Scroll & Stumble: Examining TikTok as a Microlearning-Based Exposure Model in a Hobby-Based E-Learning Module for Adult Learners

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SCROLL & STUMBLE: TIKTOK AS A MICROLEARNING-BASED EXPOSURE MODEL

Abstract

This Capstone Report investigated the use of a microlearning-based exposure model to assess adult hobby learners' ability to acquire and apply foundational knowledge to confidently troubleshoot failures, select appropriate materials and methods, and independently transfer their skills to new surfaces and techniques. The study aimed to answer the following questions: "How do learners describe their experience using TikTok as a microlearning-based exposure model for learning new decoupage techniques?" and "How does the use of TikTok as a microlearning-based exposure model impact adult hobby learners' ability to transfer techniques to new surfaces independently?" Participants were given a pre-survey prior to completing a hobby-based e-learning module. After completing the module, participants were given a post-module questionnaire. Participants in this study were recruited from a Facebook special interest group, and stakeholders were the administrators of the group, whose permission was required to recruit the 5 participants. Mixed-method research was used for this study. Both surveys and questionnaires included both selected and constructed responses, as well as open- and closed-ended items. The findings demonstrated that the exposure- to-instruction workflow successfully supported foundational skill transfer.

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Chapter 1: Introduction

Instructional Problem

Decoupage crafters are skilled, motivated, and resourceful. However, their learning is largely unstructured and reactive and built on trial-and-error or unvetted community content. The Learners need to be able to troubleshoot failures confidently, select appropriate materials and methods, and transfer their skills to new surfaces and techniques independently to transform their procedural competence into adaptive expertise.

Knowledge, Skills, and Abilities (KSAs)

The fully developed e-learning solution will address the following:

Current State of Knowledge, Skills, and Abilities (KSAs)

Learners like Pam are experienced self-starters who have already built a functional informal learning ecosystem around their craft. Their current KSAs include:

Knowledge: They know that decoupage can be applied to many surfaces (ceramics, glass, seashells, wood) and that multiple techniques exist. They know where to search for answers (YouTube, TikTok, Facebook groups) and are aware of the large, international crafting community around them.

Skills: They can follow tutorials, replicate techniques they see demonstrated, and can create functional art pieces they are proud to share or sell. They can navigate social media platforms to find inspiration, post their work, and engage with community feedback. Some teach others through tutorials they create themselves.

Abilities: They persist through failure and self-correct through trial and error. They engage in peer learning naturally by asking questions in community groups and incorporating feedback. They experiment with new surfaces and variations of techniques they already know.

Desired State of KSAs

Knowledge: Understand why specific techniques work on certain surfaces and not others. Understand how to assess the credibility and usefulness of external resources, including sponsored content and influencer recommendations.

Skills: Troubleshoot a failed technique by identifying the likely cause (e.g., the wrong medium, surface preparation, application method, or drying conditions) rather than simply restarting or abandoning a project. Evaluate and select appropriate tools, materials, and resources based on their specific project needs rather than trends or promotions.

Abilities: Approach new techniques with a structured, transferable problem-solving framework that reduces dependence on trial-and-error alone. Confidently make independent decisions about technique selection, material substitution, and project sequencing.

The Gap Between Current and Desired State

The learners can follow tutorials and create projects, but they lack the understanding of why something works or does not work. With this module, learners will close the gap between their current and desired states by moving from doing to understanding and from *searching* to *evaluating*.

Troubleshooting gap: Learners know when something goes wrong, but do not always know why. This leads to repeated trial and error without a mental model for diagnosing the problem.

Evaluation gap: They can easily find resources, but they lack a reliable framework to distinguish high-quality, actionable guidance from sponsored or low-quality content.

Conceptual gap: Their knowledge is largely procedural and surface specific. The learner needs to develop transferable principles that they can confidently apply to new techniques or unfamiliar materials without external validation.

Research Topic

Investigate the use of a microlearning-based exposure model to assess adult hobby learners' ability to acquire and apply foundational knowledge to troubleshoot failures confidently, select appropriate materials and methods, and independently transfer their skills to new surfaces and techniques.

The Importance of the Research Topic

This topic is important because it will inform future learning environments for this learner group. If microlearning-based exposure models prove useful in helping learners reach

their learning goals, instructional designers will know to continue using this model in this setting. However, if the research suggests that this model is ineffective in helping this learner group reach their learning goal, instructional designers will know they need to use a different model to achieve greater success.

Research Questions

1. How do learners describe their experience using TikTok as a microlearning-based exposure model for learning new decoupage techniques?
2. How does the use of TikTok as a microlearning-based exposure model impact adult hobby learners' ability to transfer techniques to new surfaces independently?

End-of-course survey questions for participants: What did you learn from the course that you did not know before? How will it influence your future projects?

Research Purpose

The purpose of this study is to examine the use of TikTok as a microlearning-based exposure model in a hobby-based e-learning module for adult hobby learners, to understand how short-form video exposure influences learners' experience and their ability to independently transfer decoupage techniques to new surfaces.

Chapter 2: Literature Review

Introduction to the Literature Review

One day, as I was doomscrolling through TikTok, I saw someone show their decoupage process from start to finish. Before watching this video, I had never heard of decoupage or seen it done. My curiosity led me to watch more videos about decoupage and to investigate further. A week later, I had a dresser full of cool decoupage ceramics, money in my pocket from the sales because people wanted to buy my finished products, and a genuine love of the craft I had recently discovered. Thinking in terms of Bloom's Taxonomy, I feel I have gone through the levels from understanding to creating. In terms of Maslow's Hierarchy of human needs, my basic needs were met when I discovered decoupage, and as I worked to improve my craft, I was exploring my higher needs. This led me to think that this may work as an educational model. In practice, students would either be able to watch and be ignited in their curiosity or keep scrolling until they stumble upon something they find interesting, if given a TikTok-like platform that shows cool, practical uses of a particular concept. Instead of a share button (which is all about social validation), an investigate button (which focuses on personal curiosity) would foster curiosity and motivation and provide additional resources, whether it is another cool video, a worksheet, or a tutorial on how to get started. Additionally, I would like to argue that exposure leads to curiosity. In terms of the Zone of Proximal Development, before you can locate a student's ZDP, they need exposure to know what is even possible. You cannot find your passion for something by living in a bubble, and you cannot begin to know your ZDP if you don't yet know it exists. Such a Scroll-and-Stumbling model provides that exposure.

I understand that I am not alone in scrolling through social media and then serendipitously learning something new. Other adults in the world are having accidental learning experiences from short-form video platforms. However, there is a gap in current research on how this kind of exposure-driven, serendipitous microlearning translates into real skill transfer among adult hobby learners. This study is grounded in many different theories and frameworks. The foundational theory my research is based on is adult learning theory and andragogy. Based on my learner analysis, adult hobby learners are self-directed, intrinsically motivated, and driven by immediate relevance. Next, the theory of Connectivism explains how knowledge lives in networks. Participants in this study are members of special-interest Facebook groups dedicated to the craft. Before this study, learning was already taking place in a digital environment. For this

study, I will intentionally use TikTok as a network. Additionally, TikTok will act as a form of microlearning for learners. Microlearning enhances the learning experience and prevents cognitive overload (Silva et al., 2025; Tan et al., 2026). Moreover, central to this study is the argument that exposure to the unknown precedes curiosity, which in turn precedes active engagement. Loewenstein's theory of the psychology of curiosity suggests that curiosity intensifies until it is addressed by appropriate stimuli (Loewenstein, G., 1994). Zajonc's research suggests that repeated exposure to stimuli leads to the formation of preferences and familiarity (Zajonc, 2001). Furthermore, Landauer and Dumais (1997) explore the idea that weak interrelations from exposure amplify learning through inference.

TikTok's algorithm creates the conditions for the exposure explained by Zajonc, Landauer, and Dumais through serendipitous content discovery (Zeng, 2023). Ultimately, the goal of this exposure model is to support learning transfer through short-form video microlearning (Sheffler et al., 2022). This literature synthesizes these themes to build the theoretical foundation of this study. This research paper will address this gap by examining the use of TikTok as a microlearning-based exposure model in a hobby-based e-learning module for adult hobby learners, to understand how short-form video exposure influences learners' experiences and their ability to independently transfer decoupage techniques to new surfaces.

Adult Learning and Andragogy

This study is rooted in adult learning and andragogy to understand the study's learner population. Adult learning and andragogy are characterized by adults who are self-directing and intrinsically motivated (Knowles, 1979). Participants in this study are adult learners who are self-directed, experienced, and motivated by immediate relevance and personal interest. This group of adult hobby learners usually knows what they want to make; they just need assistance troubleshooting any errors that may occur. Furthermore, this learner group needs help understanding why the errors occur and how to prevent them in the future. Their desire to learn serves their personal interests.

The type of learning that occurs with adult learners is informal learning and sometimes even incidental (Merriam, 2001). Adult hobby learners can indeed opt to take a class to learn different techniques, but more often than not, they are not learning in a classroom environment like school-aged students. Instead, this learner group usually discovers learning opportunities on social media, such as Facebook groups and TikTok videos. Before this study, this learner group

was already learning decoupage skills and techniques through Facebook groups, YouTube, and TikTok. This tells us that the nature of adult learning lies in informal environments. Additionally, when learners stumble upon learning opportunities by way of short-form video content, this tells us that the nature of adult learning is also unplanned (Merriam, 2001).

Learning a new skill involves acquiring both procedural and content knowledge (Sheffler et al., 2022). As novices, learners are presented with foundational knowledge, and as they progress through the stages, they become competent, proficient, and ultimately an expert in the skill (Sheffler et al., 2022). To progress through the stages, adult hobby learners need to know the foundational rules and the observable patterns within the maker community to determine what is relevant to learn. This can be done by scrolling and stumbling upon the appropriate stimuli in an internet-connected environment. Specifically, this can be done by watching process videos on TikTok. This will give novice learners direction and guidance in deciding what is relevant to learning and what is not.

In deciding what is relevant to learning, adult hobby learners are motivated to learn what is needed to learn to accomplish their goals. This speaks to the nature of adult learning and how adults are motivated to learn by relevance and personal interest (Knowles, 1979; Sheffler et al., 2022). It also speaks to the importance of technology in skill learning (Sheffler et al., 2022). This is why this study is also built on the theory of Connectivism.

Connectivism

Connectivism is the notion that learning occurs through networks. It is based on rapidly changing foundations, in which new information that alters landscapes, perceptions, and realities is continuously acquired (Siemens, 2005). The participants of this study are already a part of a specific network: Facebook groups dedicated to decoupage crafts. Additionally, this study explores the social media platform TikTok as another avenue for acquiring knowledge. The way in which the short-form video is presented to learners serves not only as a network of knowledge but also as a form of microlearning.

