

Mortgage Loss Mitigation E-Learning

A Test in Micro-Learning

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Abstract

This research project focuses on developing an e-learning course to address challenges in mortgage loss mitigation training, particularly related to the demands of busy schedules and the technical language complexity of government regulations. The instructional design strategy of micro-learning was chosen as a potential solution, emphasizing short, focused training sessions that deliver relevant, applicable content while incorporating performance support. The research questions proposed asked how micro-learning impacted participants' understanding and ability to apply loss mitigation concepts and their feelings toward the use of micro-learning as a learning strategy. The course was developed using the 2025 Federal Housing Administration loss mitigation rules as a test case to explore design principles that could also benefit the broader mortgage industry. A small sampling of mortgage employees from the organization Freedom Mortgage participated in the study. A qualitative research methodology was employed, utilizing questionnaires to capture the initial perceptions and behaviors of participants. The preliminary results were largely favorable, with users highlighting the advantages of micro-learning and the effectiveness of tools like an included AI chatbot for performance support. To build on these promising results, a more robust research methodology is proposed, presenting a way to obtain more concrete results, which can help inform future improvements to mortgage organizational training programs.

Table of Contents

Chapter 1: Introduction	5
Instructional Problem	5
Research Topic	6
Research Questions	7
Research Purpose	7
Chapter 2: Literature Review	8
Introduction to the Literature Review	8
Mortgage Crises and Loss Mitigation Shortcomings	9
Home Mortgage as a Volatile Industry	13
Micro-Learning as an Instructional Strategy	20
Conclusion	22
Chapter 3: Research Methodology	25
Instructional Problem Overview	25
Potential Solutions	27
E-Learning Unit of Instruction Description	29
Research Methodology	37
Method	37
Participants/Stakeholders	37
Data Collection Instrument(s)	39
Data Analysis Technique(s)	39
Expected Timeline	40
Data Security and Confidentiality	40
Conclusion	41
Chapter 4: Results	43
Summary of Research	43
Summary of Results	44
Proposed Iteration(s) of E-Learning Solution	48

Chapter 5: Discussion	54
Conclusion(s) Based on Results	54
Limitations	55
Implications of Research on Educational Practice	56
References	58
Appendix A	64
Appendix B	66
Appendix C	68
Appendix D	69
Appendix E	70

Chapter 1: Introduction

Instructional Problem

The instructional challenge for this project is as follows: Mortgage loss mitigation specialists often resist training that lacks clarity, relevance, performance support, or disrupts their schedules. Many specialists have limited prior experience with the processes and government regulations involved. Most staff lack foundational knowledge of loss mitigation procedures and require basic instruction on terminology, regulations, and systems necessary for reviewing default borrowers for home retention options. They will have received such training during the early onboarding process. Given the ever-evolving nature of these regulations, ongoing training is essential. Employees must acquire the knowledge to understand regulatory changes and develop the skills and abilities to apply these complex rules effectively when reviewing default borrowers.

This e-learning course centers on the Federal Housing Administration (FHA), a government mortgage insurer. The FHA's loss mitigation servicing guide was updated in Spring 2024, with the new regulations set to take effect in January 2025. Staff will have already been trained on FHA regulations and the skills needed to review borrowers in compliance with those rules using their organization's mortgage servicing system. This course will now focus on equipping staff with the knowledge to understand and apply the new technical regulations introduced in the updated servicing guide. It will cover how to interpret these changes and integrate them into the review of default loans. However, updates related to mortgage servicing systems are outside the scope of this e-learning course, as organizations use varying systems and internal processes. This course is exclusively dedicated to helping learners understand the new FHA guidelines and how to apply them to default loans.

In summary, before taking the e-learning course, specialists will possess knowledge, skills, and abilities (KSAs) related to the previous FHA loss mitigation regulations and the process of reviewing borrowers using mortgage servicing systems based on those rules. After completing the course, loss mitigation employees will be able to identify the updated 2024 FHA guidelines and apply them to determine eligible home retention options for borrowers in default.

Research Topic

This e-learning study centers on mortgage loss mitigation and applies instructional design strategies like microlearning and scenario-based learning, with a focus on performance support. These approaches aim to reduce learner resistance by enhancing job confidence and providing flexible learning schedules. The course attempts to build competence in the regulatory guides while minimizing potential friction, whether from disruptions during training or issues arising in daily workflows due to inadequate training quality.

This topic is essential because loss mitigation plays a vital role in the broader industry. Non-compliance with government regulations can lead to substantial fines, while errors may result in significant financial losses, potentially jeopardizing the stability of smaller servicers. Training must be comprehensive, and management must invest adequately in their specialists, equipping them with the necessary tools to excel while prioritizing their well-being. Neglecting these aspects can foster resistance, leading to disengagement, absenteeism, lack of motivation, and disinterest—all of which contribute to costly mistakes.

Investing time and resources in developing e-learning courses that incorporate learner-centered design theory and instructional strategies plays a crucial role in identifying both emotional and performance-related challenges. Human-centered design principles can help address potential moments of resistance, transforming them into opportunities for learning and

growth—benefiting both individual specialists and the organization as a whole. The design strategies outlined above—microlearning, scenarios, and performance support—serve as essential tools for effective intervention. Each will be examined in greater detail in the literature review. Research in human resources highlights that many employees prefer short, job-relevant learning bursts, emphasizing the positive impact microlearning can have on both individual performance and organizational success.

Research Questions

This project will be guided by two research questions: the first focuses on the learner's experience with the course, while the second examines the learning outcomes. The first question asks: How does micro-learning as an instructional strategy impact mortgage loss mitigation specialists' understanding of loss mitigation concepts and how to apply them? The second question explores: How does an e-learning module using micro-learning influence learner attitudes about learning those loss mitigation concepts?

Research Purpose

This research project aims to explore the impact of a micro-learning strategy on mortgage loss mitigation specialists' ability to understand and apply loss mitigation concepts and measure their attitudes toward this micro-learning strategy.

Chapter 2: Literature Review

Introduction to the Literature Review

During the Great Depression and the Great Recession, hundreds of thousands of families lost their homes. In 1932 alone, there were 250,000 foreclosures, and by 1933, half of all mortgages were delinquent, with 1,000 foreclosures occurring per day (Jackson, 1985). From 2007 to 2009, during the housing crisis, “approximately 1.8 million homeowners lost their homes to foreclosure while another 5.2 million homeowners faced foreclosure initiation” (CFPB, 2024). The impact could have been even more severe if many states had not implemented moratoriums on foreclosures (Wheelock, 2008).

Foreclosure is the process by which a lender reclaims a property from a borrower who has failed to meet the terms of their mortgage contract. When a borrower takes out a loan to purchase a home, the property is used as collateral for the lender. The mortgage document is the security for the loan and provides stipulations that must be honored, such as timely consistent payments. If the borrower breaches these conditions, the mortgage grants the lender the legal right to repossess the property to recover the outstanding debt, usually through an auction.¹

What many people may not realize is that foreclosure is not the only option for both the borrower and the lender. In fact, foreclosure is often the worst outcome because it can be a lengthy process, sometimes taking a year or more in certain states, and it is very costly due to legal fees, missed interest, and diminished returns. A better option for both parties is to reinstate the loan and bring it current through loss mitigation, which has become a more significant aspect of mortgage servicing, particularly since the housing crisis.

¹ For more on the United States foreclosure process, see Federal Housing Finance Agency, n.d.

Loss mitigation involves a review by mortgage servicers—organizations that maintain the loan after origination—of the borrower’s loan and, at least historically, their financial situation to find a way to keep the home, such as by modifying the loan terms or deferring unpaid amounts to the end of the mortgage term. This review process can be complicated due to strict guidelines set by government insurers and investors, who heavily regulate the process and are ever evolving. Failure to comply with these rules can result in penalties for the lender, the loss of insurance claims, or even the requirement to buy back the house.

Quality training is crucial in loss mitigation, given the significant stakes for both lenders and borrowers and the quantity and rapid changes in regulations. This report of the literature sets out to outline the need for comprehensive mortgage loss mitigation training by incorporating effective practices from adult learning theory and eLearning technology. The following synthesis also discusses the value and benefits that come from the use of micro-learning as a learning strategy. The literature review is broken up into four sections that focus on four broad themes: mortgage crises and loss mitigation shortcomings, home mortgage as a volatile industry, a survey conducted of those within the mortgage industry, the nature of resistant learning, and microlearning as an instructional strategy. The last section concludes with a brief analysis of how the literature analyzed can inform this e-learning research project.

Mortgage Crises and Loss Mitigation Shortcomings

In the early 2000s, a housing bubble emerged as home construction continued to surge and property values increased rapidly. What initially seemed like a solid investment quickly turned sour in the latter half of the decade, as home values plummeted and homeowners saw their equity shrink dramatically. The situation was exacerbated when the interest rates on adjustable-rate mortgages soared from their initially attractive “teaser rates.” As a result, many

homeowners began defaulting *en masse*, prompting lenders to automate the foreclosure process as quickly as possible, often neglecting loss mitigation strategies (Adelino, Gerardi, and Willen, 2009). However, this approach led to significant financial losses as the housing market collapsed.

While numerous news reports, books, academic articles, and films have documented the mishandling of this crisis, this review focuses specifically on the role of loss mitigation in addressing these challenges. Mortgage servicers were unprepared for the surge of defaulted loans flooding their systems and lacked the necessary staff to thoroughly evaluate them for loss mitigation options. This was partly because servicing systems, which manage loans after origination, are heavily automated. Servicers rely on these systems to handle large volumes of loans efficiently, making a profit through their ability to scale. While tasks like processing payments are relatively straightforward, assessing loans for loss mitigation is much more complex. Levitin and Twomey (2011) say loss mitigation is “discretion-intensive and requires significant trained manpower.” They further explain that “In normal times, default levels are low, and servicers compete by improving their economies of scale and automation. Servicers have little incentive to invest in the resources for hands-on loss mitigation, much less sufficient capacity for peak volumes.”

Entry-level jobs in the mortgage servicing industry have been notorious for having poor training and high turnover, which is highlighted in publications. Lauri Goodman of the Urban Institute, for example, said that during the housing crisis, “personnel were often ill-equipped to handle the new demands, making mistakes in dealing with distressed borrowers” (Fisher and Fox, 2019). During this time, borrowers had an incredibly difficult time trying to get their servicer to answer the phone. Fisher and Fox (2019) further say, “Even when borrowers reach the right employee to address their concerns, the representatives generally are neither sufficiently

trained nor competent enough to provide correct or consistent answers to even the most basic questions. Unsurprisingly, these poorly paid workers with high turnover have been dubbed the ‘Burger King Kids.’” Thompson (2009) makes the same argument, further pointing out that these collections employees are not trained to effectively communicate with the borrowers. Loss mitigation employees receive greater training, but not enough as Thompson (2009) writes: “While loss mitigation employees are generally more highly trained than collections employees, line-level loss mitigation employees are still not extensively trained, adequately supported, or given meaningful discretion as to the terms of a modification.”

Not all mortgage servicers are equipped with enough staff to manage a sudden increase in default loans. This issue resurfaced during the COVID-19 pandemic, which saw default rates similar to those of the housing crisis, as many people lost their jobs. Just a few months after the pandemic began in the U.S., 7.1% of the nation’s mortgage loans were delinquent (Boesel, 2020). However, unlike the housing crisis, there was a significant reduction in foreclosures due to the CARES Act, which implemented a moratorium on all COVID-19-related foreclosures. Mortgage servicers rushed to assess borrowers for loss mitigation options while navigating a multitude of insurer and investor guidelines related to the pandemic. They had to swiftly update their systems to comply with new regulations and train their staff accordingly, only to face frequent changes to these guidelines, sometimes within weeks or even days.

Servicers often outsource parts of their workload, such as loss mitigation, to specialized sub-servicers who have the staff or technology to handle these tasks more efficiently. These sub-servicers may be based in the United States or frequently offshore. According to Lane (2014), some of the largest mortgage servicers have offshored about a third of their servicing needs. Outsourcing loss mitigation is often more cost-effective and less burdensome than managing it

in-house, as the cost of reviewing a default loan for home-retention options is significantly higher than servicing a loan in good standing. The Mortgage Bankers Association (2024) recently reported that the cost to servicers is approximately \$176 per year for a loan in good standing, compared to \$1,857 per year for a loan in default.

