

A Qualitative Study of Transfer of Knowledge in Small Family Farms

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Abstract

This study employed a qualitative methodology to explore small family farm owners' strategies to transfer knowledge and preserve critical expertise, skills, and organizational insights. Given the challenges inherent in small family farms, including the lack of standardized processes for knowledge transfer, qualitative research allows for an in-depth exploration of these complexities. The study aimed to investigate knowledge transfer strategies used by retired small family farm owners in the northeastern U.S. A total of 13 were interviewed using a semi-structured format, focusing on strategies employed to facilitate knowledge retention. Data was analyzed through coding and theme identification to provide comprehensive insights into the barriers, facilitators, and situational factors affecting knowledge transfer. Findings contribute valuable knowledge to the existing literature on knowledge transfer and offer practical recommendations for improving knowledge retention in small family farms.

Keywords: Qualitative research, knowledge transfer, small family farms, expertise preservation, strategies, rural entrepreneurship.

Introduction/Background

Small businesses play a crucial role in the U.S. economy. However, small business owners often face challenges regarding succession planning. Complications such as emotional attachment to the business, finding time to mentor successors, and determining the financial arrangements to transfer assets often arise when owners consider handing over control. These challenges are especially significant for family businesses, where succession planning and management professionalization are essential but often receive little attention, particularly regarding human resource management (Fama & Jensen, 2017). While small business owners may hesitate to relinquish control, having a clear succession plan that includes knowledge transfer is key to ensuring the long-term success of their businesses (Rothwell, 2015).

The dynamics between retiring owners and the next generation can complicate the succession process in family-owned businesses, including small family farms. Family relationships and dynamics often influence decision-making, power struggles, and conflicts during succession (Dyer & Hatch, 2006). Emotional attachments, differing interests, and unresolved conflicts may affect objective decision-making (Mohamad et al., 2023). While business operations involve various components such as people, technology, resources, and policies (Argote et al., 2022), succession decisions are often driven by familial considerations rather than business needs. This "extraverted" approach to succession can lead to suboptimal decisions (Stavrou, 2023). During succession, considerations such as competence, merit, and long-term viability should guide the selection of successors, yet family dynamics can overshadow these factors (Garcia & Sosa-Fey, 2020).

The tradition of passing ownership from parent to child is deeply rooted in small businesses, including family farms (Cooper et al., 2013). Gran (2022) found that 60-70% of small business owners desire to pass their business on to family members, but only 15% succeed. The succession process is fraught with challenges, particularly the transfer of knowledge across various areas such as finances, marketing, staffing, and legalities (Castaneda & Cuellar, 2020). Many small business owners lack access to the resources or networks that could provide them with insights on best practices for knowledge transfer (Huang, F., 2019). The demands on owners' time and a lack of formal training in business management and knowledge transfer often make the process seem overwhelming (Castaneda & Cuellar, 2020).

This study defines small family farms as those employing fewer than 20 individuals with annual sales under \$5 million and serving local or regional markets. Participants were retired small family farm owners from the northeast U.S., and their interviews provided detailed insights into their experiences with knowledge transfer. The information gathered contributed to developing strategies, policies, and interventions to optimize knowledge transfer and foster sustainable growth in small family farm businesses.

Summary of the Literature Review

Successful knowledge transfer is vital for the long-term sustainability of small family farms, and understanding the mechanisms, processes, and strategies employed by retiring owners is crucial in safeguarding the future of such businesses.

Knowledge Transfer in Small Businesses

Small businesses, especially family-owned farms, often face challenges related to the continuity of critical knowledge, which is essential for their survival and growth. Knowledge transfer (KT) refers to the process through which knowledge is shared, disseminated, and applied within an organization (Mthuli et al., 2021). Effective KT enables the preservation of expertise, skills, and business insights, which are essential during business transitions such as succession. However, small businesses—particularly family-owned ones—often struggle with ensuring this knowledge transfer due to various obstacles such as limited resources, emotional attachment to the business, and the absence of formal knowledge-sharing systems (Fama & Jensen, 2017; Rothwell, 2015).

The literature suggests that many small business owners, particularly in the agricultural sector, fail to recognize KT's value until they prepare for retirement or the transfer of ownership (Castaneda & Cuellar, 2020). When knowledge transfer is delayed or poorly executed, it can significantly lose operational continuity, leading to inefficiencies, decreased productivity, and eventual failure (Wickert & Herschel, 2001). The successful transfer of tacit knowledge—knowledge that is not easily written down or formalized—is particularly challenging in small businesses where informal networks and personal relationships are central to operations (Mitton et al., 2007).