Knowledge exists across digital and human networks (Conceição & Biniecki, 2024; Siemens, 2005). This means that, at the individual level, learners can acquire knowledge and share it with others. The individual can then share knowledge through digital means. In this study, TikTok is the digital network.

Furthermore, networks can have weak interrelations from exposure, but if used strategically, the learner can amplify their learning through inferences (Landauer & Dumais, 1997). When learners watch short-form video content, they are not just watching one video to meet their learning goals. They are using multiple weak interrelations to fill gaps in their knowledge and amplify what they already know. Those videos act as nodes to a larger whole (Siemens, 2005).

Microlearning

Microlearning promotes continuous and flexible learning. It provides learners with small portions of clear, accessible content appropriate to their level and interest (Silva et al., 2025). This works for adult hobby learners because oftentimes they must fit crafting into their busy schedules. With short-form videos and microlearning, learners do not have to spend more time than is necessary learning how to troubleshoot simple problems. Microlearning meets adult hobby learners where they are in terms of time commitment.

Short-form videos will be the microlearning format used in this study. Learners benefit from video-based content in part because of the simultaneous intake of audio and visual. Learning happens more effectively when information is presented across dual modalities (Tan et al., 2026). Problem-based training also enhances learners' capacity to integrate knowledge and solve problems diligently (Tan et al., 2026). According to andragogy, adult learners are motivated by practical relevance, goal achievement, and the ability to apply their learning to real-life situations (Knowles, 1979). Therefore, microlearning is the best framework for this study of adult hobby learners, as information will be presented on TikTok to help learners solve specific problems and meet specific learning goals. Moreover, the way short-form videos are presented on TikTok fosters curiosity in learners, compelling them to keep viewing the learning content.

Curiosity

Curiosity is the strong desire to know or learn something. Curiosity is what motivates learners to learn and complete courses. If left unsatisfied, curiosity intensifies until the learner is exposed to suitable stimuli (Loewenstein, 1994). For adult hobby learners, scrolling through TikTok is usually not educational. Learners initially scroll for entertainment purposes. However, when they stumble upon a video that exposes a gap between what they know and what they want to know, their curiosity is piqued. This information gap theory motivates learners to continue scrolling, stopping only when the information gap is filled (Loewenstein, 1994).

Curiosity exerts a powerful motivational force (Loewenstein, 1994), but it need not last long for adult hobby learners. In the context of this study, while scrolling through TikTok, their curiosity lasts just long enough to stumble upon a video that compels them to take action, leading to a finished, crafted project. This means that learners will first scroll through short-form video content, stumble upon something that piques their curiosity, watch it, search for similar videos within the learning network, and then start working on a project.

Further, curiosity leads to voluntary exposure to stimuli (Loewenstein, 1994). This relates to the participants in this study because learners will not be explicitly assigned a specific video to watch. Instead, they will let their curiosity lead them to what they truly need and what to learn. Adult hobby learners, when considered in the context of andragogy, are self-directed learners who voluntarily seek out learning opportunities. Connectivism shows that gaps arise from weak interconnections within the network of nodes, and that curiosity drives learners to use those nodes to fill their knowledge gaps. However, before learners become curious, they must first be exposed to what already exists that they did not know existed.

Exposure

Exposure is the process of being introduced to something unknown until it becomes familiar. One day, while scrolling through TikTok for entertainment, I came across the craft of decoupage. That exposure ignited my curiosity, which only subsided once I investigated further and eventually created my own decoupage project. Before a learner can identify their Zone of Proximal Development, they must first be exposed to what is possible beyond their current knowledge (Vygotsky, 1978, as cited in Conceição & Biniecki, 2024). For novice decoupage learners, scrolling through TikTok provides that window. It reveals techniques and possibilities they did not know existed, which effectively maps the outer boundary of what they could learn next. For this study, participants will undergo repeated passive exposure to various decoupage videos on TikTok to build familiarity and preferences (Zajonc, 2001). Because the learners are not assigned to watch a specific video or learn a specific technique, learners will scroll- thus creating the exposure- until they stumble upon something that piques their interest and curiosity, which will then compel them to investigate further. Not only will scrolling through short-form video content create exposure, but it will also amplify learning (Landauer & Dumais, 1997). If a learner is interested in a specific technique they stumbled upon, watching multiple videos on it will be more effective than watching just a single video. For this study, TikTok will be used

intentionally to create the conditions for this type of exposure. The exposure to different decoupage techniques will be the catalyst for curiosity, which will then prompt the learner to act. Ultimately, the process will culminate in knowledge transfer, in part due to the TikTok platform, which promotes serendipitous learning.

TikTok and Serendipitous Learning

Serendipitous learning is the process of acquiring knowledge or skills by chance or through accidental experiences. TikTok is the best platform for fostering serendipitous learning because of its continuous scrolling feature. When used for educational purposes, TikTok can serve as a starting point for deeper learning, allowing learners to quickly absorb introductory concepts before turning to more detailed content (Prevost et al., 2025). TikTok is well-suited to this study because of its algorithm. The algorithm used for the For You Page (FYP) displays recommended videos based on the user's interests, and it can also expose users to unfamiliar content (Zeng, 2023).

This study anticipates several challenges associated with using TikTok as an educational tool. First, students' familiarity with the platform and their spontaneous use might interfere with their perception and performance (Pozzo et al., 2024). That study found that learners already familiar with the platform reported more positive experiences and greater openness to using it for educational purposes than learners unfamiliar with it. Mulgaonkar & Premarajan (2026) suggest that learners do not respond uniformly to digital environments; rather, individual differences shape how they interpret and use technology. Typical users of the platform are between 18 and 34 years old (Prevost et al., 2025). The age range of adult crafters extends beyond 34, so if successful, this study will challenge that notion. Additionally, the lack of regulation of content accuracy and quality can pose a challenge when using the platform for educational purposes (Prevost et al., 2025). However, the use of TikTok will act as a springboard for deeper learning for this study. Learners will be introduced to various decoupage techniques, igniting their curiosity. The learners will then return to the module to further investigate the technique that they are interested in, which will be vetted content. Upon further investigation into their chosen technique, learning transfer will occur, and learners will create a finished decoupage project based on their serendipitous research.

Transfer

In learning transfer, learners apply their newly acquired knowledge and skills in a context different from the one in which learning originally took place (Roumell, 2019). In this study, learning transfer will be evident when learners watch short-form decoupage videos, investigate further, and then independently create a finished product on different surfaces.

For transfer to occur, the knowledge and skills must be generalized, applied, and maintained over time (Roumell, 2019). Additionally, the learner must be personally motivated, the content must be relevant to the learner, and the learning goals must be goal-oriented toward the learner's needs (Roumell, 2019). This study will provide the appropriate conditions to foster learning transfer in the participants. Coming from special-interest Facebook groups dedicated to decoupage, the participants in this study are already personally motivated, and the relevance is already evident. Many participants have joined those groups to learn new skills and techniques. Lastly, well-structured microlearning can support deeper cognitive processing (Mulgaonkar & Premarajan, 2026). The design of the eLearning module will foster transfer and help reduce cognitive overload through microlearning. The conditions that will promote learning transfer will be in the microlearning design, the self-directed nature of the learners, their favorable inclination to learn and perfect their craft, and the personal relevance of the content.

Conclusion

The theoretical foundation of this study draws on six interconnected frameworks that together explain how serendipitous exposure to microlearning can lead to skill transfer among adult hobby learners. Andragogy tells us that adult learners are self-directed and intrinsically motivated. Connectivism tells us that learning occurs through networks. Microlearning presents content in small portions and helps prevent information overload. Curiosity is a motivational factor in compelling adult learners to complete a course. Before a learner becomes curious, they must first be exposed to different possibilities. This study will present short-form videos on TikTok as a microlearning approach to induce curiosity through exposure. Through this instructional design, the study will examine the use of TikTok as a microlearning-based exposure model in a hobby-based e-learning module for adult hobby learners, to understand how short-form video exposure influences learners' experience and their ability to transfer decoupage techniques to new surfaces independently.

Several findings from existing research informed and validated this study's design. In other studies, researchers have proven that microlearning improves motivation and engagement (Silva et al., 2025; Tan et al., 2026). They have also discovered that TikTok's algorithm promotes serendipitous discovery (Zeng, 2023) and that short-form video content works most effectively when the videos are 6 minutes or under (Tan et al., 2026).

On the other hand, some things did not work. Pozzo et al. (2024) found that learners unfamiliar with TikTok had fewer positive experiences. Prevost et al. (2025) suggested that TikTok's lack of content regulation poses quality challenges, and Mulgaonkar & Premarajan (2026) suggested that microlearning only works when it is intentionally designed.

Several sources directly shaped the design and theoretical argument of this study. The Information Gap theory and how it explains that curiosity intensifies until it is satisfied, and how exposure leads to curiosity, helped inspire my thinking. This helped me to form my argument for a Scroll and Stumble model. Roumell's (2019) finding that transfer requires intentional application opportunities directly shaped the design of the eLearning module. Additionally, learning about the benefits of microlearning and how adults learn informed the design decisions. Lastly, Conceição & Biniecki (2024) explained how digital informal learning is effective, which validated my approach to this study.

Chapter 3: Research Methodology

Instructional Problem Overview

Decoupage crafters are skilled, motivated, and resourceful. However, their learning is largely unstructured and reactive and built on trial-and-error or unvetted community content. The Learners need to be able to troubleshoot failures confidently, select appropriate materials and methods, and transfer their skills to new surfaces and techniques independently to transform their procedural competence into adaptive expertise.

Potential Solutions

A potential solution to the instructional module is a one-hour e-learning module. The e-learning module addresses the instructional problem by providing learners with vetted content, an in-depth look at how different materials perform under varying conditions, and insights into troubleshooting decoupage mistakes.

1. **Vetted Content:** The module includes vetted YouTube tutorials on various decoupage techniques.
2. **Understanding of Materials:** The module contains a material list and goes into detail about how each material performs under different conditions. This helps the learner to understand the "why" behind their decoupage mistakes to troubleshoot.
3. **Troubleshooting Content:** The module helps the learner troubleshoot various decoupage mistakes based on the pathway and the surfaces used.