The challenge is that these sub-servicers also face limitations in staffing. They rely on handling a high volume of clients to be profitable, so sudden surges in defaults can overwhelm even their specialized capabilities. Mortgage servicers often manage backlogs of defaulted loans, even under normal conditions, by sending them to sub-servicers in batches to avoid overloading them. This approach can create issues because the CFPB (Consumer Financial Protection Bureau) and insurer and investor guidelines impose strict timelines for communicating with borrowers to help reinstate their loans if possible. As a result, servicers can find themselves dependent on the capacity of sub-servicers, who are often unprepared for rapid shifts in the industry.

Sub-servicers need to maintain robust training programs that can quickly adapt to the constantly changing landscape of the mortgage industry. Likewise, mortgage servicers must ensure their staff is well-trained, especially if they do not fully outsource or only partially outsource their portfolios, so they are prepared to manage the workload if sub-servicers are unable to meet their needs effectively.

Proper training is crucial not only for reviewing defaulted loans but also for effectively communicating with distressed borrowers. At the 2024 Mortgage Bankers Association conference in Orlando, multiple panelists highlighted the importance of educating delinquent borrowers. David Sheeler, Senior Executing Vice President of Freedom Mortgage Corporation, stated, “There’s a real need for servicers to provide education.” He emphasized that servicers

should find ways to “ease the burden on the customer.” In another panel, Sacha Rosenthal from the government investor Freddie Mac asked, “How do you educate early and often?” He stressed the need for increased efforts to improve conversations with borrowers.

Home Mortgage as a Volatile Industry

The Federal Housing Finance Authority (2024) recently reported that the U.S. mortgage industry accounted for \$11.7 trillion in unpaid principal balances at the close of the first quarter of 2024. This figure reflects nearly 51 million outstanding mortgages and represents about 65% of American’s total household debt, which stands at \$17.80 trillion (Federal Reserve Bank of New York, 2024). The average mortgage debt has steadily increased, rising from \$201,000 in 2017 to \$241,000 by the end of 2023 (Ostrowski, 2024). Meanwhile, home prices have surged dramatically, with the median price in the U.S. reaching nearly \$328,000—a nearly 50% increase since 2019 (Tracey, 2024). Some of these homes were purchased at government-set interest rates, which reached a record high of 7.79% in the aftermath of the COVID-19 pandemic (Freddie Mac, n.d.).

The United States has just finished its 60th presidential election, with president elect Donald Trump and current Vice President Kamala Harris as the candidates. A key issue throughout campaigns was how to address inflation, lower interest rates, and stabilize the housing market. Inflation has finally eased following the pandemic, but significant price increases remain, particularly in housing, which contributed to 70% of last year’s inflation spike (Siegel, 2024). Although interest rates have dropped significantly from their post-pandemic highs, the federal government continues to navigate efforts to stabilize the economy. High interest rates and soaring housing costs have led to a “rate-lock,” where many people are reluctant to sell, buy, or refinance. Voter concerns about the housing market were central to this

election, with polls indicating that 90% of voters were basing their decisions on issues like housing affordability (O'Donnell, 2024).

The current economic conditions have placed significant financial strain on homeowners, with some expressing concerns about a potential downturn that could put families at risk of losing their homes. While many economists believe the U.S. economy will remain strong, others argue that a mild recession may be on the horizon. Wilbur Ross, a former Trump administration official, has confidently predicted an upcoming recession, partly due to the ineffective use of stimulus checks, which he claims “artificially propped up” the economy (Sor, 2024). The national unemployment rate has also fluctuated but is trending upward, averaging about 0.5% higher in 2024 than in 2023 (U.S. Bureau of Labor Statistics, n.d.). Naturally, as unemployment rises, mortgage delinquencies tend to follow suit.

As expected, mortgage delinquencies surged during the COVID-19 pandemic, reaching a peak of 8.22%, a level not seen since the housing crisis in 2010 (Statistica, 2024). By 2022, the situation improved, with delinquency rates returning to pre-pandemic levels. In the second quarter of 2023, delinquencies hit a record low of 3.37%, but have since begun to rise steadily, reaching 3.97% by the second quarter of 2024. While this is still relatively low compared to the past two decades, it signals increasing homeowner distress. Contributing factors, such as the sharp rise in housing prices and growing unemployment, raise concerns that the delinquency rate may continue to climb.

Another factor contributing to the potential rise in mortgage defaults is the increasing rate of credit card and auto loan delinquencies (Martinez, 2024). Car loan defaults are now at levels not seen since the end of the housing crisis, largely due to high interest rates and inflated car prices (Hyatt, 2024). Additionally, there has been a surge in commercial foreclosures, with banks

taking over more commercial properties than at any point in the past decade (Grant, 2024), potentially leading to layoffs. This foreclosure process puts further stress on banks, as they are unlikely to recover the full value of these properties. The issue may worsen, as over \$2.2 trillion in commercial real estate maturities are set to come due by 2077 (Grant, 2024). In contrast, residential foreclosures have remained at historic lows throughout 2024, with just over 30,000 filings reported in August (ATTOM, 2024). However, this may not be a sign of a strong economy, given the other concerning factors previously discussed. The low foreclosure numbers may be supported by the multi-year nationwide moratorium and financial assistance programs, such as government stipends and the Housing Assistance Funds, which have provided crucial support to homeowners. It is uncertain what lies ahead for the housing market, but mortgage servicers should be prepared and have strong training programs in place.

Anonymous Survey

To assess the need for additional training in mortgage loss mitigation, an anonymous survey was performed among professionals currently working in mortgage servicing (Appendix E). The survey included 11 questions, most of which were multiple-choice or allowed participants to select multiple answers using checkboxes. A total of 20 respondents completed the entire survey. This section will highlight key data from this exercise, while the full survey is available for review at the end of this report.

The first question asked participants to identify their role in the mortgage industry. Approximately half of the respondents were loss mitigation specialists, while many others selected “Other” and specified roles such as loss mitigation supervisors or managers. This indicates that most participants held positions in loss mitigation. This insight is significant, as it lends credibility to their perspectives on the need for further training, given their direct, daily

involvement in this area of the industry. Additionally, 65% of respondents have worked in loss mitigation for eight years or more, a detail that becomes particularly relevant in light of the information presented below.

The third question asked participants to rate the quality of the training they received in loss mitigation, with multiple-choice options ranging from excellent to poor. Only 20% of respondents rated their organization's training as excellent, while 50% considered it good. However, 30% felt their current training was either fair or poor, which raises concerns given the complexity of regulations, proprietary technology, and the rapid changes in the industry. All respondents reported receiving their training on the job, with courses and webinars being the second most common method. Notably, 45% indicated they engage in self-directed study. While this proactive approach is commendable, it is somewhat concerning, as it may reflect a gap in available training resources.

The concern deepens with question five, which asks how often loss mitigation training is provided. Alarming, 70% of respondents indicated that they receive training only occasionally or rarely—annually or less. Only 25% reported receiving training on a monthly or quarterly basis, and just one respondent said they were trained weekly or bi-weekly. This is particularly troubling as all insurers and investors released new servicing guidelines for loss mitigation in 2024, underscoring the need for more frequent training. There are more home-retention options than ever, and they continue to become more complex. The next question addressed the relevance and currency of training materials. Only 25% of respondents felt their materials were very relevant and up to date, while another 25% believed they were somewhat up to date. Half of the participants were either neutral or felt the materials were somewhat outdated. This poses a

significant issue, particularly for new hires during onboarding, as they typically lack any foundational knowledge in loss mitigation, as mentioned earlier.

The responses regarding the frequency of training and the relevance of training materials sharply contrast with the participants' views on the importance of comprehensive loss mitigation training. An overwhelming 95% stated that such training is either extremely important or very important. As previously mentioned, a lender risks significant financial losses—potentially hundreds of thousands of dollars per loan—if they fail to stay compliant with insurer and investor guidelines. Respondents echoed this concern, with 90% indicating that regulatory compliance requires more focused training. Additionally, 40% believe that customer communication should be emphasized in loss mitigation training, reinforcing the earlier point about the critical role of effective communication with distressed borrowers.

Question nine provides further valuable insights by asking about the challenges faced in loss mitigation. Half of the respondents cited inadequate time for training, while 45% felt there was a lack of practical examples. The need for real-world examples is critical, as insurer and investor guides are often filled with technical jargon and lack concrete scenarios that show how the regulations are applied. Training materials must bridge the gap between these regulations and the specific servicing technology, offering clear demonstrations of how the servicing guidelines are implemented in practice. The perceived lack of time for training is understandable, particularly during periods of increased defaults, rapid changes in guidelines, and challenges in maintaining smooth workflow processes. Loss mitigation specialists also operate under strict timelines to review defaulted loans and reinstate borrowers. Given these pressures, it may be beneficial to adopt a training strategy that offers flexibility to accommodate employees' busy schedules.

In the final survey question, 60% of respondents expressed interest in additional free online training resources. This is noteworthy, considering these resources wouldn't be linked to their specific organizations. However, it underscores the difficulty specialists face in seeking advanced training beyond what their employers offer. Outside of reading and memorizing insurer and investor guidelines, accessing thorough training can be a significant challenge. Loss mitigation is a highly specialized area within the mortgage industry, and there are few on-demand online resources available—most of which are limited to webinars and occasional in-person seminars throughout the year. The existing online training options can also be prohibitively expensive unless covered by the organization, with individual courses often costing \$50-\$100 for a 30-minute session through providers like the Mortgage Bankers Association.

The survey data highlights a clear need for specialized training in mortgage loss mitigation. Interestingly, the results were skewed, with a significant number of respondents having over 8 years of experience in the field. It would be interesting to see how the results might differ for employees with only one or two years of experience. Respondents overwhelmingly agreed that training is crucial in this field, particularly when it comes to navigating the complex and constantly changing compliance regulations. However, many professionals find it challenging to dedicate time to further specialization due to their busy schedules. Key insights from this survey will be integrated into the persona created below.

The Nature of Resistant Learning

The term “resistant learner” may evoke the image of someone consciously opposing course material. While this can occur, resistance in learning is far more complex. Tolman and Kremling (2017) describe resistance as “a motivational state and an outcome of multiple interacting factors...dynamic and fluid, influenced by ongoing interactions and situations among

the student, the professor, and student peers.” Their approach is systemic, encompassing the individual's history, immediate environment, and even organizational culture. A learner may not even be aware of their resistance. In fact, educators should expect resistance: “The question is not whether student resistance will occur; the question is when it will start and how intense it will be” (Tolman & Kremling, 2017). Instructional designers must identify potential resistance points and implement effective interventions.

Marshall Alcorn (2013) offers a complementary perspective rooted in biology. He argues that the mind gathers information from the environment, but assimilation is not immediate. Sometimes, it may never occur, or the body may resist it. Drawing from neurobiology and affective theory, Alcorn contends that humans are not purely rational beings; they find meaning through emotions, which drive action. Emotions like fear, anxiety, and shame can hinder the absorption of new information, especially when linked to deeply held beliefs.

The role of educators or instructional designers is not to combat emotional resistance with logic but to engage with it. They should create opportunities for dialogue, fostering environments that support informational integration. Alcorn (2013) emphasizes the role of reflection, which “defines a practice where conscious thought doubles back on itself to consider its own content.” He explains, “Through reflection, emotions not yet fully entertained can be brought into active contemplation. Through active contemplation, new feelings are produced by contemplating old feelings in a new context.”

Resistance can also stem from the environment, or organizational culture. Tolman and Kremling (2017) cite Giroux's concept of hidden curricula—“unstated norms, values, and beliefs embedded in and transmitted through the underlying rules that structure routines and social relationships.” The terms “school” and “classroom” can easily be replaced with “office” and

“organization.” They also reference Rankin’s concept of campus climate, defined as “the cumulative attitudes, behaviors, and standards concerning access, inclusion, and respect for individual and group needs, abilities, and potential.”

Micro-Learning as an Instructional Strategy

Balancing training with time constraints is a major challenge in organizational learning and development. Employees are primarily focused on completing their tasks, which often leaves little room for upskilling. A comprehensive survey by the Society of Human Resource Management (SHRM, 2022) revealed that 25% of respondents believe training programs fail due to a lack of time. According to one statistic, employees “spend less than 1 percent of a typical workweek on training and development” (Torgerson and Iannone, 2020). Additionally, 25% reported that they quickly forget the information, 24% found the training irrelevant to their role, and 21% cited outdated materials as a concern.