Challenges in Knowledge Transfer for Small Family Farms

Small family farms face unique challenges when it comes to knowledge transfer. Many of these farms rely on informal systems of knowledge transmission, such as personal mentorship and on-the-job training (Langmann et al., 2021). This informal nature of knowledge sharing makes it difficult to establish a standardized process for ensuring critical knowledge is passed on to the next generation. The lack of formalized processes often results in knowledge gaps when an owner retires or transitions ownership to a successor.

Another key challenge is the emotional attachment that small business owners have to their businesses. Nows (2022) notes that business owners often find it difficult to imagine a time when they will no longer oversee operations, leading to delays in succession planning and KT. Furthermore, family dynamics can complicate the process, as succession decisions are often influenced by personal relationships and emotional attachments rather than business considerations. Studies have found that family power struggles, conflicting interests, and unresolved family issues can hinder effective succession planning (Mohamad et al., 2023; Muskat & Zehrer, 2017).

Small family farms also tend to overlook the strategic importance of knowledge transfer. While much focus is placed on the practical and operational aspects of running the farm, the significance of passing down knowledge regarding finances, marketing, staffing, and long-term goals is often underappreciated (Cooper et al., 2013).

Theoretical Framework

This study uses two key theories as a foundation: Social Constructionist Theory (SCT) and ethnomethodology. SCT is particularly relevant to understanding knowledge transfer in the context of small businesses, as it emphasizes the role of social interactions and shared meanings in shaping how knowledge is transferred (Gergen, 2009). The theory suggests that knowledge is co-constructed through social interactions, which can be crucial in transferring tacit knowledge within family-owned businesses. In small family farms, where relationships are often close-knit and informal, SCT provides a lens through which to examine how knowledge is shared, transferred, and applied.

On the other hand, ethnomethodology focuses on the everyday practices that individuals use to make sense of their social world. This approach highlights how knowledge transfer occurs in informal, context-dependent ways through language, demonstrations, and shared experiences (Garfinkel, 1967). In small family farms, much of the knowledge transfer happens through informal conversations and mentorship, and ethnomethodology allows researchers to understand how these interactions shape the transfer process. By observing the everyday interactions between retiring farm owners and their successors, the study aimed to uncover the subtle, context-dependent ways knowledge is passed on.

Methods

The study design utilized a qualitative, pragmatic inquiry to address the question: What strategies do small family farm owners employ to facilitate knowledge transfer?

The population for this study consisted of retired small-family farm owners located in the northeast sector of the U.S. Small-family farms are typically defined as businesses that employ fewer than 20 people, generate average annual revenues of less than \$5 million, and primarily serve local or regional markets. Using purposive and snowball sampling techniques, the sample included 13 retired small family farm owners in the northeast U.S. who were interviewed to explore successful knowledge transfer strategies. Potential participants were identified through local business associations, chambers of commerce, and government databases that categorize businesses by size, location, and revenue. A screening questionnaire was sent to potential participants to verify that they met the inclusion criteria, including the business size, location, and revenue. Participants were required to have retired from their business and have been actively involved in the ownership transition and knowledge transfer process.

Data Collection

This study's primary data collection method included semi-structured interviews, which allow for open-ended and follow-up questions based on the participants' responses, allowing for a deeper understanding of the participants' unique experiences. The interview questions were designed to explore the participants' experiences with knowledge transfer, including their strategies for ensuring business continuity, handling succession, and addressing challenges in knowledge dissemination.

Additionally, the researcher used content analysis to review the farms' operations documents, including business manuals, succession plans, and training documents. This analysis aimed to triangulate the interview findings and gain a broader understanding of how knowledge transfer strategies were formalized or documented within the small family farm context.

Data Analysis

The data analysis for this study was conducted using thematic analysis. Thematic analysis involves identifying, analyzing, and reporting patterns within the data (Braun & Clarke, 2006). The researcher used an inductive approach to coding the interview transcripts, allowing themes to emerge directly from the data rather than being pre-defined. The interview data were coded to identify key themes related to knowledge transfer strategies, challenges, and success factors. These codes were then grouped into categories, and patterns were identified across participants' responses.

Results

The primary research question that guided this study was: *What strategies did retired small family farm owners utilize to foster knowledge transfer to ensure the continuity of critical expertise, skills, and organizational insights to the next ownership?*

Four major themes emerged from the analysis of the transcribed interviews (see Table 1).

