schedule an online video conference call with Google Meet to meet together for the interview. After discovering the participants' viewpoints from the questionnaire, the interviewer will provide ample time to the participant during the follow-up interview to further expand their reasons behind their questionnaire answers.

Follow-up Interview Questions

In English, please expand your thoughts from the questionnaire using the following questions:

1. Walk me through your current thematic unit planning system. How do you or your teaching team plan a thematic unit for your students?
2. Tell me a story about a time when you used a pre-planned thematic unit. Was it easy to prepare, implement, and execute? Were the students motivated and engaged during the lessons? Did you feel it supported the students' learning objectives well?
3. Tell me a story about a time when you used a unplanned (spontaneous) thematic unit. Was it easy to prepare, implement, and execute? Were the students motivated and engaged during the

lessons? Did you feel it supported the students' learning objectives well?

4. Should the selection of thematic units be the responsibility of the school's curriculum coordinator, the teachers, or the students?

5. Which do you prefer: preselected thematic units or unplanned (spontaneous) thematic units?

6. Do you have any additional comments or ideas about the planning of integrative thematic units?

Appendix H

SME Email Invitation

Date: February 6, 2021

To whom it may concern,

I am a doctoral candidate at the American College of Education. I am writing to inform you about an opportunity to participate in a dissertation research study as a Subject Matter Expert (SME) for an online questionnaire.

Study Title: A Phenomenological Study Exploration of Pre-planned Thematic Units in Preschool and Kindergarten

Description of the study: Contextual thematic unit instruction is an effective form of instruction used for early childhood teaching (Wardani et al., 2020). Planning a curriculum with contextual, thematic instruction and materials helps deliver lessons in a more meaningful way (Wardani, 2020). Pre-planning thematic units before the school year begins may better prepare preschool and kindergarten teachers when planning instruction, preparing materials, and supporting diverse preschool and kindergarten students to reach developmentally appropriate learning goals. However, some teachers and educators are hesitant to leverage pre-planning thematic units before a school year begins. A short, open-ended questionnaire will be used to capture participants' opinions.

Description of criteria for participation: The participation criteria for participants include professional teachers and educators who have worked with students between the ages of one year to six years, who have experienced pre-planned thematic units and unplanned thematic units, and who have taught within one large international school in Germany. Participation in the study will

be voluntary. If participants wish to withdraw from the research at any time, they may do so by contacting me using the information below. I may publish the results of this study. However, I will neither use names nor share identifiable data provided. Information will remain confidential. If participants would like additional information about the study, then they can contact the following stakeholders:

Doctoral Candidate Contact Information: Deborah Fischer [redacted]

Chair Contact Information: Dr. Lorainne Cleeton lorannie.cleeton@ace.edu

If you would like to be a SME for my self-administered interview, please read through the questionnaire at the following link:

https://docs.google.com/forms/d/e/1FAIpQLScrYWkJkiM8YobLWlceZ6kOTY0Ev1RCPWzokS_z88edGs3izw/viewform?usp=sf_link

Your advice and feedback is important to me as you have expertise in the field of Early Childhood Education, have taught students between the ages of one and six years old and have experience using thematic units.

Once ready with your feedback, please respond to: [redacted]

Thank you again for considering this dissertation research opportunity!

Regards,

Deborah Fischer

Appendix I

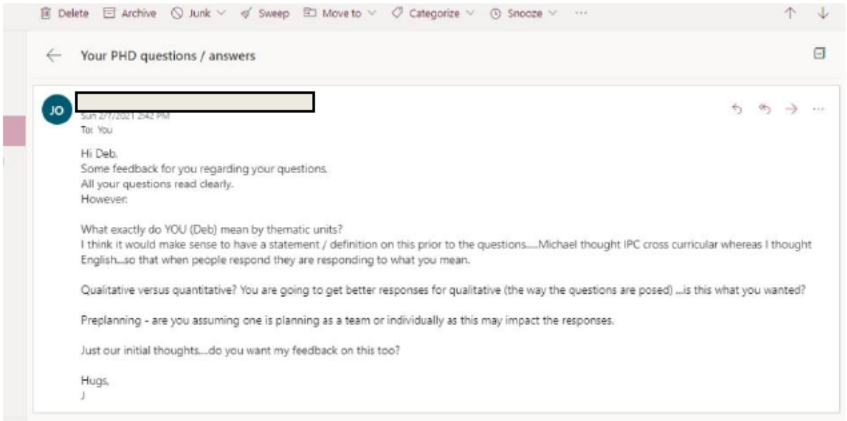
SME Recommendations

Subject Matter Expert (SME) #1

Feedback from the SME:

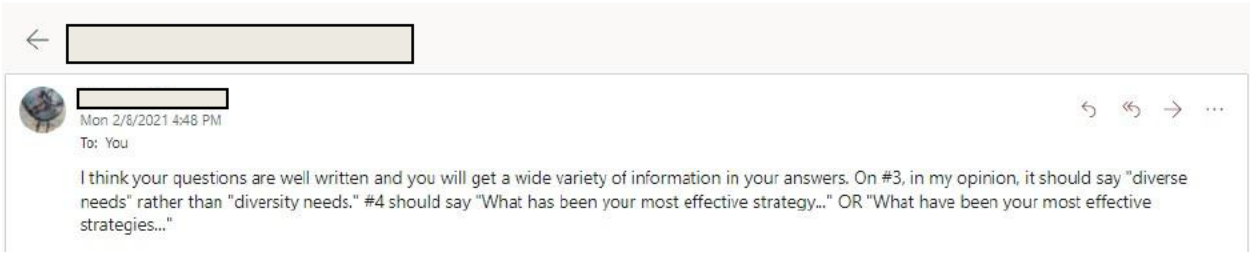
SME#2

Feedback from the SME:



SME#3

Feedback from the SME:



[redacted]

[redacted]

Mon 2/8/2021 4:48 PM

To: You

I think your questions are well written and you will get a wide variety of information in your answers. On #3, in my opinion, it should say "diverse needs" rather than "diversity needs." #4 should say "What has been your most effective strategy..." OR "What have been your most effective strategies..."

Appendix J

Final Questionnaire

Questionnaire

Interview objective: Preschools and kindergartens can choose whether to delegate and pre-plan thematic units (such as Animals, Transportation, or Occupations) for grade levels before a school year begins or not. Schools can allocate thematic units on the scope and sequence between grade levels or simply allow all teachers and educators to choose freely what units they will teach and when. What are your experiences, thoughts, and opinions on this?

Directions: In English**,** please read the questions below and share your experiences, thoughts and opinions.

Current Job Title: _____

Years in Early Childhood Education:_____

Nationality:_____Current Teaching Grade Level/s:_____

Age:_____ Gender: Male □ Female □ Other □

Highest Educational Degree and Country (example: Bachelor's in education in Germany):

_____

1. What benefits have you found for the use of pre-planning thematic units in regard to following and planning curriculum objectives?

2. What drawbacks or difficulties have you found for the use of pre-planning thematic units in regard to following and planning curriculum objectives?

3. What benefits have you found for the use of pre-planning thematic units in regard to building, organizing, distributing, sharing, and storing thematic materials and resources?

4. What drawbacks or difficulties have you found for the use of pre-planning thematic units in regard to building, organizing, distributing, sharing, and storing thematic materials and resources?

5. What benefits have you found for the use of pre-planning thematic units in regard to supporting students with diversity needs such as supporting ESL, multiple intelligences, or special needs?

6. What drawbacks or difficulties have you found for the use of pre-planning thematic units in regard to supporting students with diversity needs such as supporting ESL, multiple intelligences, or special needs?

7. What has been your most effective strategies utilizing thematic units?

Thank you for your thoughts! After submission, a follow up interview to explore more about your answers will be scheduled.

Appendix K

Final Follow-up Interview

Follow-up Interview

Forty-five-minute to one-hour follow-up interviews will be scheduled with each study participant to explore participants' experiences, thoughts, and opinions from the study's questionnaire. After completing the questionnaire, the researcher will reconnect with the participant, collaborate to decide an appropriate face-to-face meeting time at the German international school site or schedule an online video conference call with Google Meet to meet together for the interview. After discovering the participants' viewpoints from the questionnaire, the interviewer will provide ample time to the participant during the follow-up interview to further expand their reasons behind their questionnaire answers.

Follow-up Interview Questions

In English, please expand your thoughts from the questionnaire using the following questions:

1. Walk me through your current thematic unit planning system. How do you or your teaching team plan a thematic unit for your students?

2. Tell me a story about a time when you used a pre-planned thematic unit. Was it easy to prepare, implement, and execute? Were the students motivated and engaged during the lessons? Did you feel it supported the students' learning objectives well?

3. Tell me a story about a time when you used a unplanned (spontaneous) thematic unit. Was it

easy to prepare, implement, and execute? Were the students motivated and engaged during the lessons? Did you feel it supported the students' learning objectives well?

4. Should the selection of thematic units be the responsibility of the school's curriculum coordinator, the teachers, or the students?

5. Which do you prefer: preselected thematic units or unplanned (spontaneous) thematic units?

6. Do you have any additional comments or ideas about the planning of integrative thematic units?

Appendix L

Data Preparation Example

Question 1	Benefits following curriculum objectives using pre-planned thematic units	Drawbacks following curriculum objectives using pre-planned thematic units	Benefits planning curriculum objectives using pre-planned thematic units	Drawbacks planning curriculum objectives using pre-planned thematic units	Other responses
What *benefits* have you found for the use of pre-planning thematic units in regard to following and planning curriculum objectives? What *drawbacks* have you found?	Responses	Responses	Responses	Responses	Responses