E-Learning Unit of Instruction Description

Module Link: https://decoupage-module.netlify.app/#/

Module Title: Decoupage Discovery: Mastering Techniques on Every Surface

Module Description: This module is designed for adult hobby learners and teaches them how to master decoupage techniques on various surfaces. This module is grounded in Learning Through Exploration and Discovery (LEAD) practices. Therefore, learners first explore different decoupage techniques and styles through TikTok before returning to the module to choose a pathway based on their interest. The learner can choose among 5 pathways: Napkin Decoupage, Image and Photo Transfer, Tissue Paper, Rice Paper, and Fabric. Through their chosen pathway, learners will learn which materials are needed to get started, how different surfaces respond to

those materials, how to troubleshoot problems that may arise during decoupage practice, and how to finish each project. Learners will also watch tutorials, practice building their own projects, and receive individualized feedback from an AI evaluator.

Target Audience: This module is intended for adult hobby learners seeking to improve their decoupage skills.

Learning Goal: By the end of this module, adult hobby learners will be able to independently apply a self-selected decoupage technique to a new surface through guided microlearning exposure, formative practice, and reflective transfer.

Learning Objectives: By the end of this module, learners will be able to:

• Identify a decoupage technique of personal interest through self-directed exploration of short-form video content on TikTok.

• Demonstrate the selected technique by completing a practice piece using the materials, steps, and guidance provided in their chosen pathway.

• Troubleshoot common technique-specific errors by applying knowledge gained through the scenario check and Watch Out sections of their pathway.

• Evaluate their own work using AI-generated feedback to identify strengths and areas for improvement.

• Transfer the selected technique independently to a new surface not used during the practice exercise.

• Reflect on their learning process by articulating what they tried, what worked, what surprised them, and what they would do differently.

Formative Assessments: There is one “Check for Understanding” assessment that checks their understanding of materials handling and troubleshooting. Learners will also be presented with one scenario to check their understanding of project-specific troubleshooting. Lastly, learners can submit one project for a low-stakes AI evaluation: a photo and a written reflection, which the AI will evaluate and critique.

Summative Assessment: There is a final "Transfer Challenge" that is evaluated by AI. Learners will take what they have learned from the course and their low-stakes assignment to submit a photo of their first project and a second photo of their second project, completed on a different surface than the first, and will also provide a written reflection. AI will evaluate their ability to transfer their technique to a different surface.

Anticipated Learner Needs and Solutions:

1. **Varying Decoupage Experience Levels:** With learners having various levels of decoupage expertise, content would have to be appropriate for all levels of learners. The module addresses this need by providing content and assessments that take the learner through multiple levels of thinking, from understanding to creating

2. **Vision Impairments:** There may be learners with vision impairments. Those learners will be able to navigate through the course because it is compatible with screen readers. Additionally, font sizes are reasonable, there is plenty of white space, and the layout is predictable. For example, each pathway includes learning objectives, materials lists, information regarding surfaces, YouTube tutorials, instructions on how to get started, and formative and summative assessments.

Two Learning Technologies:

1. **YouTube:** YouTube is incorporated into the module to help the learners visually see tutorials on how to apply specific techniques to different surfaces, which helps with the learning goal of being able to independently apply a self-selected decoupage technique to a new surface through guided microlearning exposure, formative practice, and reflective transfer.
2. **AI Evaluation Agents:** I used MindStudio to build an AI agent that takes the learner's project photo and written reflection and provides individualized feedback and critiques. This agent is used for both formative assessment and the final challenge summative assessment. This technology aligns with the learning goal because it lets the learner know what they have done well and what they need to work on next time, enabling them to apply a decoupage technique independently.

Addressing the Instructional Problem: The problem statement reads:

Decoupage crafters are skilled, motivated, and resourceful. However, their learning is largely unstructured and reactive and built on trial-and-error or unvetted community content. The Learners need to be able to troubleshoot failures confidently, select appropriate materials and methods, and transfer their skills to new surfaces and techniques independently to transform their procedural competence into adaptive expertise.

This module addresses the instructional problem by providing learners with vetted content, an in-depth look at how different materials perform under varying conditions, and insights into troubleshooting decoupage mistakes.

1. **Vetted Content:** The module includes vetted YouTube tutorials on various decoupage techniques.
2. **Understanding of Materials:** The module contains a material list and goes into detail about how each material performs under different conditions. This helps the learner to understand the "why" behind their decoupage mistakes to troubleshoot.
3. **Troubleshooting Content:** The module helps the learner troubleshoot various decoupage mistakes based on the pathway and the surfaces used.

Research Methodology

Method

I used mixed-method research for this study. A pre-module survey and questionnaire include both selected and constructed responses, as well as open- and closed-ended items. My study investigates the use of a microlearning-based exposure model to examine adult hobby learners' ability to acquire and apply foundational knowledge to troubleshoot failures confidently, select appropriate materials and methods, and independently transfer their skills to new surfaces and techniques. Therefore, I'll need to know whether the microlearning-based exposure model I've built has been effective in helping the learner acquire and apply foundational knowledge to troubleshoot failures independently. That requires a qualitative data collection method. Because I use TikTok as a microlearning-based exposure model, and that app, according to my research, is most popular with specific age groups, I also collect age ranges of

the participants to test if it is the microlearning-based exposure model that is or is not effective, or if it is the specific use of TikTok. This data requires a quantitative data collection method.

Participants/Stakeholders

For this study, participants are adult hobby learners who are recruited from decoupage crafting Facebook groups. Those groups are diverse in age, location, and job titles, with participants aged 18 to 65 and older, and job titles ranging from teacher and barista to stay-at-home parent to banker. The participants' ages and job titles will reflect that diverse range. This study will recruit between 5 and 10 participants. Other potential stakeholders of this study include the admins of the Facebook groups. Recruiting participants from these Facebook groups requires permission from their administrators.

Data Collection Instrument(s)

Participants will be given a pre-survey to take prior to completing the e-learning module. As a summative assessment, participants will upload photos of their finished products for evaluation by an AI agent. After completing the module, participants will be given a post-module questionnaire. At the start of the pre-module survey, participants are asked to provide the code they received during recruitment as an identifier for analyzing the results. The pre-module survey comprises four sections: "About You," "Decoupage Experience," "TikTok Familiarity," and "Curiosity and Motivation." Altogether, there are 12 questions- nine of which are multiple-choice questions, and 3 are open-response questions. Each question aligns with my research questions.

Research Questions

1. How do learners describe their experience using TikTok as a microlearning-based exposure model for learning new decoupage techniques?
2. How does the use of TikTok as a microlearning-based exposure model impact adult hobby learners' ability to transfer techniques to new surfaces independently?

The first research question requires qualitative data collection because it asks learners to describe their experience using TikTok as a microlearning-based exposure model for learning new decoupage techniques. Therefore, in the pre-module survey, participants are asked about their previous experience with TikTok, decoupage, and other crafts. Because the purpose of my research is to examine the use of TikTok as a microlearning-based exposure model in a hobby-based e-learning module to understand how short-form video exposure influences learners'

experience and their ability to independently transfer decoupage techniques to new surfaces, participants are asked questions about their curiosity and motivation. The formative and summative assessments gauge whether short-form video exposure affects their ability to independently transfer decoupage techniques across surfaces.

Once participants complete the module, they are asked to take a post-module survey. Participants are asked to provide the code they received at the start of the recruitment process. This post-module survey comprises 13 questions- nine of which are multiple-choice questions and four are open-response questions. There is also a survey item that asks participants to upload their summative assessment results. The post-module survey has four sections: "Your TikTok Experience," "Your Learning Experience," Your Transfer Experience," and "Reflection," and each aligns with the research questions.

Data Analysis Technique(s)

I will use a convergent mixed-methods design because qualitative and quantitative data are collected in the same sitting to compare them and determine whether they support the same conclusion about the exposure model's effectiveness. Data from the pre-module, module, and post-module surveys will be linked by participant code rather than by name.

Once the open-ended response data is gathered, I will code it by sorting words and phrases into common themes that I see arising from the participant's experience using TikTok. Once closed-ended response data are gathered, I will group the age ranges and compare them with their summative assessment results (see Figure 2 and Figure 3 on the Figures page) to examine whether transfer outcomes are attributable to TikTok and age rather than to the microlearning exposure model.

Quantitative and qualitative results will be merged using a joint display that allows comparison of themes from participants' open-ended responses with patterns and counts from closed-ended responses. By joining these results, I will be able to determine whether the microlearning exposure model supports skill acquisition and independent transfer.

Expected Timeline

Table 1

Task	July	August	September
Request admin permission to recruit participants.			

Send out requests for recruitment.			
Onboard participants.			
Have participants complete surveys and the module.			
Clean and code the research data.			
Analyze the data.			
Write chapters 4 and 5 to summarize and conclude.			

Data Security and Confidentiality

To ensure participant confidentiality, I will not collect participant names for this study. I will, however, provide participants with randomized codes to use in place of names and ask them to provide their age range (for example, 18-24). Additionally, when participants take photos to upload, they will be instructed to include only their product in the photo, not their faces or anything that could reveal their identities. Participant photos submitted for assessment will be evaluated by an AI tool. They will not be shared, published, or used for any purpose beyond providing feedback to the participant and informing this research study.

In storing data securely, forms and surveys will be completed in Google Forms. No one besides me, as the researcher, will have access to the results.

Conclusion

A convergent mixed-methods design was selected to enable the simultaneous collection of qualitative data describing learners' experiences and quantitative data assessing whether observed outcomes were attributable to the model itself or to age-related patterns in TikTok use. The specific data collection instruments selected for this study are a pre-module survey, an AI-evaluated summative assessment, and a post-module survey. These data collection instruments were selected for this study because they contain both open- and closed-ended questions that would help answer whether the module's microlearning exposure model is effective in supporting skill acquisition and independent transfer among adult hobby learners.

Participants are recruits of decoupage community groups on social media. Once the administrators of the Facebook groups approve the recruitment process, participants will undergo onboarding, which includes being informed about the study and the possible risks associated

with participation, and completing consent forms, a pre-module survey, the module, and a post-module survey.

Convergent mixed methods will be used in the data analysis phase. A thematic analysis of the qualitative data and a pattern analysis of the quantitative data. Quantitative and qualitative results will be merged using a joint display to help me determine whether the microlearning exposure model supports skill acquisition and independent transfer.

Chapter 4: Results

Summary of Research

Instructional Setting

The module was completed asynchronously by the learners, and because it is responsive, they could complete it on a device of their choice.

Research Topic

Investigate the use of a microlearning-based exposure model to assess adult hobby learners' ability to acquire and apply foundational knowledge to troubleshoot failures confidently, select appropriate materials and methods, and independently transfer their skills to new surfaces and techniques.

Participants/Stakeholders

For this study, 5 adult hobby participants took part. Their role in the e-learning intervention was to document their prior knowledge and experiences regarding TikTok and decoupage craft on the pre-module survey/ questionnaire. During the e-learning module, the goal was to teach them about different surfaces and decoupage techniques so they can troubleshoot their own problems while crafting and independently transfer their skills to new surfaces. After completing the module, their role involved documenting their module experience on the post-module survey/questionnaire.