Table 1

Emerging Themes and Frequencies

<u>Theme</u>	<u>Frequency</u>	<u>Percentage of Total</u>
Mentoring and Hands-on Learning	42	32.30%
Family Dynamics and Interactions	37	28.46%
Communication and Respect	28	21.55%
<u>Technology and Documentation</u>	<u>23</u>	<u>17.69%</u>
Total	130	100.00%

Theme 1: Mentoring and Hands-on Engagement

Mentorship, particularly through hands-on engagement, was identified as a central strategy in knowledge transfer. This finding supports research by Gantt et al. (2024), who emphasized the importance of long-term, empathetic mentorship. Participants frequently discussed the value of teaching by example, describing their mentorship in practical, everyday farm activities such as operating equipment and performing essential tasks. RF12 stated, “I simply taught them day in and day out. I worked with them, showed them everything.” RF6 echoed this sentiment, highlighting the importance of informal knowledge sharing and experiential learning. This theme was categorized into three subthemes:

1. **Skill development and knowledge transfer**—Participants emphasized their role in helping successors develop technical skills and knowledge about farm operations.
2. **Personal and professional growth** – Mentorship also supported the personal development of successors, fostering confidence, motivation, and professional growth.
3. **Engagement and relationship building** – Building strong interpersonal relationships between mentor and successor was crucial to successful knowledge transfer.

The frequency of key terms such as *mentor*, *teaching*, and *hands-on* in interviews confirms the centrality of this theme (see Table 2).

Table 2

Code Words Related to "Mentoring and Hands-on Engagement"

<u>Code Word</u>	<u>Referenced by</u>	<u>Total Times Mentioned</u>
Mentor	RF1, RF4, RF8, RF11, RF13	12
Teach, Taught, Teaching	RF3, RF6, RF9, RF13	11
Receptive	RF5, RF9	3
Hands-on	RF2, RF4, RF5, RF8, RF13	7
Learning by doing	RF7, RF8, RF13	9
Showed, Showing, Shown	RF1, RF2, RF8, RF10	7

Theme 2: Family Dynamics and Interactions

Family dynamics played a significant role in knowledge transfer. Trust was identified as a crucial

component in fostering a positive, effective learning environment. Bell (2019) found that trust influences intergenerational farm succession, and this study reinforced that finding. Key family values, such as mutual respect and emotional support, emerged as vital for ensuring that knowledge was successfully passed down. Participants stressed the importance of trust in the mentor-mentee relationship, with RF10 stating, “The first is trust; if the person who is learning is receptive, great. Because if they don’t want to learn, you’re not gonna teach them a damn thing.” Participants also emphasized the significance of intergenerational relationships, noting that clear communication between family members—particularly between parents and children—was essential. RF13 described family dynamics: “The process of passing knowledge involved balancing traditional methods with new approaches,” which aligns with research on multi-generational leadership (Dewanto et al., 2024).

Table 3

Code Words Related to "Family Dynamics and Interactions"

<u>Code Word</u>	<u>Referenced by</u>	<u>Total Times Mentioned</u>
Trust	RF3, RF6, RF7, RF9, RF13	12
Relationships	RF1, RF2, RF4, RF6, RF9	12
Family	RF2, RF4, RF8, RF12, RF13	14
Respect	RF1, RF10, RF11	5
Intergenerational	RF2, RF4, RF5, RF8	5

Theme 3: Communication and Respect

Communication and mutual respect were highlighted as key to successful knowledge transfer. Several participants noted that passing knowledge was significantly hindered without open, honest, and empathetic communication. RF7 emphasized the importance of “passing on not only technical knowledge but also the culture and passion associated with the work.” Similarly, RF13 described the role of respect: “Issues such as personality conflicts and a lack of respect can hinder the learning process significantly.”

This theme involved subthemes such as:

1. **Interpersonal skills** – Effective communication requires listening and empathizing with others.
2. **Feedback and dialogue** – Open, two-way feedback was essential to fully transfer knowledge.

3. **Equality and dignity** – Respecting the learner and fostering a culture of equality were foundational for ensuring a positive learning experience.

Table 4

Code Words Related to "Communication and Respect"

<u>Code Word</u>	<u>Referenced by</u>	<u>Total Times Mentioned</u>
Empathy	RF1, RF4, RF6, RF13	8
Personality	RF5, RF9, RF10	5
Listening	RF6, RF10, RF12	6
Appreciation	RF1, RF6, RF11, RF13	4
Support	RF1, RF4, RF6, RF8	8

Theme 4: Technology and Documentation

Technology and documentation were critical for preserving knowledge and ensuring future success. Participants discussed how technology was increasingly necessary to manage farm operations, particularly record-keeping, automation, and database management. As RF13 noted, “We kept explicit notes in notebooks... every single field, every single crop, everything we do. You make a note. Well, that’s how we did it.” However, there was also a generational divide regarding the use of technology. For example, RF2 and RF7 expressed frustration with newer technologies, while recognizing their importance for efficient farm management.