Despite these challenges, many employees are eager to learn and develop new skills. The survey showed that 57% enjoy learning new things, and 54% are motivated to acquire the skills necessary for career growth. To improve learning and development initiatives, respondents suggested more job-relevant training (38%), more current content (32%), and shorter training sessions (30%). The survey also indicated that 70% of employees prefer online, self-paced learning as their preferred training medium. Self-paced training is essential as it offers employees flexibility and autonomy in how they approach learning. Ideally, mandatory learning is blended with informal, impromptu methods, which can be more effective. According to Cross (as cited in Torgerson and Iannone, 2020), formal training accounts for only “10 to 20 percent of what people learn at work,” highlighting the impact of informal learning approaches.

To make e-learning more flexible for workers, shorter, and relevant, modules can be divided into bite-sized chunks. This approach, known as microlearning, allows employees to fit learning into their schedules, “delivering just-in-time informational and instructional content in short, manageable bursts, matching the way learners of all ages are accessing information that interests them in and outside of class” (Corbeil, Corbeil, and Khan, 2021). Microlearning enables employees to quickly access the information they need and immediately return to their tasks, or even better, integrate learning seamlessly while on the job. Each session focuses on small objectives that contribute to a larger goal, directly supporting the learner’s professional development and equipping them with relevant skills to address immediate challenges (Major and Calandrino, 2018). Microlearning delivers brief, targeted on-demand content specifically designed to meet the learner’s needs and directly relate to their job responsibilities.

Microlearning is a relatively new phenomenon that came about with the rise of the on-demand information with digital technology. It is becoming increasingly popular with organizations, with 81% of the survey saying they are using or will be using microlearning for training (Axonify, n.d.). This style of learning can fit more seamlessly into the daily workflow. It has also been shown to increase engagement, with one survey showing that 74% of employees voluntarily engaged with over 100 micro-learning training sessions per year.

Micro-learning principles increase the likelihood of learners retaining information and applying newly acquired skills. Short bursts of learning help prevent cognitive overload, whereas longer lessons with lots of information will have diminishing returns. Lessons should be designed to transfer information from short-term working memory to long-term memory, where mental constructs are formed and can be recalled through practice and application (Hultberg, Calonge, and Lee, 2018). To facilitate this, instructional designers and trainers should begin with

foundational concepts based on the learners' prior knowledge and gradually progress to more complex ideas, allowing time for repeated cognitive processing. Each micro-lesson should build on the previous one, and the spaced intervals between lessons provide opportunities for learners to slightly forget, then revisit, reinforce, and deepen their understanding (Hultberg, Calonge, and Lee, 2018).

Conclusion

This history of mortgage loss mitigation and its potential future offers a broad yet highly relevant perspective. The synthesis above highlights that robust training in mortgage loss mitigation remains in its early stages for some organizations, with its necessity only recognized over the past 15 years. Major crises, such as the late 2000s housing crash and the COVID-19 pandemic, posed significant challenges to developing such programs as organizations grappled with staffing shortages and backlogged files. Now, with the United States largely emerging from the pandemic, there is an opportunity to prioritize improved training initiatives. Designing flexible learning systems that leverage effective instructional strategies is essential, given the uncertainty of the economic landscape and the recent rise in mortgage defaults. Having weathered these crises, organizations must shift from a reactive approach to a proactive one, building training programs that anticipate and prepare for future challenges.

Robust training programs are essential as government mortgage investors and insurers frequently update their servicing guides in response to crises, shaping how loss mitigation is conducted. These guides now feature more extensive and detailed sections on loss mitigation, offering a wider array of home retention options than ever before. Borrowers have access to dozens of options, depending on whether their mortgage is backed by agencies such as the Federal Housing Administration (FHA), Rural Housing Service (RHS), Veterans Affairs (VA),

Fannie Mae, Freddie Mac, or various private insurers and investors—each with its own unique servicing guide. Specialists must thoroughly understand these retention options because the housing market remains a critical concern for Americans. For borrowers facing financial hardship and mortgage default, the language of loss mitigation can be overwhelmingly complex. Knowledgeable intermediaries are therefore crucial to help borrowers navigate their options and make informed decisions.

This literature review on mortgage loss mitigation does not address how risk analysis has been taught in the past, as no available research exists on the subject. At the onset of COVID-19, some mortgage organizations lacked standardized training programs altogether. While many now offer training through learning management systems (LMS), these programs often fail to incorporate effective adult learning strategies or sound instructional design principles. Instead, trainers frequently present complex, highly technical servicing guides as dense text with minimal instructional support. As noted in the section on micro-learning, many employees want to expand their knowledge but may resist poorly designed materials.

Additionally, external training options are limited, making it difficult for employees to access comprehensive learning resources beyond reading and memorizing insurer and investor guidelines. Loss mitigation is a highly specialized area within the mortgage industry, and there are few on-demand online resources available—most of which are limited to webinars and occasional in-person seminars throughout the year. The existing online training options can also be prohibitively expensive unless covered by the organization, with individual courses often costing \$50-\$100 for a 30-minute session through providers like the Mortgage Bankers Association. These, too, are text heavy and could benefit from different learning strategies. A

more comprehensive examination of mortgage companies' training programs would be highly difficult as their training is proprietary.

Loss mitigation training is often inadequate, despite the high stakes of potential errors, as previously discussed. This gap can create a stressful environment and lead to learner resistance, particularly when specialists feel they lack the necessary resources to perform their critical roles effectively—a challenge observed firsthand. While resistance to learning can be a systemic issue beyond the scope of a single e-learning course, certain instructional strategies can help mitigate resistance and cultivate stronger learning cultures within organizations. Considering the daily demands and pressures faced by loss mitigation specialists, micro-learning emerges as a promising approach. This strategy can support the development of more effective training programs while also reducing resistance by delivering focused, manageable content that integrates seamlessly into busy work schedules.

Chapter 3: Research Methodology

Instructional Problem Overview

This chapter revisits the instructional challenge and refines it into a focused problem statement suitable for an e-learning solution. The initial challenge is as follows: Mortgage loss mitigation specialists often resist training that lacks clarity, relevance, performance support, or disrupts their schedules. The first two sections will define the problem statement, forming the foundation for a 1-hour e-learning course, guided by the tools of point of view and "how might we..." questions. Three potential solutions will then be proposed, with the most viable option selected for implementation. To ensure a targeted and manageable approach, the module will focus on addressing one specific issue from this broader challenge, with the potential to positively influence other related concerns.

This problem statement emerged from firsthand experience during and after the COVID-19 pandemic within an organization dedicated to mortgage loss mitigation support. These observations were further validated through sources such as the literature review above and surveys conducted on social media platforms, which gathered insights from loss mitigation specialists across various companies.

Point of View (POV)

In learning design, a point of view seeks to align with the learner's needs, challenges, and emotions, while narrowing the focus to a single aspect that an e-learning course can effectively address. The literature review highlighted the demanding schedules of loss mitigation specialists, particularly during spikes in loan defaults or when servicing guidelines change. During these high-volume periods, new employees—often with no prior mortgage experience—must rapidly learn the terminology, rules of loss mitigation, and internal systems and processes to meet strict

timelines for reviewing default loans. Loans must be reviewed for home retention options promptly, and lengthy, frequent training sessions can disrupt the workflow. Based on this insight a point-of-view chart can be formed, based on the template provided by Dam and Siang through the Interaction Design Foundation (n.d):

User	Need	Insight
Loss mitigation specialists	Flexible and comprehensive training programs on the vast array of government and private insurer and investor regulations	The learner feels they lack sufficient time for training due to meeting deadlines and optimizing processes. Specialists must balance efficiency with quality, making it challenging to fit training sessions into their schedules without falling behind.

The template is divided into three parts: the user/learner, their specific need, and insights gathered from research. Each section forms a Madlib-style problem statement that drives the design process:—" [User] needs to [user's need] because [insight]" (Dam and Siang, n.d.). A simpler problem statement based on the chart above could be: "Due to the constantly evolving, highly technical, and time-sensitive nature of compliance regulations, loss mitigation specialists require a flexible approach to access comprehensive training programs."

A key aspect of the problem statement is that it should be actionable for the instructional designer, allowing them to create a viable solution. It must also be specific, as a learning solution cannot address every challenge a user may face. The problem statement in the POV template emphasizes the need for a training program that accommodates specialists' schedules (Dam and Siang, n.d.). If the solution enables learners to gain a deeper understanding of loss mitigation

regulations without disrupting their workflow, it can serve as a model for future training programs. While relevant training and performance support were highlighted as issues for specialists, they are not directly tied to the problem statement. However, the instructional design strategies outlined below will consider these challenges when proposing potential solutions.

How Might We...?

Dam and Siang (n.d.) suggest transforming a problem statement into a question to create an environment that encourages innovation. This approach allows for the exploration of new ideas without presupposing a specific solution. For instance, instead of stating the problem, one might ask, “How might we make training modules more flexible for loss mitigation specialists?”, “How might we simplify servicing regulations into more digestible formats that align with specialists’ schedules?”, or “How might we design courses that serve as ongoing resources after completion, enabling specialists to maintain efficiency and uphold quality compliance?” The phrase “How might we...” suggests the possibility of multiple solutions to a problem, encouraging brainstorming and iteration on various ideas (Dam and Siang, n.d.). The problem statement, along with the questions it inspires, will form the basis for the next phase of the design process, where potential solutions are proposed.

Potential Solutions

This section will briefly look at three of the different approaches that were considered for the e-learning course. It will end with an explanation why micro-learning was selected as the strategy for this research project. The first proposed e-learning solution is a course designed with micro-learning principles, whose benefits have already been thoroughly discussed. This one-hour course will be divided into more manageable segments, each lesson being self-contained and crafted with a micro-learning strategy in mind. For the course, a typical learning management

system, such as Talent LMS—which offers a free tier useful for organizations without an LMS—would be utilized. A user-friendly course content creation tool, like Articulate Rise, compatible with SCORM learning systems, could be employed. Additional technologies might include software suites like Adobe or Wondershare for media content and performance aids, as well as AI tools like ChatGPT to serve as a job aid. One potential challenge with this strategy is the extra work involved in implementing micro-learning. Correctly employing this approach means that the designer isn't just breaking up a long course into chunks; each micro-lesson must be self-contained, which can require more effort. To mitigate this, the designer can use various components from the first micro-lesson as templates for the subsequent lessons, such as the general structure, themes, and introductory graphics for videos. The templates can be saved and then altered as needed. Some course content creation tools, like Articulate Rise, offer micro-learning course templates. This planning can help maximize the efficiency of the labor involved.

A second potential e-learning course idea focuses on performance support and scenario-based learning. Unlike the first example, where this strategy is just one element, this course would center entirely around it. The primary technology used would be AI, such as ChatGPT for businesses. An AI chatbot would be integrated into the mortgage servicing system or the LMS, providing loss mitigation specialists with a constantly available resource for assistance. This AI would have comprehensive knowledge of internal processes and servicing guide regulations, allowing it to seamlessly integrate into employees' daily workflows. It could offer help or training through generated scenarios. However, the most significant challenge with this approach is the extensive backend programming required to integrate such an AI tool with the system. Additionally, thorough testing would be necessary to ensure the chatbot's outputs align with regulations and internal processes. One potential solution to this challenge is to integrate the AI

tool within the LMS or create an easy transition from the LMS to another AI source. There are AI chatbot systems that provide a URL that can be linked to. Although this might be less seamless, it would require less work and allow organizations to evaluate the effectiveness of this training strategy before investing further.

The final e-learning course solution proposed is the adoption of the social constructivism learning style, which emphasizes the collaborative aspect of creating knowledge and meaning. In this approach, course content would be designed around specialists communicating and collaborating to master loss mitigation concepts and processes. The primary technology used would be a learning management system. The courses would provide preparatory learning to employees, enabling them to meet with a supervisor or manager to work through the learning material together. Another potential technological tool could be an organizational wiki. Similar to Wikipedia, employees could contribute to the organizational knowledge base by sharing information on unique scenarios they encounter, which would be valuable to others. A potential challenge with this approach is encouraging participation in the collaborative creation of knowledge. This could be addressed by incorporating game mechanics into the wiki, offering tangible rewards to motivate contributions. Users could get points that result in obtaining more prestige badges that translate to benefits like gift cards or additional paid time off. There are many third-party applications that help with the implementation of gamification.