Stakeholders of this study included the admins of the Facebook groups. Recruiting participants from the Facebook groups required permission from their administrators.

Data Collection

Data was collected via separate Google Forms for both the pre- and post-module surveys, and responses were consolidated in Google Sheets.

Summary of Results

Pre-Module Descriptive Data

Data from the pre-module survey show that participants are mostly 65 years of age or older and have been interested in crafting for more than 5 years. All participants have reported that they currently practice other crafts: 80% also paint, 20% scrapbook, and 60% cite "other" as their current craft. All participants have tried decoupage before. Of these decoupage crafters, 20% state they are complete beginners, while 80% state they have "some experience." Participants were asked about the source of their learning, and 10% reported taking in-person classes to learn decoupage, while 60% reported learning through trial and error. YouTube also ranks high as a source of learning, with 60% of participants stating they have learned through YouTube tutorials.

Previous TikTok Usage

Of the participants, 40% report using TikTok a few times a week, 20% use it occasionally, 20% never use it, and 20% use it daily. Only 10% of participants reported having learned a new skill on TikTok before.

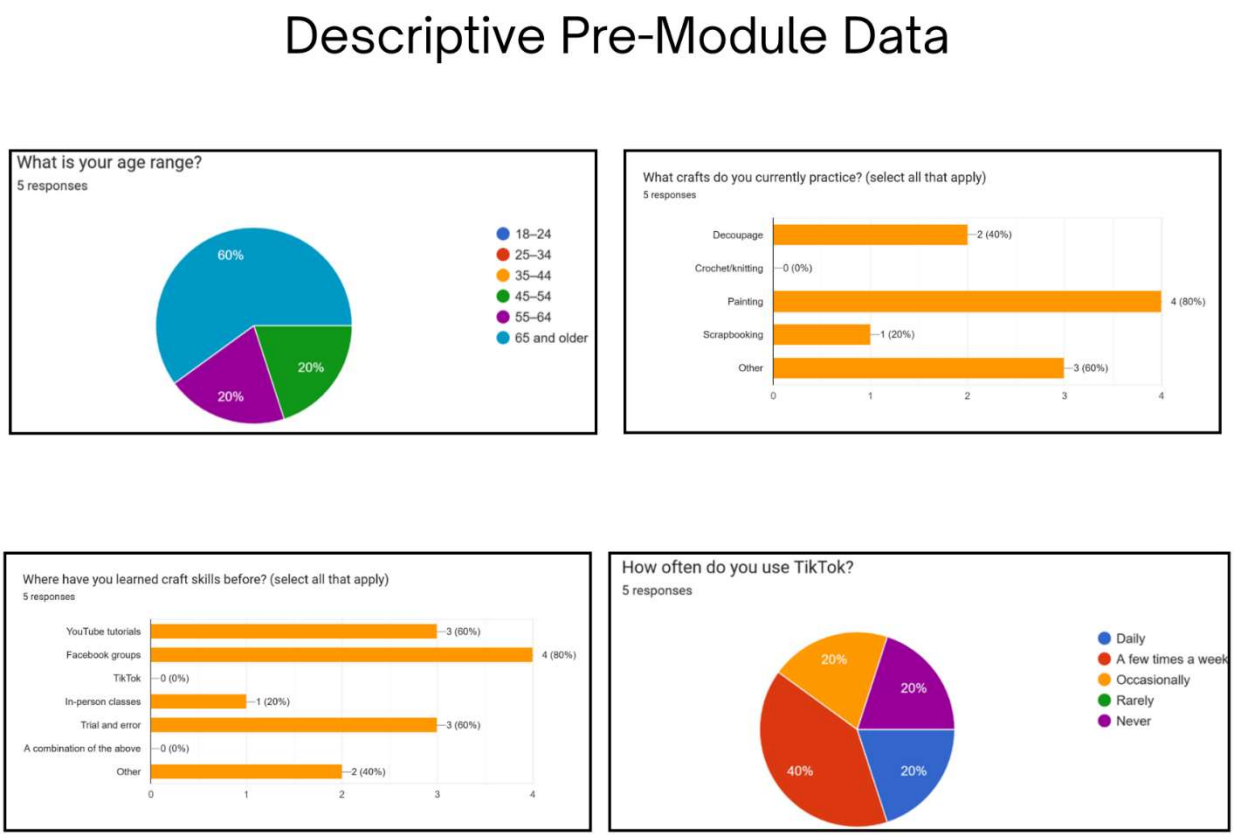
Attitudes Towards the E-learning Intervention

When asked what motivated them to complete the e-learning module, 40% of participants cited gaining motivation to get back into crafting as a creative outlet as a reason, another 40% cited seeing my recruitment post in the Facebook group as motivation, and 20% cited being a part of many crafting groups on Facebook as the reason for wanting to complete the e-learning module.

The data shows that most participants were interested in learning more about the decoupage-on-seashells technique, which was not introduced in the module. Of the participants, 60% were interested in decoupage on oyster shells, 20% wanted to learn how to decoupage on pots and baskets, 20% were interested in paper crafts, and another 20% were interested in learning about decoupage, different glazes, and coasters.

When asked what they had hoped to learn by the end of the module, all participants cited becoming more proficient in decoupage as their goal.

Figure 1: Descriptive Pre-Module Data Visualization.



Post-Module Descriptive Data

TikTok Usage and Influence

Before continuing their respective pathways in the module, participants were guided to use TikTok to explore different decoupage possibilities. Of the participants, 40% spent 10-30 minutes on the TikTok app before returning to the module, 20% spent up to 1 hour on the app, and 20% reported not using TikTok at all.

As for returning to the module after browsing TikTok, 60% of participants reported it was “somewhat” difficult and required a conscious effort. Among the other participants, 20% reported returning to the module naturally when they felt ready, and 20% reported not using TikTok at all. Of all the participants who went to TikTok, 100% stayed on task.

Additionally, although 20% of participants did not use TikTok, among those who did, 75% chose their pathway based on what they had discovered on the app, and 25% said TikTok had confirmed something they were already curious about.

When asked whether they would use TikTok in the future to learn a skill, 60% of participants said, “yes, definitely,” 20% said “probably,” and 20% who did not use TikTok said, “probably not.”

Of all the participants, 60% said their interest shifted from passively watching TikTok videos of finished products to wanting to see how the products were made; 20% said it “somewhat” made them want to see how the crafts were made; and 20% did not go to TikTok. Lastly, excluding the participant who did not use TikTok, everyone said their learning experience changed how they think about using TikTok as a learning tool. Excluding non-TikTok users, 75% say they now see TikTok as a legitimate way to learn, while the other 25% say they somewhat see the potential of using TikTok as a learning tool, though they have some reservations.

Learning and Transfer Experience

Participants were asked to discuss which technique they tried and the result. Participants of this study used different techniques and a variety of surfaces. Of the participants, 60% chose the Rice Paper pathway, using surfaces such as ceramic coasters, oyster shells, canvas boards, and wood. As for the remaining participants, 20% selected the Image Transfer pathway, and 20% chose the Napkins pathway. Those participants chose to use ceramic tiles and oyster shells as their surfaces. Additionally, participants were asked what surprised them about their learning experience, and each participant cited different techniques for handling the various materials. Some said they were surprised by the difficulty of laying paper flat on curved surfaces, another

said they were surprised by the precise drying time between coats, and another said they were surprised by how easily napkins tear on rough surfaces.

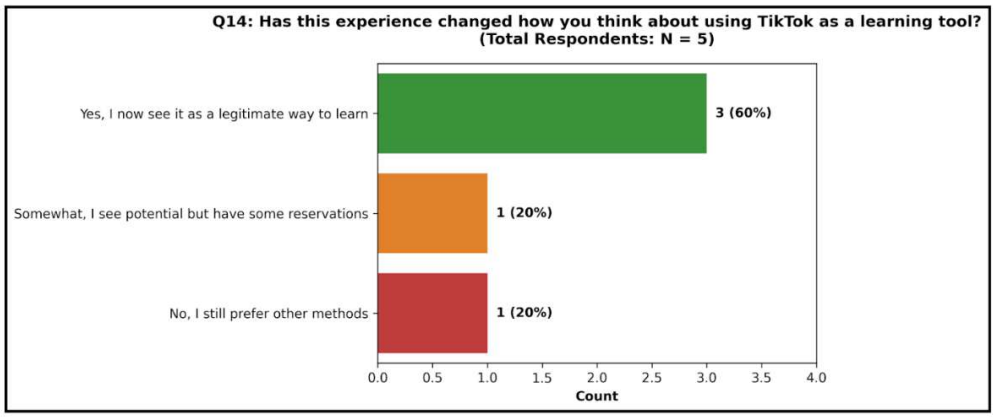
Lastly, participants had the opportunity to share their thoughts on the module and the overall learning experience. Although they found the module informative, most participants were disappointed that it did not include techniques for handling oyster shells or other curved surfaces.

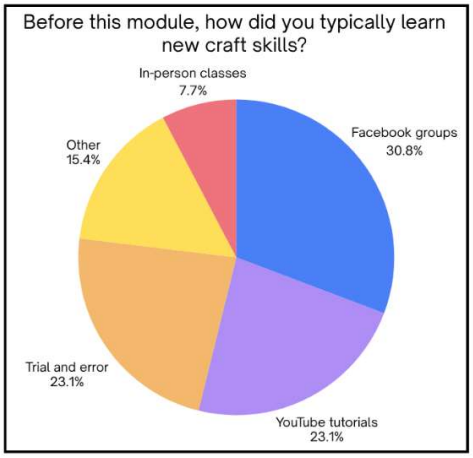
Table 2: Learner Pathway and Motivations Cited

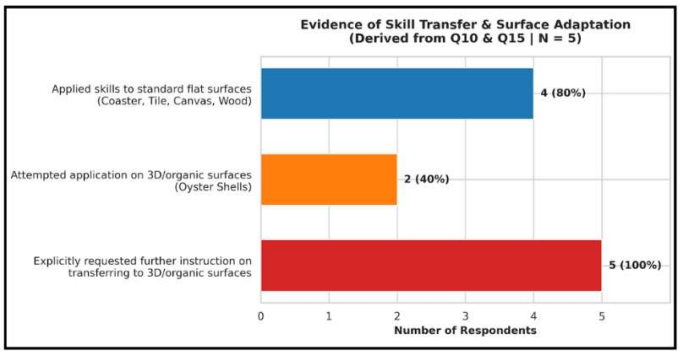
Chosen Pathway	**Count**	**Share (N=5)**	**Key Inspirations / Motivations Cited**
Tissue Paper / Rice Paper	3	**60%**	• Suitable delicate material for detailed projects • Inspired by decorative crafts seen on TikTok • Desire to practice paper crafts without tearing
Image Transfer	1	**20%**	• Curiosity about how glazes interact with transferred images
Napkins	1	**20%**	• Specifically wanted to decoupage onto collected local oyster shells