Key subthemes in this category included:

1. **Record-keeping** – Maintaining detailed records documenting farm activities and techniques was critical for knowledge transfer.
2. **Automation** – Technology tools such as QuickBooks and databases were increasingly necessary for managing farm operations.

Table 5

Code Words Related to "Technology and Documentation"

<u>Code Word</u>	<u>Referenced by</u>	<u>Total Times Mentioned</u>
Technology	RF2, RF4, RF6, RF7, RF8	12
Record-Keeping	RF1, RF2, RF7, RF13	9
Databases	RF4, RF7, RF9, RF13	7
QuickBooks	RF2, RF6, RF8, RF13	6
Automation	RF2, RF4, RF6, RF8, RF13	6

Summary of Findings and Conclusion

The findings from this study reveal that knowledge transfer in small family farms is a multifaceted process, requiring a combination of mentorship, effective communication, trust-building, and strategic use of technology. Successful strategies involve hands-on learning, a deep respect for family dynamics, and a structured approach to record-keeping and technology integration. However, challenges like personality conflicts, technological resistance, and inadequate documentation often hinder the transfer process. Addressing these challenges through clear communication, empathy, and updated technological practices is essential for ensuring that knowledge is effectively passed to the next generation of farm owners. Small family farms can ensure the continuity of their operations and knowledge base by fostering supportive relationships, respecting diverse learning styles, and utilizing modern tools.

Knowledge transfer in small family farms involves systematically passing on vital expertise, skills, and organizational insights from retiring owners to their successors. This study revealed the significance of formal and informal methods in ensuring critical knowledge is preserved and effectively utilized. Key findings emphasize the importance of experiential learning, where hands-on mentorship and day-to-day training are central. This process aligns with existing literature, highlighting that knowledge transfer goes beyond information sharing—it embeds skills and practices through direct engagement and interaction.

A notable example of successful knowledge transfer involved retiring farm owners gradually integrating their successors into farm operations. The success of these transitions was attributed to structured mentorship programs where owners provided consistent, empathetic guidance over extended periods. Integrating detailed documentation and technology, such as digital record-keeping systems, further supported these processes. This approach mirrors the findings of Harvey and Valerio (2022), who emphasized the combination of direct mentorship and modern tools for enhancing learning outcomes and ensuring operational continuity.

In contrast, knowledge transfer failures often arise from personality conflicts and resistance to new methods or technologies. Participants observed that such failures were linked to a lack of mutual respect and ineffective communication, where either the successors were unreceptive, or the mentors struggled to convey their knowledge. Resistance to adopting new technologies or

failing to thoroughly document processes also hindered the transfer, corroborating findings by Mthuli et al. (2021), which stress the importance of technological integration in knowledge transfer.

The study identified several challenges in knowledge transfer, including maintaining accurate documentation, overcoming resistance to change, and fostering an environment of trust and open communication. Participants underscored the importance of systematically capturing knowledge through traditional and digital notebooks. Successful identification of critical knowledge often involves collaboration and discussion among senior members. Practical strategies to encourage knowledge sharing included regular meetings, workshops, and leveraging technology for easy access to information. Designating individuals as mentors or knowledge transfer facilitators was also crucial in ensuring the process was structured and continuous. These findings align with Biloslavo and Lombardi's (2021) research, which stresses the importance of structured roles and strategic practices in knowledge transfer.

Implications

The study's findings offer valuable insights into knowledge transfer strategies among retired small family farm owners and have broader implications for the theories of knowledge transfer and organizational learning.

The findings present significant theoretical implications for knowledge transfer and organizational learning, particularly within small family farms. The study reinforces that experiential learning and hands-on mentorship are vital to successful knowledge transfer. This supports experiential learning theory, which asserts that learning through practical experience is essential for understanding and skill development. Furthermore, using modern technology and traditional documentation methods highlights the importance of combining tacit and explicit knowledge for effective learning and transfer.

This study challenges existing theories, primarily focusing on formalized, structured approaches, such as standardized training programs or written manuals. Instead, it underscores the value of informal, relationship-based methods often overlooked in traditional knowledge transfer models. The results suggest that future theoretical frameworks should emphasize knowledge transfer's social and relational aspects, recognizing that trust, mutual respect, and personal interaction are crucial. Additionally, while technology is an important tool, it should not be seen as the primary method for knowledge transfer, but rather as a supportive resource that complements traditional practices.

This study advances knowledge transfer theories by demonstrating the interplay between mentorship, documentation, technology, and interpersonal dynamics. It suggests that future frameworks should adopt a more holistic approach, considering human and technological factors. This research expands existing theories by illustrating that effective knowledge transfer in small family farms is achieved through a combination of traditional methods and modern innovations, providing a nuanced understanding of how knowledge is preserved and transmitted in familial business settings.

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