After evaluating the unique benefits and drawbacks of the three solutions, micro-learning was selected. Based on literature research, surveys, and firsthand experience, time is a critical factor for loss mitigation specialists, making the micro-learning strategy a promising method. Integrating AI directly into the mortgage system, while potentially seamless in workflow integration, is not the most feasible option. However, elements of AI can still be utilized within a

micro-learning delivery method, although they won't be integrated to the extent that would make them the most beneficial. Micro-learning serves as a solid foundation for building a suite of courses, allowing for the integration of other instructional design strategies such as performance-based and scenario-based learning. Once this foundation is established, designers can also incorporate social constructivist elements, like the suggested wiki, to further enhance the learning experience. Furthermore, if stress related to the quantity of time required leads to moments of resistance, micro-learning could serve as a beneficial intervention. By offering shorter, focused lessons, micro-learning helps reduce the perceived time burden, making learning more approachable and less overwhelming for participants.

E-Learning Unit of Instruction Description

The e-learning module that will undergo user testing is titled "Federal Housing Administration." This micro-course consists of a series of short, self-contained lessons that break down the regulatory guidelines of the government insurer FHA. The most recent guidelines and home retention options were released in February 2024 and must be implemented by January 2025. The servicing guide, written in highly technical language, outlines various options available to defaulting borrowers, with strict procedure hierarchies and requirements to avoid penalties for the mortgage organization. Through this e-learning course, specialists will learn about the latest changes in the FHA's servicing guide and how to apply them in their review of defaulted borrowers. The course is intended for any mortgage loss mitigation specialists that review loans insured by the FHA.

The loss mitigation specialist would typically progress through the FHA modules in sequence, but they have immediate access to all modules, allowing them to focus on what they need at any given time or skip content they're already familiar with. Learners can begin with the

introductory module to get an overview of the course content and structure. This short section includes an introductory video on FHA, followed by another video that previews a microlesson's structure, content, and assessment methods (e.g., AI GPT chatbot).

The learner then progresses through five microlessons, each covering one of FHA's main home retention options: forbearance, Advance Loan Modification, Partial Claim, Recovery Modification, and the Payment Supplement. Each lesson starts with an introductory video summarizing the topic and outlining the learning objectives. The home retention option is defined, and its regulatory requirements are explained. A second video provides a more visual breakdown using a programmed Excel sheet, showing how the math works when reviewing default borrowers. Learners can download the Excel sheet for hands-on experience. Each microlesson concludes with a knowledge check, followed by an AI chatbot-based assessment. The chatbot can generate an unlimited number of questions or scenarios to test the learner's new knowledge and skills, and learners can also ask the chatbot any questions they may have. Overall, the course is designed to take about 60-90 minutes if all sections are completed. However, this duration may increase depending on how much time the learner spends interacting with the Excel sheets or the AI chatbot.

Learning Goal and Objectives

This next section outlines the learning goals and objectives for the course. It's important to first differentiate between learning goals and learning objectives. Harvard Derek Bok Center (n.d.) says, "goals generally refer to the higher-order ambitions you have for your students, while objectives are the specific, measurable competencies which you would assess in order to decide whether your goals have been met."

The course goals and objectives will be structured around Bloom's revised taxonomy, which categorizes levels of cognitive learning in a hierarchical order (Preville, n.d.). Represented as a pyramid, this taxonomy consists of six levels, progressing from basic to more complex forms of learning: remember, understand, apply, evaluate, and create. Each category in Bloom's taxonomy is defined by a set of action verbs that describe what learners can achieve, ranging from recalling facts ("remember") to creating something new ("create"). For the role of loss mitigation specialists, it is logical to focus the course on the levels of understanding and application. Verbs associated with "understand" include compare, describe, explain, and identify, while "apply" involves actions such as implement, solve, use, and demonstrate (Preville, n.d.). Bloom's taxonomy is a valuable tool for creating course goals and objectives because it enables instructional designers to establish clear expectations that align with the learner's job role and how their performance may be evaluated both during the course and in real-world scenarios.

The primary goal of this loss mitigation course is: Loss mitigation specialists will be able to identify the various FHA home retention regulations, understand their key components, and apply this knowledge to accurately assess borrowers for the appropriate retention options. To achieve this goal, several objectives must be established:

1. Specialists will be able to describe the FHA waterfall hierarchy.
2. Specialists will be able to identify and explain the elements of forbearance and apply this knowledge to a simulated workout scenario.
3. Specialists will be able to identify and explain the elements of the Advance Loan Modification and apply this knowledge to a simulated workout scenario.
4. Specialists will be able to identify and explain the elements of a Partial Claim and apply this knowledge to a simulated workout scenario.

5. Specialists will be able to identify and explain the elements of the Payment Supplement and apply this knowledge to a simulated workout scenario.

The success of meeting these objectives will be measured through a variety of formative and summative assessments. Each micro-lesson will include different types of formative assessments: branching scenarios, simple multiple-choice questions, and an AI chatbot capable of generating an endless array of questions and scenarios. At the end of the course, a final assessment is provided through another AI chatbot, which is programmed to simulate the persona of a struggling borrower at various stages of the loss mitigation process. This setup offers a more authentic environment to test participants' understanding and application of the learned concepts.

Potential Learner Needs

A good e-learning course should anticipate and address various learner needs. Some experts argue that learning variability should be considered the norm (Pape, n.d.), meaning designers need to create modules with a diverse audience in mind. The organization CAST (2024) applies elements of Universal Design to learning, offering a helpful interactive chart to guide instructional designers in considering potential learner needs. This chart is categorized into three areas: Engagement, Representation, and Action & Expression—each corresponding to different sections of the brain.

For example, within the Action & Expression category, CAST (2024) highlights the importance of using diverse media types, which "reduces media-specific barriers to communication." Given the complexity of government servicing guides and the need for meticulous attention to detail, using various media to teach these concepts allows more learners to grasp loss mitigation principles effectively. This e-learning course employs multiple media forms, including video, text, Excel spreadsheets, and AI. For instance, if a participant struggles

with understanding the math involved in backend reviews by simply reading the servicing guide requirements, interacting with a basic programmed Excel sheet might provide a more hands-on learning experience.

Similarly, within the Representation category, CAST (2024) emphasizes the importance of providing multiple ways for participants to perceive information. To accommodate learners with disabilities, this loss mitigation e-learning module employs several strategies, such as using alternative texts for pictures, captions for videos, and audio recordings for written text.

Additionally, Articulate Rise includes accessibility features, such as keyboard-only navigation. As noted earlier, one shortcoming of some organizations' loss mitigation training is their text-heavy content. By limiting the amount of text on the screen and incorporating audio recordings, particularly for dense language, this approach can reduce cognitive load for some learners, helping them progress through the micro-lessons more efficiently while better understanding the content.

Use of Technology

The e-learning course was developed using Articulate Rise and is hosted on the TalentLMS platform. It includes seven microlessons: five focus on different loss mitigation options within the FHA program, while the first serves as an introduction and the last provides a summary along with a final assessment. To support the use of microlessons, Articulate Rise was chosen as the content creation tool over the more customizable Articulate Storyline or Adobe Captivate. Rise is better suited for quick, easily accessible lessons, allowing more time to focus on creating relevant, just-in-time content rather than dealing with the more labor-intensive Storyline. In contrast, the choice of Learning Management System (LMS) was less deliberate, as no specific feature of the LMS directly supports the course's goals. However, it would be

advantageous if an LMS offered easy integration of AI for learning and development. While such options may exist, they tend to be more costly than entry-level platforms like TalentLMS. Articulate Rise serves as an effective platform for loss mitigation specialists to seamlessly navigate through micro-learning lessons. Its clean layout, with content divided into manageable chunks, aligns well with the micro-learning strategy. Additionally, TalentLMS offers an easy-to-navigate central hub where users can access each micro-lesson and easily return to them if needed.

Another learning technology that will be utilized is an AI chatbot, based on ChatGPT. The chatbot, provided by Chatbase, allows users to input data to fine-tune its functionality. Users can provide a URL link to the chatbot, or embed it directly into a platform such as a website. The latter method would be ideal as it offers just-in-time support for specialists. However, for the purposes of this research project, the LMS will simply provide the URL, directing participants to a separate webpage with the chatbot. The chatbot will be fine-tuned with the FHA government regulatory guidelines and tailored prompts to guide learner interactions. This is a tool for learners that can answer questions and generate its own questions and scenarios to test the specialists' comprehension of and ability to apply the loss mitigation guidelines.

Addressing the Instructional Problem

The decision to structure the content into microlessons is designed to accommodate the schedules of loss mitigation specialists. Due to government regulations and client deadlines, these specialists must process and review files promptly, making it difficult to complete lengthy training sessions, particularly when the training is not immediately applicable. These lessons deliver essential information in bite-sized chunks, focused on immediate application and performance. Moreover, these microlessons are just one part of the loss mitigation training for

the Federal Housing Administration. In addition, staff must be trained to assess borrowers for home retention options using their mortgage servicing systems. Since mastering these systems requires time, microlessons help by reducing cognitive load, allowing learners to focus on the servicing systems separately from Federal Housing regulations. Microlessons also divide each home retention option into smaller segments, allowing borrowers to easily revisit the content by selecting the relevant module in the LMS when needed.

To successfully implement micro-lessons, text has been limited compared to other course offerings. Text is paired with audio recordings to reduce cognitive load, helping participants process the material more quickly while increasing comprehension by engaging both visual and auditory senses. Videos are kept very brief and to the point, preparing learners for the content to be covered. Each micro-lesson concludes with a formative assessment, allowing learners to reflect on and challenge their understanding of the concepts and their ability to apply them. The goal is to quickly reinforce what was learned and help participants translate that learning into daily performance. As noted, loss mitigation guides can be complex and often express numerous calculations in writing without visually demonstrating them. This e-learning module uses programmed Excel sheets to bridge that gap, showing the math through videos of the Excel sheet and giving the learner the ability to download the sheet. All these strategies aim to accomplish more in less time, presenting content in bite-sized pieces that build upon each other.

A key aspect of micro-lessons is their just-in-time support. The implementation of the AI chatbot is a significant feature designed to provide this performance support. If a specialist forgets the specifics of a servicing requirement, seeks additional information on a concept briefly covered in the course, or prefers the material presented in a different format to aid comprehension, the chatbot can be of assistance. Micro-lessons also aim to present relevant

material. The formative and summative assessments strive to bridge the technical language of loss mitigation with daily performance. By having the chatbot generate scenarios between a defaulting borrower and the mortgage specialist, learners can immediately apply what they have learned. This focus on just-in-time assistance and performance support aims to maximize the time participants spend learning, reducing friction in daily workflows and potentially decreasing learner resistance due to stress or prior training experiences.

Research Methodology

Method

There are three primary scientific approaches to measuring the impact of an e-learning course: quantitative, qualitative, and mixed methods. The project should select the method that best aligns with the research questions. These questions, as stated in the first chapter, are: How does micro-learning as an instructional strategy impact mortgage loss mitigation specialists' understanding of loss mitigation concepts and their application? How does an e-learning module using micro-learning influence learner attitudes about learning those loss mitigation concepts? While both quantitative and qualitative methods could yield useful data, or a combination of the two, this initial testing will focus on a qualitative approach.

As Johnson and Christensen (2019) describe, "Qualitative research is used when little is known about a topic or phenomenon and when one wants to discover or learn more about it. It is commonly used to understand people's experiences and to express their perspectives." The authors explain that a quantitative approach assumes that human behavior is more "predictable and explainable," whereas qualitative research views people as "fluid, dynamic, and changing over time and place." Moreover, the method of data collection for the quantitative approach

typically relies on raw numbers, while qualitative data can be gathered through observations and interviews.

This project does not have a history of previous e-learning courses and testing to rely on, especially regarding the use of micro-learning. In this sense, it is uncharted territory, making it difficult to rely heavily on quantitative methods. Furthermore, the second research question seeks to evaluate learner attitudes, which can only be assessed through qualitative testing. While the first research question could be measured quantitatively through something like quiz questions, such assessments are not a central feature of this course. Rather, the AI chatbot is being tested to see its impact on loss mitigation specialists' ability to understand and apply concepts—these conversations with the AI are not recorded for evaluation—and its potential continued benefit as a resource. To gain an initial understanding of the value that AI may have in training and performance support, qualitative analysis is more suitable. Lastly, learner resistance is a key component of this research. Participants' openness to micro-lessons as an alternative style of learning, and how it fits into their schedules and supports their daily workflow, can be measured through interviews and questionnaires.