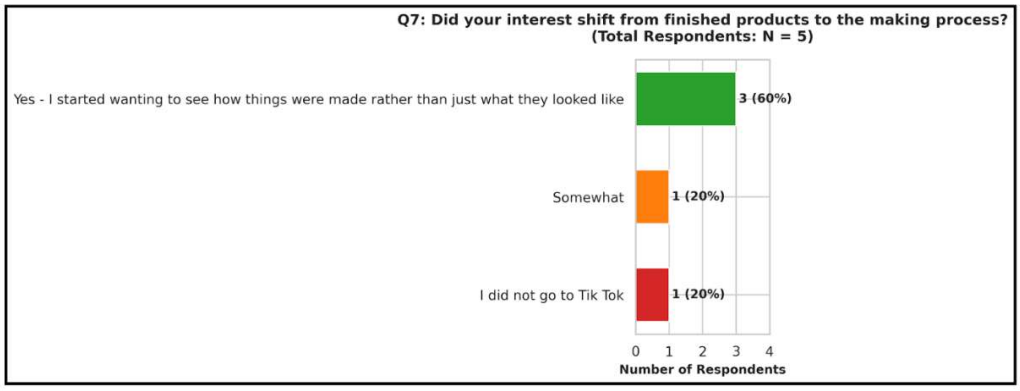
Figure 2: Descriptive Post-Module Data Visualization.

Descriptive Post-Module Data









Feedback Theme / Mention	**Count**	**Share (N=5)**	**Key Takeaway**
Praised Foundational / Basic Steps	5	**100%**	All respondents appreciated the clear basic napkin/rice paper process.
Requested Oyster Shell Guidance	5	**100%**	Every participant explicitly cited wanting decoupage techniques for oyster shells.
3D / Curved Surface Handling	3	**60%**	Highlighted the need for instructions on non-flat, irregular surfaces.
Surface Prep (Sealing & Smoothing)	2	**40%**	Specifically requested steps for treating rough, natural shell textures.
Other Organic Surfaces (Glass / Clay)	2	**40%**	Suggested extending future modules to glassware or clay pots.

Table 3: Feedback Themes and Key Takeaways.

Interpretations

The descriptive data show that learning transfer has occurred among most participants. Most participants learned and applied baseline skills to traditional, flat surfaces. Two learners attempted to transfer flat-surface techniques to more complex, curved surfaces. All participants recognized the technical complexity of transferring skills to curved surfaces such as oyster shells.

Moreover, micro-learning-based exposure models can potentially improve learning outcomes. More than half the participants reported moving from passively watching TikToks of finished products to wanting to investigate further by watching videos of the actual process.

Additionally, more than half reported that they chose their respective pathways based on what they had found while on TikTok.

Tissue and Rice paper are popular pathways. More than half of the participants chose those pathways. Furthermore, oyster shells are popular surfaces that decoupage crafters like to work with. With 60% of participants initially starting the module hoping to learn more about decoupage on oyster shells, 100% of participants post-module stated they were hoping to learn more about oyster shells and other 3d surfaces.

Lastly, participants reported that they usually learn new skills through Facebook groups, YouTube videos, and through trial and error. However, more than half of the participants say they now see TikTok as a legitimate way to learn new crafts.

All in all, the data gives direction to future iterations of the e-learning solution.

Recognition and Minimalization of Bias

As the researcher of this study, I recruited participants from decoupage groups on Facebook. I am also an avid crafter and a member of those groups. I recognized that I might see group posts from participants outside the study. Therefore, I took measures to ensure that no data would be tied to a particular person. At initial recruitment, I assigned codes to participants so that all data I see is tied to a code, rather than a person. This eliminates any bias that could have arisen during the study, as well as any bias that may arise after the study.

Proposed Iteration(s) of E-Learning Solution

Based on my personal observational notes, the following aspects of my research methodology found in Chapter 3 represent pain points that can be refined to improve my research:

Refinements and Justifications:

1. **TikTok as the microlearning-based exposure model:** I've observed that TikTok as the microlearning-based exposure model created friction in participant recruitment and for participants completing the e-learning module. Some adult learners declined to participate because they didn't have TikTok or didn't want to use it, and some participants who completed the module skipped the TikTok portion.

Additionally, reliance on an external tool can create cognitive friction points in the learning flow. Learners should be able to complete the module smoothly without interruption. Having to stop, use an external tool, then return to the module causes that cognitive interruption.

As stated in the Literature Review chapter of this Capstone research, the learner's desire to learn is to serve their personal interest, and that interest can wane if the learning is constantly interrupted. Moreover, in my Literature Review, I state that curiosity exerts a powerful motivational force that can be activated by scrolling through TikTok's short-form video content. Embedding an endless-scroll feature or a curated library into the module would eliminate the need to rely on external applications.

Refinement: Replacing the mandatory external search with an integrated, curated media library embedded within the module will preserve the integrity of the research. Alternatively, TikTok can still be used as the microlearning exposure model if the module also includes an embedded curated media library, which would give learners options and autonomy to choose

their preferred method. It would also invite a greater population of participants to take part in the study.

2. **AI Summative Assessment Evaluation:** Without a rubric presented to the learner, it is unclear what defines satisfactory or unsatisfactory work. Moreover, relying on user-submitted photos for automated assessments introduces qualitative variables such as the right lighting, camera resolution, angle, etc., that are undefined for both the learner and the AI agent, which in turn can skew evaluations and research data.

Refinement: Adding a standard submission guideline will control the variables for the AI visual analysis. In addition to submission guidelines, providing explicit exemplar photos for the learner and adding a human-in-the-loop validation process will also ensure the AI won't analyze the learner's submission in error.

3. **Target Facebook Group:** In Chapter 3, I noted that recruiting participants from special interest Decoupage groups would be best for this study because the module focuses on helping crafters improve their decoupage skills. However, the purpose of my study is to determine whether exposure to something unknown can spark curiosity, leading to further investigation and, ultimately, sustained learning. Therefore, opening the study to general crafting groups would be best for testing that theory. Participants with little to no understanding of decoupage would be more likely to encounter the unknown than an advanced decoupage crafter with familiarity.

Refinement: Open the study to general crafting groups and participants with little to no knowledge of decoupage. This would better test my exposure-to-curiosity-to investigation theory.

The abovementioned refinements would improve my research to ensure the reliability and validity of the data I've collected. It would also help keep my initial theories about exposure and curiosity at the forefront of this study.

Area of Potential Bias

During the implementation of the e-learning module, I realized that a potential source of bias was selection bias. As mentioned previously, I recruited participants from decoupage Facebook groups. In future iterations, I would recruit from general crafting groups instead of decoupage-specific groups. In general, crafters like to try different types of crafts, and I believe non-familiar crafters would be open to completing the e-learning module and learning a new craft.

Strategies for Future Iterations

1. **Incorporate short-form microlearning videos into the module.** Incorporating short-form microlearning videos into the module will reduce the need to interrupt the learning flow to search for an external app.
2. **Add submission guidelines and rubrics for summative assessment.** By providing learners with a rubric and specific guidelines for photo submissions for their summative assessments, learners will understand how to take and submit their photos, eliminating confusion and the need to retake the assessment.

Chapter 5: Discussion

Conclusion(s) Based on Results

The purpose of this research was to investigate the use of a micro-learning-based exposure model to examine adult hobby learners' ability to acquire and apply foundational knowledge to confidently troubleshoot failures, select appropriate materials and methods, and independently transfer their skills to new surfaces and techniques. For this study, I used TikTok as the micro-learning-based exposure model. Therefore, my first research question asked: how do learners describe their experience using TikTok as a microlearning-based exposure model for learning new decoupage techniques? My analysis of the data shows that more than half of the participants have a favorable view of TikTok for learning new crafts and techniques. Most of the participants had been exposed to various decoupage possibilities on TikTok and later returned to the e-learning module to choose their pathway based on what they had discovered.

This shows that exposure can lead to further investigation. Exposure precedes curiosity. Participants stated that their initial motivation for completing the module was to get back into crafting or to help with research. However, their motivation for choosing their pathways stemmed from exposure to TikTok decoupage videos.

Furthermore, pre-module survey data show that only 20% of the participants reported having learned a new skill through TikTok before. However, the post-module survey data show that most participants would intentionally use TikTok in the future to learn a new skill.

My second research question asked: How does the use of TikTok as a microlearning-based exposure model impact adult hobby learners' ability to independently transfer techniques to new surfaces? The qualitative and quantitative data indicate that exposure to short-form video catalyzes curiosity. Participants reported a shift in interest while viewing TikTok videos. Participants went from admiring finished products to wanting to understand how they were made. This initial exposure served as an effective gateway, motivating learners to deepen their understanding through the structured e-learning module.

The findings demonstrate that this exposure- to-instruction workflow successfully supported foundational skill transfer. More specifically, 80% of participants demonstrated independent skill transfer to flat surfaces, such as ceramic coasters and wooden slabs. Moreover,

although it proved difficult for the learners, all participants recognized a skill gap when working with more curved surfaces. While the microlearning videos on TikTok exposed participants to different possibilities and made them aware of the skill gap, the module proved insufficient in teaching the learners techniques for working with curved and complex surfaces.

Based on quantitative and qualitative data, I conclude that an exposure-to-curiosity-to-investigation-to-instruction-to-learning transfer workflow builds baseline proficiency for adult hobby learners. For the e-learning solution in this study, more specialized scaffolding is needed to help learners troubleshoot more complex, curved, and 3D surfaces. If there had been another iteration of the design cycle, the data support the conclusion that learners would have successfully troubleshooted issues arising from complex decoupage projects.

Limitations

One limitation encountered during data collection and analysis was the LMS used for the e-learning module. I used Articulate Rise 360 as the rapid authoring tool and Articulate Reach 360 as the LMS to host the module. However, those tools were used only on a trial basis. This means that if my trial period were to end before the e-learning solution is implemented, the study would end abruptly. Therefore, I used Netlify to house the SCORM package so that participants can access the course at any time outside of the trial period.

The decision to use Netlify also arose from my need to keep participants' PII as confidential as possible. To access the course in Reach 360, participants would have had to sign up using their personal email. To avoid giving more PII than necessary, the best option was to use Netlify, where participants could access the course without needing to sign up. Further, I assigned a code to each participant to serve as an identifier linking pre-module and post-module survey data.

Another limitation I encountered was in recruitment and the number of participants. During the recruitment process, I found that many people declined to participate since they had to use TikTok. I also found that I had to send gentle reminders to participants who had begun the study to continue with the module if they were still interested. I believe this is because the course features mental interruptions, such as when the learner must leave the module to use external tools.

Additionally, I intentionally kept the number of participants to 5. This was due to the use of the AI evaluator used for the summative assessment. The computing power required to generate results incurred costs that I, as the researcher, paid. Keeping the number of participants lower, in turn, kept computing costs lower.

Lastly, having only one iteration of the e-learning module was a limitation I encountered. As I collected qualitative data, I realized the e-learning module was missing a key component that participants had anticipated. Because of this, I was only able to conclude that learners can achieve baseline proficiency in learning transfer, and that further scaffolding would be needed for them to reach greater proficiency.

Implications of Research on Educational Practice

Suggested best practices for implementing a similar learning experience include allowing an ample yet structured exploration phase built into the e-learning solution, rather than as an external tool. To scaffold the learner toward mastery, the learner must first have an interest in the learning, and an exploratory phase would allow the learner to discover things they did not know before. Once that exposure registers, curiosity will set in, and then their ZDP will activate. Imperatively, the internal exploration phase should take the form of microlearning.

Another best practice is to allow the learner to choose their own pathway rather than provide a static, linear learning experience. The ability to choose their own learning pathway aligns with the exploration and exposure phase, and it supports learner autonomy.

Implications

The implication of this research for educational practice is that learners will have enhanced intrinsic motivation and cognitive engagement. By embedding an exploration phase within the learning module, the learner's motivation to continue shifts from compliance-driven to curiosity-driven. Moreover, because curiosity activates the ZPD, learners must be primed before they can begin thinking about and solving higher-level problems.

Another implication is that learners will be empowered and have more autonomy. Allowing learners to choose their own pathways aligns with adult learning principles and increases ownership of their own learning process. This can, in turn, improve learning retention.

Next, cognitive load will be reduced through microlearning during the exploration phase of the learning experience. Microlearning ensures that learning remains digestible and free from information overload.

This research also rejects a one-size-fits-all design. A similar e-learning module will reject traditional methods of imparting knowledge by incorporating a dynamic instructional design with multiple entry points.

Applications

In real-world practice, the learning experience can be designed with embedded discovery hubs so that learners would not have to interrupt their cognitive flow. This can take the form of a curated resource library that includes everything the learner needs to successfully complete their chosen pathway.

Lastly, in real-world practice, the pathways can be created by incorporating non-linear navigation menus, allowing learners to choose their pathways based on their interests, current skill gaps, or what they have learned from their discovery phase. Those pathways will include personalized scaffolding that would support the learner in reaching their learning goals.

References

Conceição, S. C. O., & Biniecki, S. Y. (2024). Technology and Adult Learning. New Directions for Adult & Continuing Education, 2024(184), 65–73. https://doi.org/10.1002/ace.20545

Future Learn. (n.d.). Recruiting research participants. https://www.futurelearn.com/info/courses/the-human-face-of-user-research/0/steps/169250

Knowles, M. S. (1979). Speaking from Experience: The Professional Organization as a Learning Community. Training and Development Journal, 33(5), 36–40.

Landauer, T. K., & Dumais, S. T. (1997). A solution to Plato's problem: The latent semantic analysis theory of acquisition, induction, and representation of knowledge. Psychological Review, 104(2), 261–292.

Loewenstein, G. (1994). The Psychology of Curiosity: A review and reinterpretation. Psychological Bulletin. 116(1), 75-98.

Merriam, S. B. (2001). Something Old, Something New: Adult Learning Theory for the Twenty-First Century. New Directions for Adult & Continuing Education, 2001(89), 93. https://doi.org/10.1002/ace.12

Mulgaonkar, D., & Premarajan, R. K. (2026). Instructional design in technology-enabled learning and its impact on knowledge retention: A mediated-moderated framework. Advances in Consumer Research, 3(3), 325–332.

Pozzo, D. N., Biegelmeyer, U. H., Pedroza, F. J. G., Grados, E. A., Barrera, M. B., Craco, T., & Fidelis, A. C. F. (2024). The impact of TikTok as an educational tool on students' performance: A multi-group comparison of international business classes in Peru and Colombia. Procedia Computer Science, 238, 989–994. https://doi.org/10.1016/j.procs.2024.06.124

Prevost, S. S., Duncan, K., & Cole, H. (2025). TikTok as a teaching tool? Journal of the American Association of Nurse Practitioners, 37(11), 603–607.

Roumell, E. A. (2019). Priming adult learners for learning transfer: Beyond content and delivery. Adult Learning.

Sheffler, P., Rodriguez, T. M., Cheung, C. S., & Wu, R. (2022). Cognitive and metacognitive, motivational, and resource considerations for learning new skills across the lifespan. WIREs: Cognitive Science, 13(2), 1–26. https://doi.org/10.1002/wcs.1585

Siemens, G. (2005). Connectivism: A learning theory for the digital age. International Journal of Instructional Technology and Distance Learning, 2(1), 3–10.

Silva, E. S., Costa, W.P. D., Lima, J. C. D., & Ferreira, J.C. (2025). Contribution of microlearning in basic education: A systematic review. Education Sciences. https://research.ebsco.com/c/25xrgu/viewer/html/3lvdxnvccv

Tan, A. J. Y., Kaye, L. K., Davies, J. L., Nicolson, R. I., & Karaminis, T. (2026). Learning critical thinking skills with online bite-sized videos: a qualitative account of students' perceptions. Research & Practice in Technology Enhanced Learning, 21, 1–32. https://doi.org/10.58459/rptel.2026.21005

Zajonc, R. B. (2001). Mere exposure: A gateway to the subliminal. Current Directions in Psychological Science. 10(6), 224-228.

Zeng, J. (2023). #LearnOnTikTok Serendipitously, #LearnOnTikTok Seriously. JCMS: Journal of Cinema & Media Studies, 62(4), 174–180. https://doi.org/10.1353/cj.2023.a904634

Appendix A

E-learning Module Overview

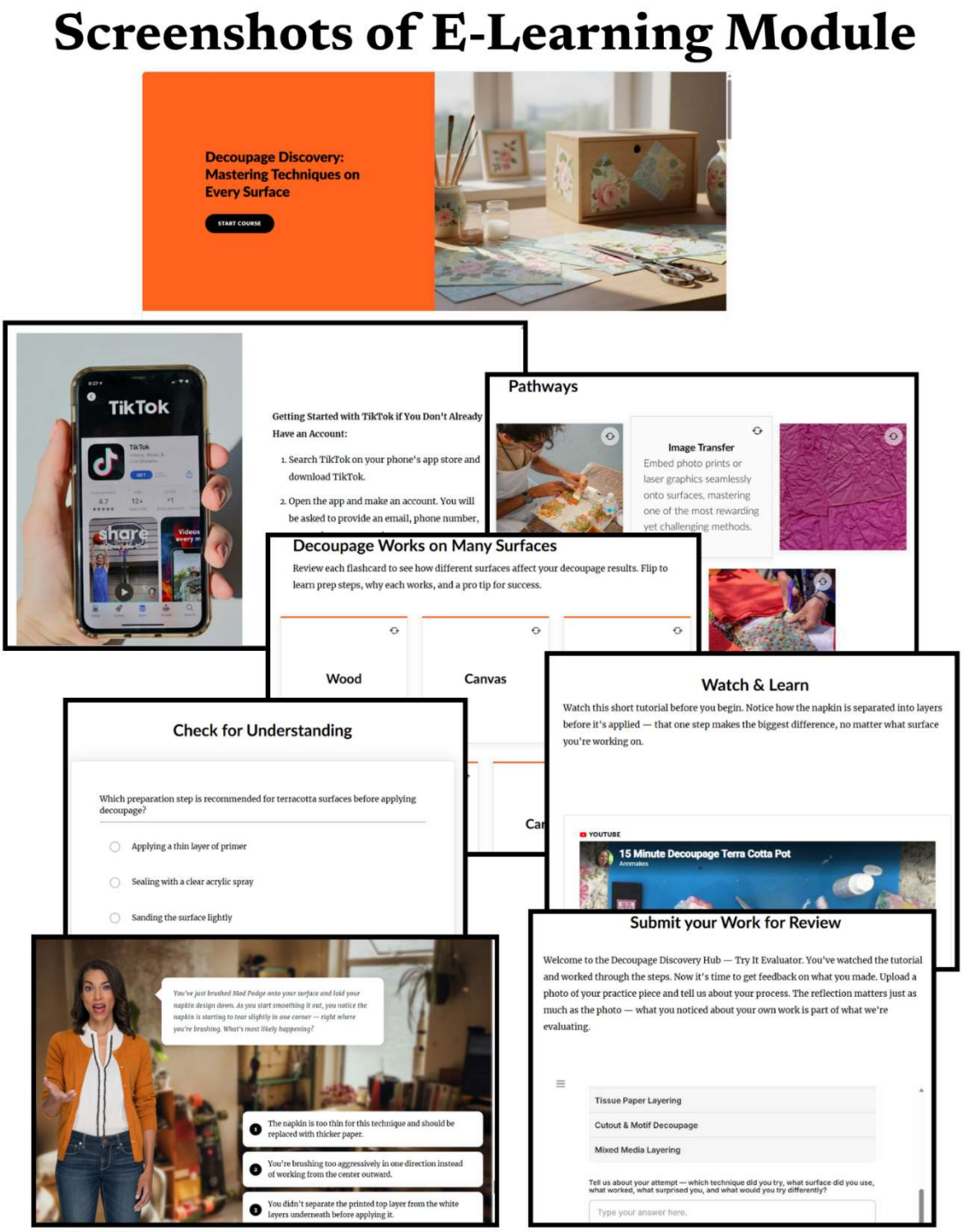
This module, built in Articulate Rise 360, targets adult hobbyist learners. The primary goal is to empower learners to improve their decoupage skills and develop the self-sufficiency needed to independently understand, anticipate, and fix common crafting mistakes.

The module employs a highly personalized, non-linear instructional design. The structure allows learners to select a focused pathway based on their specific interests, respecting their time and motivation as adult learners.

Following the module's introduction, it utilizes social media to foster intrinsic motivation. Learners are guided through a structured "TikTok Exploration" phase in which they must leave the module to explore decoupage content on TikTok using their own device and login credentials. Upon returning from TikTok, the learner is empowered to select one of five distinct, self-contained instructional pathways. This autonomy is central to the design, ensuring learners engage only with the content they are most motivated to master. The pathways are Napkins, Image Transfer, Tissue Paper, Rice Paper, and Fabric.