Participants/Stakeholders

This e-learning course aims to recruit around 10 participants of diverse ages, ranging from their 30s to 60s. These learners will hold various job titles and levels of experience, from standard loss mitigation specialists to loss mitigation managers. The study will also include individuals from the mortgage industry who are not mitigation specialists, to test the clarity and effectiveness of the content. The learners will be operating remotely from different locations across the United States. No other information regarding demographics, financial, or environmental characteristics will be analyzed. Participants will be selected based on personal

invitations, with some chosen randomly and personally unacquainted with the researchers, while others are. Since this is not a qualitative study, ensuring a random selection without influence is less of a concern. According to Sargeant (2012), for a qualitative study, “participants are selected who can best inform the research questions and enhance understanding of the phenomenon under study.”

The organization participating in this research project is Freedom Mortgage, a large institution with around 10,000 employees. Freedom handles the entire mortgage loan process, from origination to payoff, including the review of default loans for home retention options. They may be interested in exploring different approaches to loss mitigation training, as their current courses are text-heavy and mostly replicate the highly technical language of the servicing guides, as mentioned earlier. Furthermore, Freedom has transitioned to being primarily remote, making high-quality training modules using sound instructional design principles crucial for effectively preparing employees in a field that has high monetary risk.

Data Collection Instrument(s)

This research project will utilize questionnaires as the main tool for data collection. As Johnson and Christensen (2019) explain, “Researchers use questionnaires to obtain information about the thoughts, feelings, attitudes, beliefs, values, perceptions, personality, and behavioral intentions of research participants.” The two research questions aim to assess how the e-learning module and micro-learning strategy impact participants’ ability to understand and apply loss mitigation concepts, as well as their attitudes toward this learning approach. A questionnaire designed to capture learners’ feelings, attitudes, and any changes in behavior will be beneficial in collecting data to answer these research questions.

To obtain genuine feedback about the module, the questionnaire has been designed with open-ended questions and without any leading language (Johnson and Christensen, 2019). It uses clear language and avoids double-barreled questions that address two different issues in the same prompt. The questionnaire consists of six short-answer questions focusing on the impact of micro-learning, AI chatbots, and performance support. This feedback form was created using Google Forms and will be provided as a link at the end of the e-learning module (see Appendix.

Data Analysis Technique(s)

Once the questionnaires are received, they will be analyzed and interpreted. Since all of the questions are short-answer, it is important to have a good method for recording ideas and reflection. Johnson and Christensen (2019) recommend the use of memoing, “reflective notes that researchers write to themselves about what they are learning from their data.” These memos will be used to identify themes and patterns that will allow conclusions to be drawn regarding the impact of the e-learning course. Recurring ideas will be coded and categorized (Murray, 2018) and presented as a chart in the last appendix of this research paper.

Expected Timeline

The testing phase for the e-learning course can be brief, as learners will participate remotely without the need for meetings or direct observation. The proposed timeframe is one week, from December 30, 2024, to January 3, 2025. During this period, the module will be accessible to participants, and data collection will commence.

Data Security and Confidentiality

Participants are introduced to data security in the introductory micro-lesson. A privacy statement explains data collection practices, including access, anonymity, security, and external use. Information gathered through the Learning Management System and questionnaires is

confidential and solely intended to enhance future course experiences. This data will be used exclusively to refine teaching methods, materials, and support to better meet learners' needs. Participants' anonymity is ensured, as no personal information is required at any point during the course or in the questionnaires. Additionally, no collected information will be used, sold, or shared for marketing or other public purposes. All information collected through Talent LMS and the AI chatbot via Chatbase will remain secure. Access to these platforms is restricted to the researcher, with logins protected by two-factor authentication to prevent unauthorized access. Upon completion of the research, all data will be securely erased, and the accounts will be closed if necessary.

Conclusion

This chapter detailed the research methodology for the e-learning course. A problem statement was developed, highlighting the need for loss mitigation specialists to learn government regulations while maintaining efficiency and accuracy within their regular busy schedules. Micro-learning was chosen as the instructional design strategy to address this challenge as it provides a flexible alternative to other forms of learning, which also focuses on providing just-in-time performance support. User perspectives were explored through points of view and "How might we..." questions, fostering innovative ideas to tackle the problem effectively.

A learning goal was established, supported by specific objectives within the individual micro-lessons designed to achieve that goal. The broader goal is for specialists to be able to understand and apply FHA loss mitigation concepts with the individual objectives breaking down each home retention option. The chapter also provided an outline of the course content and the technologies utilized, such as the LMS (TalentLMS) and AI tools, which is to serve as

critical tool in learning and performance support. Additionally, the chapter described the qualitative research approach to be employed, including data collection through questionnaires consisting of six questions relating to the use of micro-learning and the AI chatbot. Key logistical details were covered, such as the participants (loss mitigation and general mortgage specialists), stakeholders (Freedom Mortgage), expected timeline, and measures for ensuring data security.

Chapter 4: Results

Summary of Research

This chapter of the capstone report provides a summary of the research study, analyzes its results, and explores potential refinements to enhance those results. The study proposed integrating micro-learning as an instructional design strategy with AI-driven performance support technology within the mortgage industry. Specifically, the e-learning course developed for this study focuses on simplifying government regulations for loss mitigation specialists. These specialists are responsible for reviewing defaulted loans and identifying home retention options to prevent foreclosure.

The course is designed for both on-site and remote specialists, addressing their unique needs. As detailed in Chapter 2, loss mitigation specialists often face demanding and high-pressure workloads due to the unpredictable nature of the economy and mortgage industry. Surges in defaulted loans can leave little time for training, making efficient use of available time critical. Additionally, mortgage servicing guides contain highly technical and increasingly complex government regulations, further underscoring the need for effective training solutions.

To address these challenges, micro-learning was selected as a potential solution. This approach emphasizes concise, targeted sessions that focus on practical application and immediate performance support.

The participants in this research study included loss mitigation specialists and other professionals within the mortgage industry. The sample comprised individuals of diverse ages, genders, and career stages. Freedom Mortgage, a large mortgage company managing loans from origination to payoff, including loss mitigation, served as the participating organization and stakeholder. While they permitted the research to be conducted, their involvement in the process was minimal.

The study employed a qualitative methodology for data collection. At the conclusion of the e-learning course, participants responded to six short-answer questions designed to assess their perceptions and behaviors regarding the use of micro-learning as a learning strategy and the role of AI in training and development. The responses were analyzed through memos, which will be explored in detail in the following sections.

Summary of Results

The results analyzed in this section are derived from notes based on the submitted questionnaires, which are available for review in Appendix D. These notes are organized into categories corresponding to the specific questions posed: the implementation of micro-learning, the course's effectiveness in simplifying complex concepts, the use of AI as a learning technology, and the course's value as a tool for performance support. An additional category captures general reflective observations on the course methodology and potential improvements to strengthen results, providing a foundation for justifying future changes to training programs within mortgage organizations. This section will analyze notes based on the questionnaire while the following section looks more at the notes on methodology.

The research methodology employed for this study was qualitative, with questionnaires selected as the primary tool for data collection. The six questions were designed to explore participants' perceptions and potential behavioral changes. Two key considerations in choosing micro-learning as the learning strategy were the stress experienced by some specialists (as mentioned above) and resistance to learning, often stemming from a perceived lack of time and dissatisfaction with the quality of training in this highly complex field. A qualitative approach was deemed suitable for assessing whether micro-learning and its underlying philosophy could effectively address these challenges.

Participant responses to the use of micro-learning were overwhelmingly positive. None of the respondents viewed this approach as an unsuitable format for learning the material. On the contrary, most participants found the breakdown of concepts into small, manageable segments to be highly beneficial. This approach allowed them to focus on a limited amount of material at a time and integrate learning into their schedules conveniently.

Government regulations in this field involve numerous rules and mathematical processes. For individuals without extensive prior experience, understanding the technical language and logical steps of the review process can be mentally demanding. However, the home retention guidelines follow a basic hierarchical structure: if a borrower does not qualify for the first option, the specialist proceeds to evaluate the next. This structured progression aligns well with the concise, targeted nature of micro-learning, making it an effective strategy for this type of training.

A fundamental principle of micro-learning is minimizing the cognitive load placed on learners. One participant highlighted the benefits of incorporating visuals and audio captions into the course. Research supports this approach, as pairing things like text with audio captions helps reduce cognitive load by engaging multiple senses simultaneously, rather than overburdening a single sensory point.

While micro-learning offers numerous benefits, one potential tradeoff is the omission of explanatory detail to maintain concise training sessions. Some participants remarked that the training served as a strong starting point, while others noted the absence of certain helpful information. Striking a balance is crucial—delivering short, focused training while ensuring sufficient explanation of key concepts. Additionally, providing access to supplementary resources or performance support tools can facilitate deeper learning and address gaps in

understanding. A potential risk of micro-learning, as with any training involving multiple components, is losing sight of the bigger picture while focusing on individual elements. One participant expressed interest in understanding how everything fit together. Instructional designers must ensure that the overall course is clear, providing learners with opportunities to integrate all modules holistically. This approach helps learners grasp the connections between individual parts and understand how they contribute to the whole.

The integration of AI as a training tool was designed to complement the micro-learning format. AI offers significant potential to support learners by consolidating information, generating quizzes and scenarios, simulating interactions, and personalizing learning experiences based on individual strengths and weaknesses. However, the use of AI in training is still in its early stages, making its dedicated application even more novel. A qualitative approach to data collection was chosen in part to explore participants' perceptions of AI's implementation and to assess its potential future value in enhancing learning experiences.

Participants expressed no general negative feedback about using AI for training purposes. However, opinions on its role in ongoing performance support were more mixed. Many recognized the value of AI tools, such as chatbots, in creating assessments and generating scenarios that enabled immediate application of learning. This functionality was a key aspect of the AI tool's design, intended to bridge the gap between raw information and practical application. The aim was to introduce a more authentic element to the course, helping learnings progress from the "understand" to the "apply" stage of Bloom's taxonomy. Additionally, a critical focus of micro-learning is just-in-time learning, which provides quick, relevant, and applicable training at the moment it's needed within the workflow. The AI chatbot was

specifically designed to support this objective, ensuring that learners could access targeted assistance when needed.

However, the intended use of the AI chatbot for just-in-time performance support may not have been entirely successful, based on participant feedback. Some participants questioned whether the chatbot would consistently understand queries or provide accurate answers, which is crucial in loss mitigation. Additionally, the AI was perceived as somewhat clunky, which was expected given that access to it was limited solely to the LMS. Ideally, the chatbot would be integrated directly into the specialist's system, making it easily accessible outside the confines of the LMS. Despite these concerns, participants were generally receptive to the potential value of AI in areas such as personalizing learning experiences, accommodating different learning styles, and offering hands-on practice, all of which are particularly important in mortgage loss mitigation.

The concerns about AI are closely linked to the performance support provided by the course. If employees avoid using AI due to a poor user experience, caused by lack of seamless integration, alternative performance support resources and job aids would need to be developed to strengthen this critical aspect of micro-learning. One participant also raised a noteworthy point about how the course supports individuals in actually reviewing default files. This is a reasonable concern, as mortgage companies utilize different programs and systems for loan reviews. While someone may understand the concepts and processes outlined in the government regulations, applying those concepts to review a file using the company's systems while following internal procedures is another challenge.

It should be acknowledged that the course could not train on both loss mitigation concepts and loan systems for two main reasons. First, attempting to cover both would expand

the lessons to the point where they would long qualify as micro-learning. Second, the load systems used vary across mortgage companies, so training on them would need to be dealt with separately from training on the regulations. That said, the course could benefit from being more explicit about its limitations.

The final point to address in this section is the steps taken to minimize bias in the results. Bias can easily be introduced through qualitative data collection methods, such as questionnaires. Crafting questions requires careful consideration, as the wording of a question or the omission of certain questions can inadvertently skew results or lead to biased interpretations. This study made effort to avoid such biases. The questions were kept open-ended to encourage diverse responses and were phrased to avoid steering participants toward a specific answer or discouraging them from sharing their opinions on aspects of the course not directly addressed in the question.

As this is a qualitative study, understanding the respondents' feelings is essential, so the questions were designed to allow their view to be expressed freely. Additionally, the response forms were submitted anonymously, which helps ensure that no comments were given less weight based on participants' demographics or job positions.

Proposed Iteration(s) of E-Learning Solution

The feedback on the e-learning course provide positive, albeit general, support of the instructional strategies used. The use of micro-learning impacts the way people learn loss mitigation by providing them greater flexibility in their busy schedule by providing lessons in short bursts that break down necessary concepts and processes in a quick, relevant, and applicable manner. The use of AI was generally well received for its ability to give learners an immediate opportunity to test their comprehension of the material and ability to apply it to

authentic scenarios. This serves as a tool to help bridge the gap between knowledge and application, while also serving as a continual resource aid. The course, overall, was effective in breaking down complex concepts and delivering it in a way that is less intrusive of daily workflow.