Once a pathway is selected, the instructional flow is consistent across all topics. The workflow goes as follows: learning objectives & materials, a video tutorial, active job aids, and troubleshooting tips. Along with those components, there are numerous knowledge checks and an AI evaluator that assesses whether the learner can apply the technique they learned to another surface.

Figure 3: Screenshots of the E-Learning Module.



Appendix B

Data Collection Instruments

Figure 4: Pre-Module Survey Questions and Responses.

Pre-Module Survey Responses

Form_Responses

Timestamp	Please enter your code	What is your age range?	How long have you been interested in crafting	What crafts do you currently practice? (select	Have you ever tried decoupage
7/16/2026 14:26:25	DCP-1	65 and older	More than 5 years	Painting	Yes
7/20/2026 21:00:05	DCP-3	55–64	More than 5 years	Decoupage, Other	Yes
7/23/2026 14:02:00	Dcp-4	65 and older	More than 5 years	Painting, Scrapbooking, Other	Yes
7/27/2026 18:22:24	DCP-1	65 and older	More than 5 years	Painting	Yes
8/13/2026 10:44:03	CF-1	45–54	More than 5 years	Decoupage, Painting, Other	Yes

If yes, how would you rate your current skill l	Where have you learned craft skills before? (s	How often do you use TikTok?	Have you ever learned a new skill through Tik
Some experience	Facebook groups, In-person classes, Trial and erro	A few times a week	No
Some experience	YouTube tutorials, Facebook groups, Trial and erro	Occasionally	Not Sure
Complete beginner	YouTube tutorials, Facebook groups	Never	No
Some experience	Other	Daily	Not Sure
Some experience	YouTube tutorials, Facebook groups, Trial and erro	A few times a week	Yes

Do you follow any craft or DIY creators on Tik	What brought you to this module today?	Which decoupage technique are you most cu	What do you hope to be able to do by the end
Yes	Get back into crafting because I need a creath	Decorating oyster shells, coasters	Not be anxious about a mistake, expand my tech
No	I am in many DIY Groups on Facebook	Using decouple in conjunction with glazes	Learn various decoupage techniques
No	Saw your offer on facebook	Decoupage on shells. Because I have a source for	Learn to do a good job decoupage.
No	inspiration and motivation to start getting crea	decoupaging on canvases and shells, maybe pots	become proficient!
No	Wanted to help	paper crafts. I always mess them up a few times	Decoupage better

Figure 5: Post-Module Survey Questions and Responses

Post-Module Survey Responses

Timestamp	Please enter your code	2. After watching decoupage videos on Tik Tok, approximately how long did you spend on Tik Tok before returning to the module?	3. When you returned to Tik Tok, what were you primarily watching?	4. Did you feel like Tik Tok made it difficult to return to the module?	5. Which technique pathway did you choose and what inspired you to investigate it further?
2026-08-28 14:15:22	DCP-1	10-30 minutes	More decoupage videos related to my chosen technique	No, I returned naturally when I felt ready	Tissue Paper / Rice Paper - Chosen because rice paper seemed delicate enough for detailed projects.
2026-08-29 9:40:11	DCP-2	30 minutes to 1 hour	A mix of all of the above	Somewhat I had to make a conscious effor	Tissue Paper / Rice Paper - Inspired by decorative craft projects seen on TikTok.
2026-09-01 16:05:50	DCP-3	Less than 10 minutes	Other craft or DIY content	Somewhat I had to make a conscious effor	Image Transfer - Wanted to see how glazes interacted with transferred images.
2026-09-03 11:12:04	DCP-4	I did not go to Tik Tok	I did not go to Tik Tok	I did not go to Tik Tok	Napkins - Selected napkin pathway specifically because I wanted to decoupage
2026-09-04 18:30:45	CF-1	10-30 minutes	A mix of all of the above	Somewhat I had to make a conscious effor	Tissue Paper / Rice Paper - Wanted to practice paper crafts without tearing.

6. Did the Tik Tok videos you watched influence your technique choice?	7. As you watched more Tik Tok videos, did your interest shift from finished products to the process of making them?	8. Would you use Tik Tok intentionally to learn a new craft skill in the future?	9. Please upload a screenshot of your Transfer Challenge results.
Yes, I chose based on what I saw on Tik Tok	Yes - I started wanting to see how things were made rather than just what they looked like	Yes, definitely	ricepaper_coaster_dcp1.png (Uploaded)
Yes, I chose based on what I saw on Tik Tok	Yes - I started wanting to see how things were made rather than just what they looked like	Yes, definitely	canvas_ricepaper_dcp2.png (Uploaded)
Somewhat - TikTok confirmed something I was already curious about	Somewhat	Probably	glaze_tile_dcp3.png (Uploaded)
No, I chose based on something else	I did not go to Tik Tok	Probably not	napkin_shell_dcp4.png (Uploaded)
Yes, I chose based on what I saw on Tik Tok	Yes - I started wanting to see how things were made rather than just what they looked like	Yes, definitely	ricepaper_wood_cf1.png (Uploaded)

10. Describe your process what technique did you try, what did you do, and what happened?	11. What surprised you about the experience?	12. Would you try this technique on a different surface in the future?
Applied tissue/rice paper to a ceramic coaster using Mod Podge matte. Attempted to adapt the technique onto a curved oyster shell afterwards.	I was surprised by how much trickier it is to get paper flat on curved surfaces compared to flat coasters.	Yes, I already have ideas for what I'd try next
Applied printed rice paper to a mini canvas board using water-brush feathering for soft edges.	The water brush technique made edge blending significantly easier than cutting with scissors.	Yes, I already have ideas for what I'd try next
Attempted an image transfer onto a ceramic tile using gel medium and a topcoat glaze.	The precise drying time required between seal coats before applying glaze.	Yes, I already have ideas for what I'd try next
Tried decoupaging a single-ply napkin onto a raw, local oyster shell.	How easily the thin napkin tears on the rough, uneven ridges of an oyster shell.	Probably
Used semi-transparent rice paper on a wooden coaster block and sealed with matte sealer.	The AI feedback noticed a small crease and gave me a great tip on smoothing from center to edge.	Yes, I already have ideas for what I'd try next

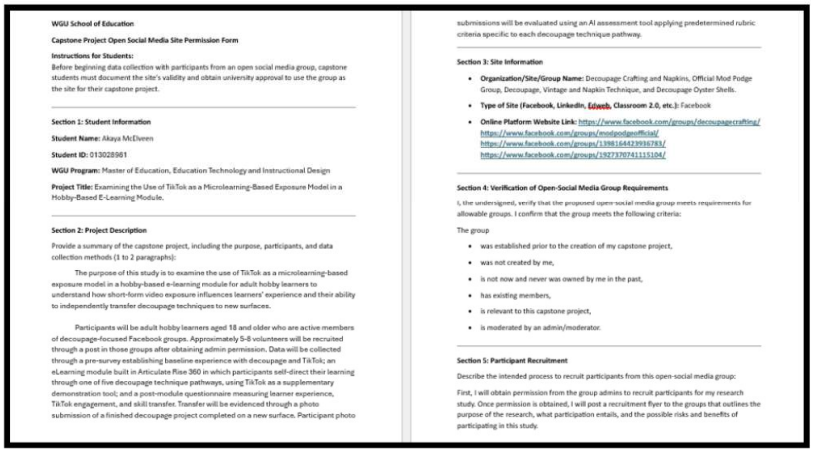
13. Before this module, how did you typically learn new craft skills? (select all that apply)	14. Has this experience changed how you think about using TikTok as a learning tool?	15. Is there anything else you'd like to share about your experience with this module?
Facebook groups, In-person classes, Trial and error, Other	Yes I now see it as a legitimate way to learn	I came into the module hoping to learn specific decoupage techniques for oyster shells. While the general rice paper steps were clear, I felt disappointed that there were no specific instructions or surface preparation tips for handling
Other	Yes I now see it as a legitimate way to learn	Good overview, but I wish there had been a dedicated module or surface guide for oyster shells and organic shapes, as that was my main area of curiosity.
YouTube tutorials, Facebook groups, Trial and error	Somewhat I see potential but have some reservations	Clear step-by-step process. However, adding surface-specific modules for items like shells or glassware would make it much more complete.
YouTube tutorials, Facebook groups	No I still prefer other methods	I joined specifically to learn how to decoupage on oyster shells. The module was helpful for basic napkin steps, but I was disappointed that shell preparation (like sealing or smoothing rough surfaces) wasn't covered at all.
YouTube tutorials, Facebook groups, Trial and error	Yes I now see it as a legitimate way to learn	Great foundational practice! For future versions, adding a bonus module on organic surfaces (like shells or clay pots) would address a huge area of interest.

Appendix C

Evidence of Site Permission

Figure 6: Open Social Media Site Permission

Open Social Media Site Permission



WGU School of Education

Capstone Project Open Social Media Site Permission Form

Instructions for Students:
Before beginning data collection with participants from an open social media group, capstone students must document the site's validity and obtain university approval to use the group as the site for their capstone project.

Section 1: Student Information

Student Name: Akaya McElveen

Student ID: 013028961

WGU Program: Master of Education, Education Technology and Instructional Design

Project Title: Examining the Use of TikTok as a Microlearning-Based Exposure Model in a Hobby-Based E-Learning Module.

Section 2: Project Description

Provide a summary of the capstone project, including the purpose, participants, and data collection methods (1 to 2 paragraphs):

The purpose of this study is to examine the use of TikTok as a microlearning-based exposure model in a hobby-based e-learning module for adult hobby learners to understand how short-form video exposure influences learners' experience and their ability to independently transfer decoupage techniques to new surfaces.

Participants will be adult hobby learners aged 18 and older who are active members of decoupage-focused Facebook groups. Approximately 5-8 volunteers will be recruited through a post in those groups after obtaining admin permission. Data will be collected through a pre-survey establishing baseline experience with decoupage and TikTok; an eLearning module built in Articulate Rise 360 in which participants self-direct their learning through one of five decoupage technique pathways, using TikTok as a supplementary demonstration tool; and a post-module questionnaire measuring learner experience, TikTok engagement, and skill transfer. Transfer will be evidenced through a photo submission of a finished decoupage project completed on a new surface. Participant photo submissions will be evaluated using an AI assessment tool applying predetermined rubric criteria specific to each decoupage technique pathway.