There are several ways the course could be improved, a couple of which will be briefly highlighted here. However, the primary focus below will be on developing a more robust research methodology to strengthen the project's results. As mentioned earlier, greater attention must be given to performance support if seamless integration of AI proves unfeasible.

For future iterations, the next version of the course could include an interactive PDF created with a tool like Adobe InDesign. This PDF would feature separate sections for each home retention option, with key regulations highlighted and embedded links explaining important terms and providing additional resources for further learning—an element also noted in earlier feedback. Users would be able to navigate through the document by clicking on tabs, creating a digital binder experience that allows easy access to various loss mitigation options. To accommodate different preferences for accessing the job aid, it would be designed with the consideration that some users may prefer to print it.

Another key area for improvement in the next iteration is ensuring the accuracy and reliability of the AI chatbot. This could be achieved by dedicating more time to fine-tuning and testing the AI to better understand user requests and deliver sound and relevant responses. Additionally, stakeholders could thoroughly vet the chatbot and offer their endorsement, which would be featured in the course, helping users feel confident in utilizing this resource.

The rest of this section is devoted to detailing how a more robust research methodology could be developed to strengthen the results. As already described, the method for measuring the

impact of the e-learning course was qualitative, using a six-question questionnaire as the data collection tool. This approach was chosen because no existing data addresses the benefits of micro-learning and technological tools, such as AI, within mortgage loss mitigation. The questionnaire aimed to capture initial reactions, including user feelings and behaviors, particularly from those likely encountering this blended learning style for the first time. However, this data does not provide organizational stakeholders or specialists with critical metrics, such as improved performance, reduced training time, or increased work output—nor does it ensure that productivity remains consistent. Furthermore, more participants are needed, and from varying organizations, to rely sufficiently on the results to make drastic changes to the training methodology that this project has proposed.

With sufficient time, resources, and organizational support, a more effective data measurement methodology would combine qualitative and quantitative approaches. This mixed-methods strategy would focus on evaluating how micro-learning and AI influence the performance of loss mitigation specialists. Baseline data, such as output performance and error rates, would be collected before implementing the course, serving as a control to compare against post-training data. However, this approach would require significant time and careful interpretation of results, as external factors could heavily skew perceptions of the course's benefits or drawbacks.

This proposal for a significant refinement is informed by research demonstrating the benefits of micro-learning (see Chapter 2). Studies indicate that, when executed effectively, micro-learning not only reduces training time but also improves retention. Additionally, with its emphasis on performance and just-in-time learning, the courses and associated resources can serve as ongoing tools to support productivity.

Discussions with stakeholders following the course implementation revealed concerns about how this learning approach might impact the company's bottom line. Some of the participant comments also highlighted the concern for how the course impacts work performance. One user commented, "While the course helped explain the ideas, I am not sure how it will help to actually review a default loan." Therefore, additional steps are needed to assess the course's impact on employee performance and identify any necessary revisions to improve the transition to practical application. Adopting a mixed methods approach would provide a more holistic evaluation, capturing employee reactions while also measuring the tangible benefits of integrating micro-learning with AI.

Careful planning is essential when implementing the training, as a poorly executed rollout could result in skewed data and misleading conclusions. To accurately assess the course's effectiveness, several approaches may be employed, ideally multiple in combination. A couple will be pointed out here with more below. The researcher could collect baseline data from standard training methods after the enactment of new government regulations, followed by data collection after subsequent regulations are implemented using the new training modules. Performance data could also be gathered from new hires trained with the standard methods and compared to data from new hires trained with the new e-learning materials.

Finally, to ensure the results are robust enough to justify changes to an organization's training approach, a larger sample of participants is needed, including individuals from a broader range of organizations with diverse workflows and processes. As stated in the report, ten individuals were selected from one mortgage company. A larger pool of users from a variety of mortgage organizations—encompassing those that work primarily remotely, on-site, and mixed, and those with different workflows and technologies—will enhance the reliability of the results.

Failing to include such diversity increases the risk of biased outcomes. For example, the organization involved in this research primarily operates remotely, making e-learning the main training tool. However, smaller organizations that work on-site may be less receptive to e-learning, and the course may not have the same level of effectiveness for them.

Proposed Strategies for Refinements

This section will explore a couple strategies for iterating on the e-learning course by implementing a more mixed-methods approach. These strategies involve partially enacting a more quantitative approach to assess whether a more extensive study and data collection would be valuable. One approach to measure this is through expanded qualitative data collection, such as extending the initial questionnaire to include additional questions about the practical application of the learning. Participants could be asked how the course has enhanced their understanding of the content compared to their previous traditional training programs, if they have experienced any benefits.

This qualitative method could be combined with an additional questionnaire, followed by a small qualitative data collection a few weeks or months later. The second questionnaire would revisit some of the initial questions to evaluate whether participants still believed the course effectively prepared them for their workload. They would also be asked if they felt they had a more comprehensive understanding when reviewing a default loan compared to before. This could help indicate whether the new training has led to improved performance, such as reducing errors often made by loss mitigation analysts, especially if the reviewed file undergoes a quality control process. Quantitative data from error logs could be collected both before and after the training to assess any reduction in errors. Success in this area would immediately be of great benefit to the organization as they would have to cut less checks for mistakes.

A second strategy involves incorporating the more mixed-methods approach to determine the impact that micro-learning has on the overall time allotted to training. As stated, research suggests that micro-learning can be more time-efficient while yielding greater results compared to traditional learning methods. To implement this, quantitative data could be collected by tracking the time taken to complete the course within the Learning Management System. If users take less time to learn the material while maintaining or improving their performance, this would indicate that micro-learning can reduce training time, allowing employees to spend more time on their work—an outcome that would certainly be beneficial for the organization.

However, this needs to be done carefully to avoid sampling bias, so participants should be selected randomly. Data on the time spent in previous training could be collected and compared with the time spent on the new modules. A potentially better method, though, would involve using a control group that undergoes traditional e-learning training and a variable group that trains with the new course. The time spent and subsequent performance outcomes could then be compared. If the results show that micro-learning is more effective, it could not only reduce training time for current staff but also improve the onboarding process for new employees.

These strategies could be implemented while also expanding the number of participants within the organization. If the resulting data proves compelling, a more in-depth study could be pursued. This assumes that both the researcher(s) and participating stakeholders have the necessary willingness, time, and resources to support a longer-term project.

Chapter 5: Discussion

Conclusion(s) Based on Results

The project detailed in this report involved the creation of an e-learning module designed to address the challenges commonly faced by mortgage loss mitigation specialists. The course employed the emerging instruction strategy of micro-learning, complemented by performance support tools such as an AI chatbot. This e-learning intervention aimed to deliver training in a format that accommodated staff schedules, offering greater flexibility. The concise, focused lessons were designed to provide performance support and just-in-time learning, seamlessly integrating with the specialists' daily workflow.

These two core elements of the e-learning module—micro-learning and AI technology—were well received according to the participant questionnaire. Six qualitative questions were posed, each focusing on these elements, to gather insights into users' perceptions and behaviors. As discussed in the previous chapter, no negative feedback was recorded regarding the use of micro-learning or AI. On the contrary, most participants highlighted the benefits of micro-learning, noting its flexibility and its ability to present material in manageable, understandable segments that could be immediately applied using the AI tool. Overall, the initial results of this e-learning test were fruitful, though not definitive. The preceding chapter outlined ways to enhance both the course design and the research methodology to improve future outcomes (some of which will be recapped in the last section).

Chapter 1 outlined two research questions: (1) How does micro-learning as an instructional strategy impact mortgage loss mitigation specialists' understanding of loss mitigation concepts and their application?; and, (2) How does an e-learning module using micro-

learning influence learner attitudes toward learning these concepts? Feedback forms revealed promising initial insights.

Micro-learning positively impacts loss mitigation specialists by breaking down complex concepts into manageable, relevant, and applicable chunks. Given the technical and complex nature of government servicing regulations, micro-learning reduces cognitive overload by addressing one home retention option at a time. The philosophy behind this strategy goes beyond just delivering short learning episodes; it emphasizes relevance and direct applicability to work. The course integrated tools such as an AI chatbot and programmed Excel sheets to support specialists in progressing from an understanding of the concepts to applying them during default loan reviews.

Limitations

Several caveats must be noted, cautioning against taking confident immediate action based on these preliminary results. Given the constraints of this project—time and available resources—the findings are limited, which rely on participants' perceptions immediately after completing the course. While learners reported an improved understanding of the concepts and responded positively to the tools designed to support their application, these perceptions do not necessarily translated to enhanced learning or improved job performance.

Further research is needed to assess whether actual deeper and more efficient learning and job performance have improved. This limitation is important, as the study focused on a small sample group and employed exclusively qualitative research methods. As outlined in the final section of the previous chapter, a more comprehensive methodology would build upon this study by adopting a mixed-methods approach, incorporating both qualitative and quantitative data collection.

Further development of the project would provide stronger validation of the preliminary answers to the research questions. Additionally, it would allow for a deeper exploration of how revising a mortgage organization's training program might influence stakeholders, employee well-being (such as resistance to learning), and overall business success. As it stands, the initial results are broad and lack the concrete evidence that a more rigorous research methodology could offer.

Implications of Research on Educational Practice

If further research validates the initial results of this e-learning project, the micro-learning approach as a design principle could highly be beneficial within the mortgage industry. This industry is inherently volatile, with ups and downs across the various sectors due to the economy and other factors, bringing surges of work in one area while others may suffer layoffs. The unpredictability makes it challenging to dedicate consistent time for staff training or onboarding, necessitating programs that are adaptable to the industry's evolving nature.

The instructional strategy of micro-learning presents a promising course structure and philosophical approach to delivering training. The mortgage industry, including but not limited to the niche area of loss mitigation, operates under strict regulations imposed by government agencies, investors, private insurers, and state laws, with potential severe penalties for non-compliance. These regulations are outlined in extensive servicing guides that often span thousands of pages, filled with insider terminology, complex concepts, and detailed processes requiring repeated reading and retraining. Add to this the fact that regulations constantly change together with mortgage organizations' own internal processes.

Micro-learning addresses these challenges by reducing cognitive load, delivering training in manageable, focused segments that emphasize relevance and immediate applicability. This

approach also supports on-the-job learning, providing just-in-time resources when employees need assistance. For mortgage professionals facing time restrictions, performance quotas, or the requirement of things like cross-training, micro-learning offers an efficient and productive solution.

Micro-learning, thus, could serve as an effective design principle for training within the mortgage industry. This strategy aligns well with the structured nature of servicing guides and their frequent step-by-step processes. The ordered and logical flow of these processes lends itself well to the short, focused training sessions that micro-learning provides. By breaking down steps, procedures, and hierarchies into manageable lessons, employees can more easily absorb and apply the content. However, instructional designers must also ensure that these individual lessons are integrated holistically, so that learners can understand how all the components fit together.

Finally, combining micro-learning with performance support tools like AI has the potential to revolutionize how employees are assisted on the job. In an ideal scenario, an AI-powered tool, such as a chatbot, could provide mortgage employees with a range of resources—helping them navigate and master training materials, translate learning into practical application, and offer ongoing support in real-time.

With advancements in AI, these tools can be finely tuned to access comprehensive servicing guides and the specific internal processes of an organization, enabling employees to retrieve critical information seamlessly in the daily workflow. Training programs could also be integrated into the chatbot, with various media like images to help the employee visualize what to do. The AI could call upon and tailor these resources based on the inquiry prompt.

The general design principle derived from this focused study could be very fruitful for such an industry that is highly complex and ever evolving.

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Appendix A

The e-learning module that will undergo user testing is titled “Federal Housing Administration.” This micro-course consists of a series of short, self-contained lessons that break down the regulatory guidelines of the government insurer FHA. The most recent guidelines and home retention options were released in February 2024 and must be implemented by January 2025. The servicing guide, written in highly technical language, outlines various options available to defaulting borrowers, with strict procedure hierarchies and requirements to avoid penalties for the mortgage organization. Through this e-learning course, specialists will learn about the latest changes in the FHA’s servicing guide and how to apply them in their review of defaulted borrowers. The course is intended for any mortgage loss mitigation specialists that review loans insured by the FHA.

The loss mitigation specialist would typically progress through the FHA modules in sequence, but they have immediate access to all modules, allowing them to focus on what they need at any given time or skip content they’re already familiar with. Learners can begin with the introductory module to get an overview of the course content and structure. This short section includes an introductory video on FHA, followed by another video that previews a microlesson’s structure, content, and assessment methods (e.g., AI GPT chatbot).

The learner then progresses through five microlessons, each covering one of FHA's main home retention options: forbearance, Advance Loan Modification, Partial Claim, Recovery Modification, and the Payment Supplement. Each lesson starts with an introductory video summarizing the topic and outlining the learning objectives. The home retention option is defined, and its regulatory requirements are explained. A second video provides a more visual breakdown using a programmed Excel sheet, showing how the math works when reviewing

default borrowers. Learners can download the Excel sheet for hands-on experience. Each microlesson concludes with a knowledge check, followed by an AI chatbot-based assessment.

The chatbot can generate an unlimited number of questions or scenarios to test the learner's new knowledge and skills, and learners can also ask the chatbot any questions they may have.

Overall, the course is designed to take about 60-90 minutes if all sections are completed.

However, this duration may increase depending on how much time the learner spends interacting with the Excel sheets or the AI chatbot.

Appendix B

FHA Loss Mitigation Training Survey

The data from this survey will be used solely by the researcher to obtain feedback of the effectiveness of the course and the potential value of the instructional strategies used therein.

1. How does the use of smaller micro-training lessons impact how you learn loss mitigation concepts?

2. What role, if any, does micro-learning like this have within the schedule of a mortgage specialist?

3. In what ways has this e-learning course helped or hindered your ability to understand and apply the government regulations?

4. How does the use of an AI chatbot impact learning loss mitigation?

5. What role could AI serve in training?

6. What aspects of the course affect your ability to transition your learning and perform in a loss mitigation role?

Appendix C

12/18/24, 1:01 PM

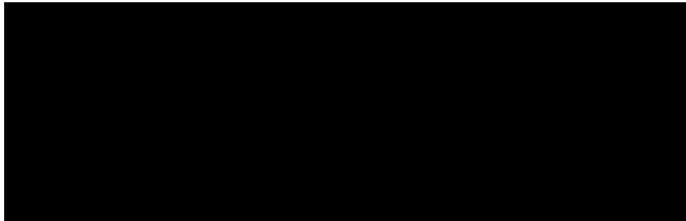
Yahoo Mail - Capstone Research

Capstone Research



Dear Keith Vande Vrede,
Freedom Mortgage has reviewed your Capstone Research request for study, titled *Federal Housing Administration*, and we agree to support collaboration efforts towards your collection of data in accordance with your description:
This research project involves inviting around ten participants to complete a 1-hour training module focused on FHA loss mitigation regulations. Participants will be personally invited by the researcher and will be asked to complete a short answer questionnaire at the conclusion.
The extended invitation to conduct the above-described study will occur between 12/30/24-1/3/25.

Sincerely,



As a customer of Freedom Mortgage, you deserve outstanding service, 100% of the time. If you experience anything less, please contact my manager, Don Jones, don.jones@freedommortgage.com.

CONFIDENTIALITY NOTICE: This e-mail and any attachments (collectively, "e-mail") is confidential and may contain information that is private, proprietary, and/or legally privileged. Any unauthorized use, copying, printing, saving, sharing or other distribution of this e-mail is strictly prohibited. If you have received this e-mail in error, please (1) notify us so that we can correct the error and take steps to ensure it does not reoccur and (2) delete the e-mail without distribution.

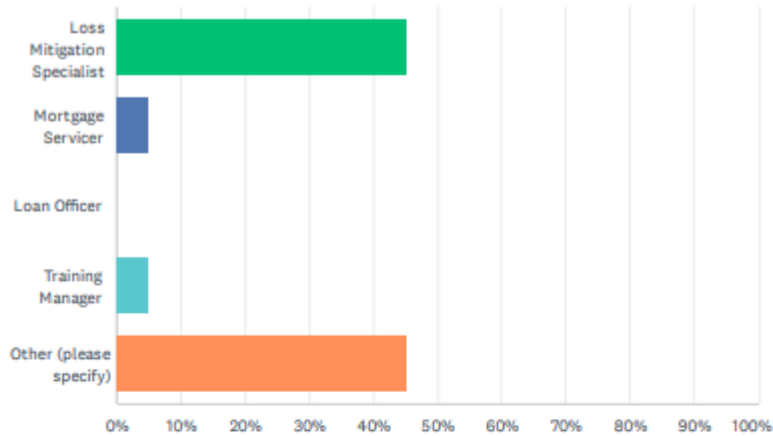
Appendix D

How does the use of smaller micro-training lessons impact how you learn loss mitigation concepts?	What role, if any, does micro-learning like this have within the schedule of a mortgage specialist?	In what ways has this e-learning course helped or hindered your ability to understand and apply the government regulations?	How does the use of an AI chatbot impact learning loss mitigation?	What role could AI serve in training?	What aspects of the course affect your ability to transition your learning and perform in a loss mitigation role?	General Research Notes	General Research Notes
Based on the limited number of participants, there were no negative reactions to the use of micro-learning as the main structure for the training.	Like the previous question, none of the participants viewed micro-learning as an inherently poor format to learning loss mitigation.	Many of the participants appreciated how the concepts were presented succinctly, which helped understand them easier.	The AI chatbot trial was received generally well among participants.	Participants were very receptive the general idea of the value AI may have in training.	Relative to the other questions, answers to course's value helping people transition from course to performance had the most mixed results.	After revisiting the qualitative questionnaire and responses, it may be too focused on the feelings and behaviors of the participants.	Not sufficient to gauge the initial reaction from users right after taking the course. More data is needed.
Participants appreciated the short bursts of content, which helped break up the training, preventing overwhelming the user while also making training more flexible around their schedule.	Many commented that the use of micro-learning fits better with people's varying schedules.	One comment said the course was a good foundation for more detailed learning. Some people might want additional resources to get more in-depth explanations.	Comments said that the use of AI served as a helpful source of interaction to see various scenarios and immediately apply what was learned.	Many comments highlight the use of AI to help generate quizzes for people to help reinforce learning.	One comment noted that an in-person walkthrough will still be a superior form of learning.	Only one question of the questionnaire gives attention to the benefit the course may have on actual performance. More attention is needed. Not enough comments consider the tangible impact on the job.	Micro-learning focuses on not just bite-sized lessons but just-in-time support. How do we measure how the course continues to be useful while on the job, if at all?
Some liked that the micro-lesson were succinct, while one noted that, at the same time, this might omit relevant helpful information. There is a trade-off.	One individual noted this style learning would be helpful as a starting point for learning these concepts. I presume this is due to the way content is broken down into smaller chunks with an emphasis on performance.	While the course alerts users to information they are presumed to one, one comment was still concerned about the lack of explanations for more terms.	Some users saw the potential value of AI being used to tailor learning experiences to the individual, helping them focus on areas needing improvement and reinforce ideas learned in the course.	Other users noted that AI incorporates a more interactive component into the course.	Another comment was concerned about the beneficial use of the AI outside of the course. May be a bit clunky of a user experience. Others were concerned how the training relates to actually reviewing default files.	A research methodology focused entirely on a qualitative approach is not wholistic enough. It doesn't address the actual performance increase or decrease of the employees.	Micro-learning is expressed to maximize learning with less time and focus on performance. Need to figure out how to measure if this is true for course on loss mitigation.
One participant noted the value of having an audio and visual emphasis. This may be an excellent supplement to the goal of micro-learning, maximizing learning within less time.	One constructive comment concerned how the individual micro-lessons fit together as a whole. There needs to be an emphasis on a wholistic perspective since micro-learning demarcates information into separate sections.	Another constructive comment suggested that the formative questions at the end of the lessons might appear basic and do not prepare learners for the complicated scenarios that they will deal with.	Other comments brought up the concern that some answers may not be explicit enough, or grasp what was being asked. One comment also asked how the learner can know for sure the veracity of the bot's answer.	Comments also noted how it's helpful having a hands on approach to learning the content, which also accommodates different learning styles.	Several comments were still positive and liked how the concepts were broken down, making it easier to remember and apply. Another said it is a beneficial starting point.	A mixed approach, qualitative and quantitative may be better, giving attention to both feelings of the employees but also looking at actual results that benefit a company.	Results would be better if the testing sample size was larger from more organizations and involved other types of data measurement.

Appendix E

Q1 What is your role in the mortgage industry?

Answered: 20 Skipped: 0

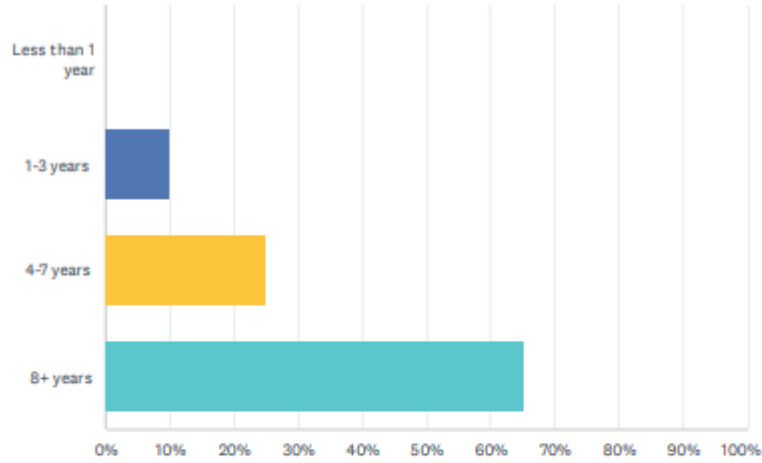


ANSWER CHOICES	RESPONSES
Loss Mitigation Specialist	45.00% 9
Mortgage Servicer	5.00% 1
Loan Officer	0.00% 0
Training Manager	5.00% 1
Other (please specify)	45.00% 9
TOTAL	20

#	OTHER (PLEASE SPECIFY)	DATE
1	Foreclosure Attorney	8/23/2024 4:23 PM
2	Late Stage Default Manager	8/22/2024 11:10 PM
3	Default Asset Manager	8/22/2024 11:12 AM
4	Product Consultant	8/22/2024 11:08 AM
5	Ops Manager	8/21/2024 8:25 PM
6	loss mitigation / default review	8/21/2024 4:46 PM
7	Lossmit manager	8/21/2024 9:20 AM
8	Loss Mitigation Supervisor	8/21/2024 12:40 AM
9	Loss Mitigation Supervisor	8/20/2024 9:27 PM

Q2 How many years of experience do you have in loss mitigation?

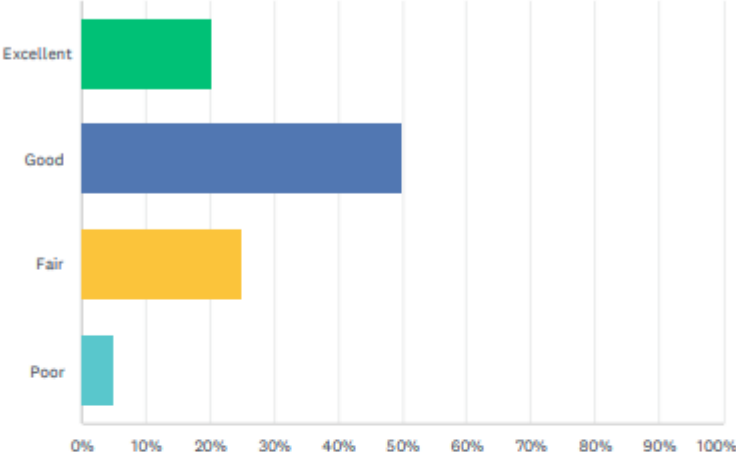
Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	
Less than 1 year	0.00%	0
1-3 years	10.00%	2
4-7 years	25.00%	5
8+ years	65.00%	13
TOTAL		20

Q3 How would you rate the quality of the training you have received in loss mitigation?