Section 3: Site Information

- **Organization/Site/Group Name:** Decoupage Crafting and Napkins, Official Mod Podge Group, Decoupage, Vintage and Napkin Technique, and Decoupage Oyster Shells.
- **Type of Site (Facebook, LinkedIn, Edweb, Classroom 2.0, etc.):** Facebook
- **Online Platform Website Link:** https://www.facebook.com/groups/decoupagecrafting/ https://www.facebook.com/groups/modpodgeofficial/ https://www.facebook.com/groups/1398164423936783/ https://www.facebook.com/groups/1927370741115104/

Section 4: Verification of Open-Social Media Group Requirements

I, the undersigned, verify that the proposed open-social media group meets requirements for allowable groups. I confirm that the group meets the following criteria:

The group

- was established prior to the creation of my capstone project,
- was not created by me,
- is not now and never was owned by me in the past,
- has existing members,
- is relevant to this capstone project,
- is moderated by an admin/moderator.

Section 5: Participant Recruitment

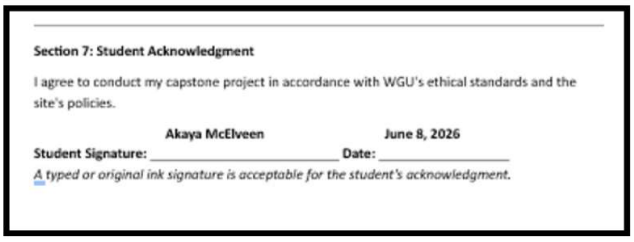
Describe the intended process to recruit participants from this open-social media group:

First, I will obtain permission from the group admins to recruit participants for my research study. Once permission is obtained, I will post a recruitment flyer to the groups that outlines the purpose of the research, what participation entails, and the possible risks and benefits of participating in this study.



Section 6: Open Social Media Site Verification

Please capture a screenshot of the social media site to document that it is an open group. Ensure the screenshot captures the following information: group name, public group designation, member size, and the 'about' information.



Section 7: Student Acknowledgment

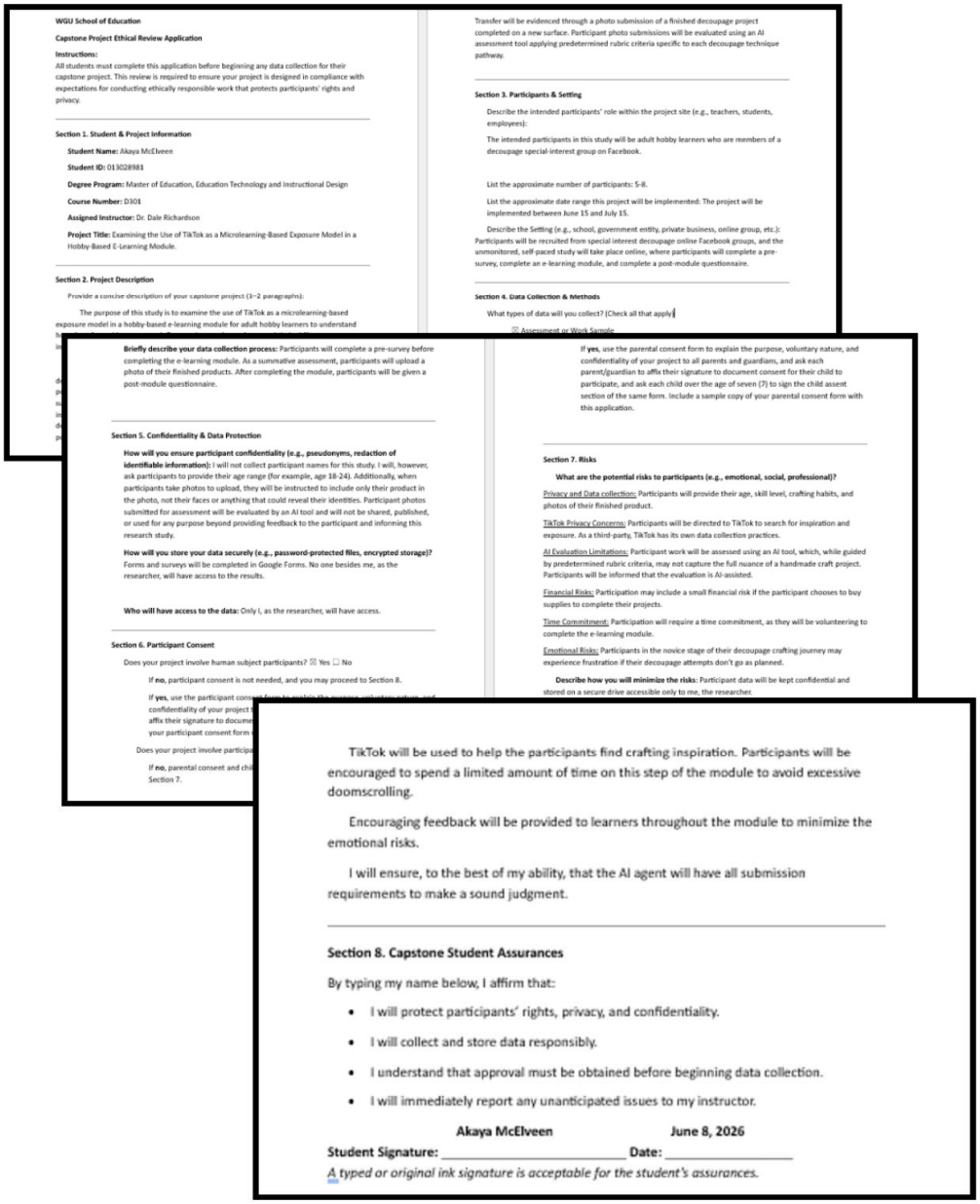
I agree to conduct my capstone project in accordance with WGU's ethical standards and the site's policies.

Student Signature: Akaya McElveen **Date:** June 8, 2026

A typed or original ink signature is acceptable for the student's acknowledgment.

Figure 7: Capstone Ethical Review Application

Capstone Ethical Review Application



WGU School of Education

Capstone Project Ethical Review Application

Instructions:
All students must complete this application before beginning any data collection for their capstone project. This review is required to ensure your project is designed in compliance with expectations for conducting ethically responsible work that protects participants' rights and privacy.

Section 1. Student & Project Information

Student Name: Akaya McElveen

Student ID: 013028981

Degree Program: Master of Education, Education Technology and Instructional Design

Course Number: D301

Assigned Instructor: Dr. Dale Richardson

Project Title: Examining the Use of TikTok as a Microlearning-Based Exposure Model in a Hobby-Based E-Learning Module.

Section 2. Project Description

Provide a concise description of your capstone project (3–2 paragraphs):

The purpose of this study is to examine the use of TikTok as a microlearning-based exposure model in a hobby-based e-learning module for adult hobby learners to understand

Transfer will be evidenced through a photo submission of a finished decoupage project completed on a new surface. Participant photo submissions will be evaluated using an AI assessment tool applying predetermined rubric criteria specific to each decoupage technique pathway.

Section 3. Participants & Setting

Describe the intended participants' role within the project site (e.g., teachers, students, employees):

The intended participants in this study will be adult hobby learners who are members of a decoupage special-interest group on Facebook.

List the approximate number of participants: 5-8.

List the approximate date range this project will be implemented: The project will be implemented between June 15 and July 15.

Describe the Setting (e.g., school, government entity, private business, online group, etc.): Participants will be recruited from special interest decoupage online Facebook groups, and the unmonitored, self-paced study will take place online, where participants will complete a pre-survey, complete an e-learning module, and complete a post-module questionnaire.

Section 4. Data Collection & Methods

What types of data will you collect? (Check all that apply)

☒ Assessment or Work Sample

Briefly describe your data collection process: Participants will complete a pre-survey before completing the e-learning module. As a summative assessment, participants will upload a photo of their finished products. After completing the module, participants will be given a post-module questionnaire.

Section 5. Confidentiality & Data Protection

How will you ensure participant confidentiality (e.g., pseudonyms, redaction of identifiable information): I will not collect participant names for this study. I will, however, ask participants to provide their age range (for example, age 18-24). Additionally, when participants take photos to upload, they will be instructed to include only their product in the photo, not their faces or anything that could reveal their identities. Participant photos submitted for assessment will be evaluated by an AI tool and will not be shared, published, or used for any purpose beyond providing feedback to the participant and informing this research study.

How will you store your data securely (e.g., password-protected files, encrypted storage)? Forms and surveys will be completed in Google Forms. No one besides me, as the researcher, will have access to the results.

Who will have access to the data: Only I, as the researcher, will have access.

Section 6. Participant Consent

Does your project involve human subject participants? ☒ Yes ☐ No

If **no**, participant consent is not needed, and you may proceed to Section 8.

If **yes**, use the parental consent form to explain the purpose, voluntary nature, and confidentiality of your project to all parents and guardians, and ask each parent/guardian to affix their signature to document consent for their child to participate, and ask each child over the age of seven (7) to sign the child assent section of the same form. Include a sample copy of your parental consent form with this application.

Section 7. Risks

What are the potential risks to participants (e.g., emotional, social, professional)?

Privacy and Data collection: Participants will provide their age, skill level, crafting habits, and photos of their finished product.

TikTok Privacy Concerns: Participants will be directed to TikTok to search for inspiration and exposure. As a third-party, TikTok has its own data collection practices.

AI Evaluation Limitations: Participant work will be assessed using an AI tool, which, while guided by predetermined rubric criteria, may not capture the full nuance of a handmade craft project. Participants will be informed that the evaluation is AI-assisted.

Financial Risks: Participation may include a small financial risk if the participant chooses to buy supplies to complete their projects.

Time Commitment: Participation will require a time commitment, as they will be volunteering to complete the e-learning module.

Emotional Risks: Participants in the novice stage of their decoupage crafting journey may experience frustration if their decoupage attempts don't go as planned.

Describe how you will minimize the risks: Participant data will be kept confidential and stored on a secure drive accessible only to me, the researcher.

TikTok will be used to help the participants find crafting inspiration. Participants will be encouraged to spend a limited amount of time on this step of the module to avoid excessive doomscrolling.

Encouraging feedback will be provided to learners throughout the module to minimize the emotional risks.

I will ensure, to the best of my ability, that the AI agent will have all submission requirements to make a sound judgment.

Section 8. Capstone Student Assurances

By typing my name below, I affirm that:

- I will protect participants' rights, privacy, and confidentiality.
- I will collect and store data responsibly.
- I understand that approval must be obtained before beginning data collection.
- I will immediately report any unanticipated issues to my instructor.

Akaya McElveen **June 8, 2026**

Student Signature: _____ **Date:** _____

A typed or original ink signature is acceptable for the student's assurances.

Appendix D

Additional Supplements

Figure 8: AI Evaluation Result Example

AI Evaluation Result Example