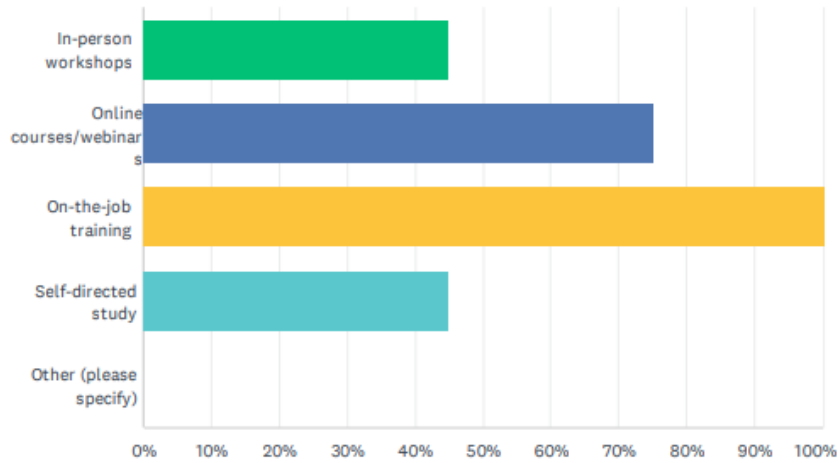
Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	
Excellent	20.00%	4
Good	50.00%	10
Fair	25.00%	5
Poor	5.00%	1
TOTAL		20

Q4 What type of training have you received? (Select all that apply)

Answered: 20 Skipped: 0

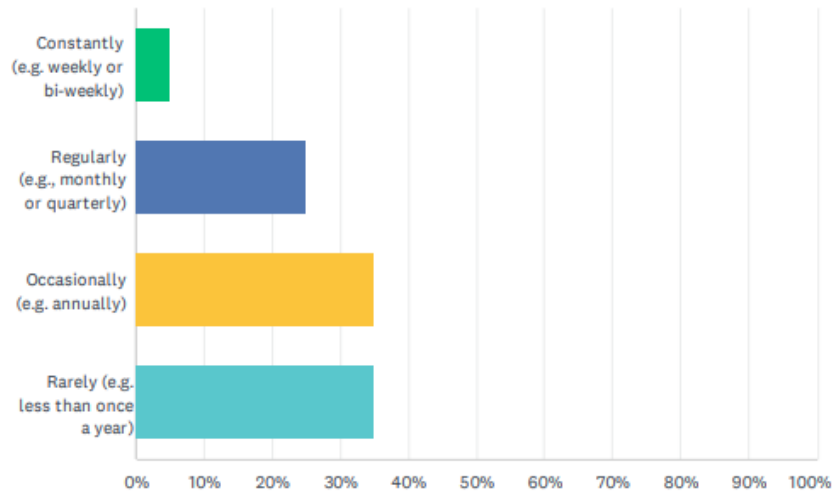


ANSWER CHOICES	RESPONSES
In-person workshops	45.00% 9
Online courses/webinars	75.00% 15
On-the-job training	100.00% 20
Self-directed study	45.00% 9
Other (please specify)	0.00% 0
Total Respondents: 20	

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Q5 How frequently does your organization provide training on loss mitigation?

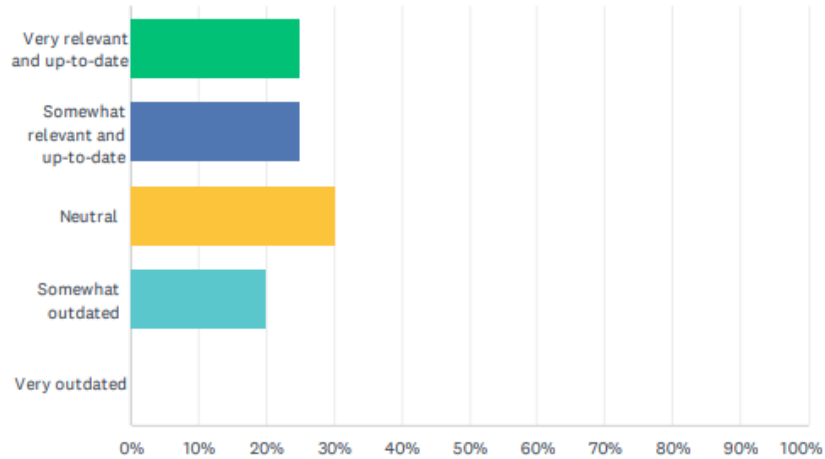
Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	
Constantly (e.g. weekly or bi-weekly)	5.00%	1
Regularly (e.g., monthly or quarterly)	25.00%	5
Occasionally (e.g. annually)	35.00%	7
Rarely (e.g. less than once a year)	35.00%	7
TOTAL		20

Q6 How relevant and up-to-date do you find the training materials provided?

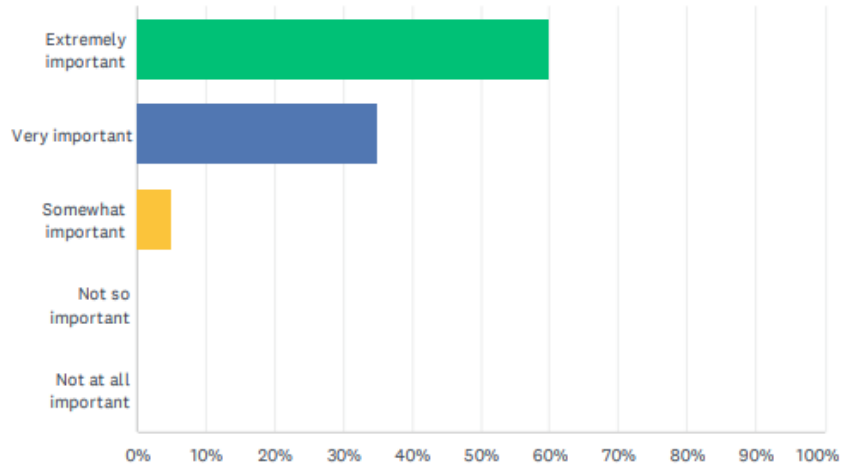
Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	
Very relevant and up-to-date	25.00%	5
Somewhat relevant and up-to-date	25.00%	5
Neutral	30.00%	6
Somewhat outdated	20.00%	4
Very outdated	0.00%	0
TOTAL		20

Q7 How important do you think comprehensive training is for effective loss mitigation?

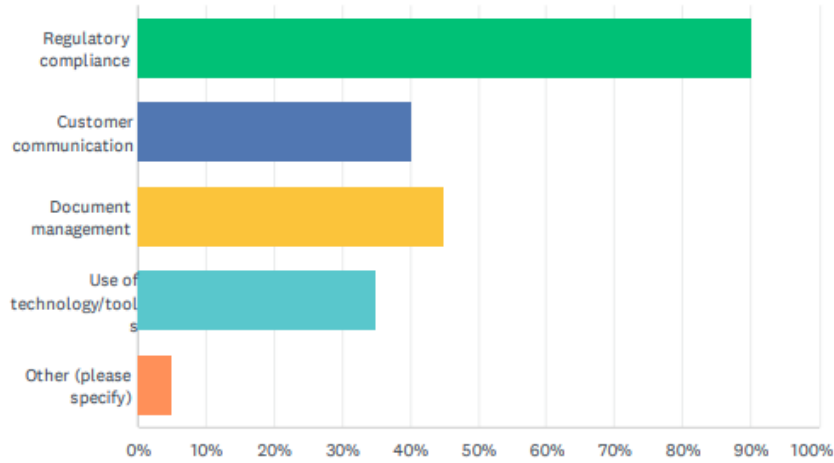
Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	
Extremely important	60.00%	12
Very important	35.00%	7
Somewhat important	5.00%	1
Not so important	0.00%	0
Not at all important	0.00%	0
TOTAL		20

Q8 What aspects of loss mitigation do you believe require more focused training? (Select all that apply)

Answered: 20 Skipped: 0

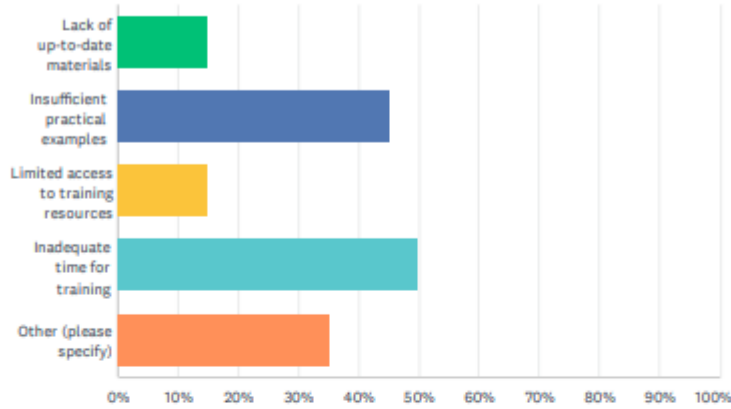


ANSWER CHOICES	RESPONSES
Regulatory compliance	90.00% 18
Customer communication	40.00% 8
Document management	45.00% 9
Use of technology/tools	35.00% 7
Other (please specify)	5.00% 1
Total Respondents: 20	

#	OTHER (PLEASE SPECIFY)	DATE
1	Mortgage industry knowledge	8/22/2024 4:24 PM

Q9 What are the biggest challenges you face in loss mitigation? (Select all that apply)

Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES
Lack of up-to-date materials	15.00% 3
Insufficient practical examples	45.00% 9
Limited access to training resources	15.00% 3
Inadequate time for training	50.00% 10
Other (please specify)	35.00% 7
Total Respondents: 20	

#	OTHER (PLEASE SPECIFY)	DATE
1	on the attorney side, we hear about a lot of frustration with missing documents	8/23/2024 4:23 PM
2	Lack of Communication (or VERY poor communication) when programs offered, guidelines, or protocols change.	8/22/2024 4:24 PM
3	Sufficient technology	8/22/2024 11:08 AM
4	Na	8/21/2024 12:40 AM
5	No job	8/20/2024 10:58 PM
6	I had to choose one. Chase is amazing with training	8/20/2024 10:12 PM
7	Retention of information for specialists that cannot retain new information as well as others.	8/20/2024 9:27 PM

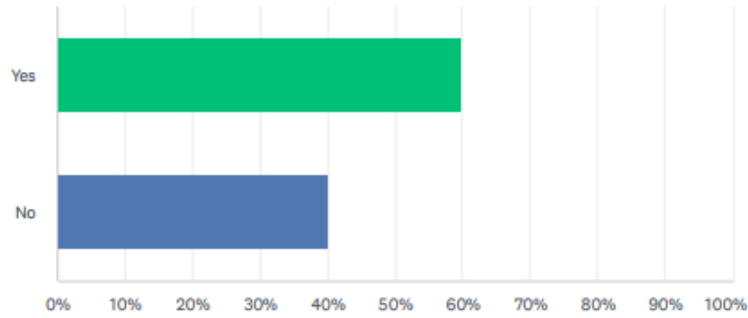
Q10 In your opinion, how could better training in loss mitigation impact the overall performance of your organization?

Answered: 14 Skipped: 6

#	RESPONSES	DATE
1	Reduce errors and increased efficiency.	8/23/2024 5:56 PM
2	It would impact my organization positively by lessening the frustration of borrowers.	8/23/2024 4:23 PM
3	Increase production, efficiency, & job satisfaction of the loss mitigation rep AND decrease or avoid customer complaints, escalations & happiness	8/22/2024 4:24 PM
4	SPOC agents have to be trained in new programs to help explain to borrowers when they call	8/22/2024 12:42 PM
5	Quicker loan resolutions	8/22/2024 11:12 AM
6	N/A	8/22/2024 11:08 AM
7	Hands on training with work shops.	8/22/2024 10:05 AM
8	It would not only give the employees a sound base as far as regulatory requirements but also would help to streamline assistance to homeowners as trained employees tend to assess situations correctly the 1st time as opposed to having to reset a homeowners expectations if an employee did not initially assess the situation correctly.	8/21/2024 8:25 PM
9	Occasional internal refresher courses.	8/21/2024 4:46 PM
10	Prevent errors and lack of understanding	8/21/2024 9:20 AM
11	It would help reduce potential losses due to errors. Currently staying in compliance and providing updated training is where the gap is.	8/21/2024 7:53 AM
12	I would improve the customer experience & save money, while retaining top talent.	8/21/2024 12:40 AM
13	Better training enables our staff to correctly handle any changes in the industry with ease and eliminates excessive mistakes that can harm our borrowers.	8/20/2024 9:27 PM
14	Better training in loss mitigation reduces financial losses, improves decision-making, enhances customer trust, and boosts operational efficiency. It creates a proactive risk management culture, leading to better overall performance and stability for the organization.	8/20/2024 8:56 PM

Q11 Would you be interested in additional free online training resources in loss mitigation for you or your team?

Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	60.00%	12
No	40.00%	8
TOTAL		20